Creativity-Innovation Cycle for Organisational Exploration and Exploitation: Lessons from Neowiz - a Korean Internet Company

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This article is about a Korean Internet company that has successfully changed its major service items three times during its 10-year history. The company has been well known for innovativeness since it became the first in the world to develop and sell completely virtual products. By introducing breakthrough innovations, as well as a stream of successive minor innovations, the company has become a leader in highly contested market segments. To explain the company’s success, we develop a creativity-innovation cycle with four elements: generating creative ideas from employees, communicating these ideas, implementing them, and learning from the market response. We argue that tight, successive connections of the four elements allowed the company to take advantage of its existing core competencies and execute breakthrough innovations. We explain how the company made the cycle as complete as possible and discuss lessons other companies can learn from the case.

Introduction

The Korean economic crisis in 1997 and the subsequent IMF bailout had devastating effects on most of the large Korean companies that had relied heavily on debt financing for their growth. Interest rates for three-month certificates of deposit skyrocketed from 11.79% in late June 1997...
to 23.10% in late February 1998, while the exchange rate against the US dollar rose from 888.10 Korean won to 1572.10 during the same period. To avoid becoming insolvent during this economic adversity, many large Korean companies conducted large-scale lay-offs as well as attempting to reduce their debts by selling their businesses to foreign companies. However, about half of the 30 largest chaebols — the Korean conglomerates — faltered during the four years after the crisis.

The crisis led the Korean government to change its industrial policies. Most importantly, it sought to reduce the national economy’s dependence on the chaebols and to foster technology-intensive start-up companies as a new growth engine for the national economy. The government provided special tax treatments to start-up companies, opened KOSDAQ (Korea Securities Dealers Association Automated Quotations — the Korean equivalent of NASDAQ) and made formation of venture capital companies easier. It became much easier for people with new business ideas and technical capabilities to mobilize financial resources and form their own companies, and even hope to make a fortune after listing them on KOSDAQ. These new policies led to a sharp increase in new company formations, which absorbed many of those laid off by the large companies, thus helping to alleviate the unemployment problem caused by the economic crisis.

The Korean government especially tried to create an environment where companies dealing with information and communication technology (ICT) could flourish by investing heavily in the development of ICT infrastructures. Thanks to this government measure, Korea became the world leader in both quantity and quality of Internet use, and thus a test bed for new ICT initiatives. Policies favouring ICT businesses, coupled with the ‘dot.com’ fever around the world, triggered the formation of many dot.coms in Korea, and the continued success of many start-ups transformed the Korean economy itself. Quantitatively, the transformation was largely from the traditional brick-and-mortar economy to a hybrid of traditional and electronic commerce economies, and from chaebol-dominant economy to a mix of chaebols and a large number of innovative high-tech companies. Qualitatively, the success of innovation-driven start-ups stimulated chaebols to restructure their traditional bureaucratic organisations and adopt innovation-friendly management practices.

*The Korean economy transformed itself from a chaebol-dominated brick-and-mortar economy to a hybrid traditional/electronic commerce economy, mixing chaebols with high-tech innovators.*

While the new business opportunities fostered by government policies brought forth numerous dot.coms attempting to make money from their on-line services and contents, only a few were successful in generating profits from paid-for on-line services. One such was Neowiz, which had become the eighth largest Internet site in the world in terms of number of visitors by March 2003. It was the first company in the world to develop and sell virtual items called ‘avatars,’ two-dimensional animated characters with which users could express their identity in cyberspace, for instance, by dressing them up in virtual clothes bought in virtual malls. The Wall Street Journal and Far Eastern Economic Review featured the success of Neowiz’s avatar service, and the company soon became the target of imitation by several US firms.

The market segments occupied by Neowiz were characterized by low entry barriers and constantly changing demands for new services. To grow continuously under such conditions, the company introduced one breakthrough innovation after another, so that new services could generate enough revenues to supplement revenue decreases from services declining in popularity. Breakthrough innovations alone, however, could not guarantee the survival of the company - given the low entry barriers, such innovations were easy to imitate. However, the implementation of
a stream of minor innovations allowed the company become the market leader in each market segment it entered.

During its 10-year history, Neowiz successfully changed its major service items three times, and while the majority of its competitors failed, Neowiz not only survived but has become one of the most profitable among Korea’s dot.com firms. What was the secret of Neowiz’s success? What can other companies learn from its experience? The objective of the article is to unlock these lessons.

The article is organised as follows. Section two briefly describes the history of Neowiz, and in section three, we propose a creativity-innovation cycle as a framework of analysis to explain its success. Section four describes how the company operates the cycle as tightly and as quickly as possible. Finally, we discuss the key insights for company executives. The appendix gives some notes on the methodology of the study.

Neowiz: A Korean Internet company
Founded by eight young college graduates in 1997, Neowiz grew so that by 31 December 2006 it was the market leader in selling avatar items, web board-games, and on-line game publishing in Korea, employing 351 regular and 147 temporary staff. Its market capitalization was US$578 million, and its sales volume and net profit figures for the year were US$139.8 million and US$11.3 million, respectively.9 Figure 1 shows the changes in Neowiz’s sales volume and net profit over the past 8 years.

Neowiz has made three major changes to the nature of its business since its foundation eight years ago, as illustrated in Figure 2. The introduction of Oneclick, the Internet access service, contributed dramatically to the increase in the sales volume since 1999. Then, the company was able to compensate for the diminishing revenue from its Internet access service by selling avatar items via Sayclub, its online community service. The addition of web board-games as well as publication of other on-line games again helped Neowiz sustain its growth momentum, and by 2006, on-line game publishing accounted for about 50% of Neowiz’s total revenue. A brief history of the company is outlined below.

Contents Provider: Founding and Initial Survival
On its foundation, Neowiz launched its ‘Livecast’ service, using webcasting technology to deliver updated customized information (such as news, weather, etc.) to its subscribers via the Internet. However, due to the lack of easy and inexpensive Internet access, the company could not attract a sufficient number of subscribers to keep itself profitable. Nevertheless, Neowiz survived by providing various software development services to Korean and European Internet service providers.
The First Leap: From Contents Provider to Internet Access Service Provider

The first change was a far-reaching one, involving the company changing itself from a contents provider to an Internet access service provider. In 1998, Neowiz overhauled the company and started a modem-based Internet access service called Oneclick, which enabled ordinary computer users to access the Internet easily without subscribing to Internet service providers (ISPs). Users were charged according to the duration of their Internet connection.

Though there were as many as 250 ISPs in Korea at the time of Oneclick’s launch, Neowiz successfully secured a market leading position. About 35 competitors entered the market in 1999, mostly with services very similar to Oneclick, but despite this increasingly fierce competition, Neowiz managed to maintain its market share of about 40 to 50 percent of 2 million modem users. However, demand for the narrowband Oneclick service continued to decline from September 2000, due to the spread of high-speed broadband Internet access service, and Oneclick’s revenue contribution to Neowiz shrank from around 90 percent in 2000 to below 12 percent in 2002.

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**Figure 2. Three Changes at Neowiz**
Neowiz’s free on-line multimedia chat site ‘Sayclub’ attracted 1 million members within 3 months of its launch.

The Second Leap: From Internet Access Service Provider to On-line Community Service Provider

The second change was from an Internet access service provider to an on-line community service provider. While the spread of broadband technology and Internet cafes posed a major threat to Neowiz, it also provided the company with new business opportunities. In July 1999, Neowiz launched ‘Sayclub,’ an on-line community site that provided a free multimedia chat service, which attracted about 1 million members within 3 months of its launch, with the number increasing to 3 million within a year.

Despite the phenomenal success of Sayclub, the company was in financial trouble. It did not charge any fee to Sayclub users, and revenues from banner advertisements, the only source of income for the operation, were very small. To address this problem, Neowiz launched a completely new idea - the ‘avatar’ service - on Sayclub in November, 2000. Avatars were not real but virtual products, i.e., images that users could see only on the computer screen. This was the first attempt in the world to sell such virtual products for real money, although the initiative was subsequently emulated both in Korea and in the U.S. (on such sites as www.secondlife.com). Avatars can function as a user’s ‘signature’ in cyberspaces, e.g. chat-rooms, game rooms, bulletin boards, blogs and e-mails. Users received a ‘default’ avatar when they signed up, which came with free casual clothes. If they wanted to personalise them and cultivate a more sophisticated look for their avatars, they could purchase virtual clothes and accessories. This idea was immediately successful; sales reached over US$330,000 in its first month, and revenue grew from about US$14 million in 2001 to over US$25 million in 2002.

Sayclub’s avatars were the first attempt in the world to sell virtual products for real money.

A New Growth Engine: Online Community Service Provider to On-line Game Service Provider

The third change was the addition of the on-line game service. As the market for Internet chat services and avatars became saturated, the management of Neowiz again sought additional revenue sources to sustain its growth, and decided to enter the interactive web board-game market, which was growing very rapidly in Korea. Neowiz began providing simple multiplayer games such as poker and Go-stop—a Korean card game—and offered a premium service for paid game items in January 2002. It later launched ‘P-mang,’ an on-line game site to focus on its game business, and by 2005, had become a market leader in web board-games.

The company also began to publish on-line games developed by other companies to generate more revenue from its customer base. As of December 31, 2006, the company was providing 27 games it had developed internally, together with another 11 developed by other companies. Revenue from the game service exceeded 90% of Neowiz’s revenue in 2006, about 50% of which came from game publication.

Generation and Implementation of Creative Ideas: The Creativity-Innovation Cycle

How can a company successfully create new markets in segments other companies have neglected? After launching breakthrough innovations, how can a company successfully build entry barriers to
protect its position in a highly contested market? How can a company sustain its growth even when its market segment is ephemeral? These questions draw a great deal of attention from executives of established companies who are interested in innovating their competitive strategies, as well as from start-up founders who want to seize on new market opportunities.11

The answers to those questions will be quite different depending on whether the firm is an established one or not. Newly founded companies usually 1) get pushed to peripheral market segments that established companies have neglected due to their apparent unattractiveness,12 2) lack resources that can keep them alive on rainy days and allow them space to launch various innovations, and 3) lack the external linkages to loyal suppliers, and customers enjoyed by established companies.13 These disadvantages are more critical where newly founded companies are attempting to create new market segments. How can they be overcome? We propose a creativity-innovation cycle that can enhance the possibility of success in launching breakthrough innovations and in augmenting entry barriers by introducing numerous minor innovations.

The creativity-innovation cycle is composed of four elements: (1) generation of creative ideas, (2) communication of the ideas, (3) implementation of the ideas, and (4) monitoring and reacting to market responses. This cycle is a modification of March and Olsen’s 1975 model. To explain experiential learning of organisations, March and Olsen suggested a closed cycle of four elements: individual beliefs, individual action, organisational action, and environmental response.14 When the four elements are closely connected, organisations can learn from their experience. Conversely, attenuation of any linkage can hinder the organisation’s ability to learn from its experiences. We claim that running the creativity-innovation cycle as tightly and as quickly as possible is critical for young companies facing hyper-competition. Figure 3 shows the creativity-innovation cycle, and the linkages are detailed below.

**Step 1: Generation of Creative Ideas**
As the literature on the organisational creativity suggests, for an organisation to be innovative, its employees should generate as many creative ideas as possible, as they are the seeds of organisational innovations.15 Employees can come up with creative ideas via their imaginative and creative activities, or by observing market responses to organisational actions. The latter will be considered later; we describe the former in this section.

Organizations can foster employee creativity by hiring creative people, by motivating employees intrinsically, and by creating a work environment that encourages creativity. The first step for an
organisation to be innovative is for it to hire hardworking and creative people. Tools such as internships and employee referrals can be used to identify people who are creative and passionate about their work. Hard work is very important, because talent, knowledge and ingenuity are of no avail without diligence, persistence and commitment to the job. Companies should give due weight to passion for the work when evaluating job applicants, and multiple interviews by people working in various parts of the organisation can help discover people with passion, and whose personal goals are congruent with those of the company. By observing whether an intern works with passion, companies can identify people with the intrinsic motivation to work. Companies can also ask current employees to recommend people they know who have expertise in a particular area of work and who are passionate about it. These practices can help companies recruit people with expertise and the intrinsic motivation to work.

Second, companies should motivate their employees intrinsically to induce creative ideas. ‘Intrinsically motivated’ people are those who work hard because the work is interesting, involving, exciting, satisfying or personally challenging. In contrast, people are ‘extrinsically motivated’ when they only work hard to get promotion, larger monetary incentives or praise from others. The literature on creativity suggests that intrinsic motivation is a very important precursor of creativity. Since people are intrinsically motivated when they do what they love doing, it is better, whenever possible, to assign employees to tasks according to their preference. When employees believe strongly in what they want to do, it is better to give them a chance to pursue their ideas, even if their bosses do not agree with them.

Employees are intrinsically motivated when they love and believe in what they do, it is better to assign tasks according to their preferences.

Third, companies should create a work environment that is conducive to making people love what they do. Social environments can both enhance creativity and innovation directly, and also affect them indirectly by enhancing employees’ intrinsic motivation. Thus it is better to remove dress codes, standardized rules and formal procedures that might hamper employee creativity. Creative work team members usually perform better when they are allowed to decide their own working hours. More importantly, companies can increase employee creativity by giving them a great amount of freedom in deciding what work to do and how to do it. Finally, managers must value and support their subordinates’ creative contributions, and encourage their creativity through the fair and constructive judgment of ideas and recognition for creative work.

Step 2: From Creative Ideas to Communication
As most organisations practice the division of labour principle, a creative idea cannot normally be implemented by the sole authority of the idea generator: rather implementation involves delivering the idea to people with the relevant competence and authority. However, such communication can break down for a variety of reasons, including lack of time and incentives, cumbersome procedures, the fear of being ridiculed by others, and emotional conflicts or political power struggles among organisational members. To avoid such breakdowns, organizations can operate a culture of open communications, for instance by using a virtual community arrangement, systematic mailing lists or daily department-wide morning conferences.

…creative ideas will come when employees are free to challenge their bosses’ judgements … debate must be won by the best ideas, not by hierarchical rank.
First, companies need to promote a culture that fosters open communications. Employees are more likely to suggest their creative ideas when they feel free to challenge the judgements of bosses and peers. Therefore, it is important to build a company where debate is won not by those with hierarchical rank but by the best ideas or arguments. Organisational development tools such as assertiveness and sensitivity training and team building can help promote an ‘open’ culture. Companies also need to understand the importance of communication and persuasion skills when selecting team leaders, as, in the open work culture we believe is required lower level creative employees will work more effectively if they are persuaded rather than simply ordered to undertake tasks.21

Second, companies should encourage employees to communicate with each other about possible innovations. Research has shown that increasing face-to-face interaction between organisational members using workshops, conferences, task forces, cross-functional committees, work-out meetings, communities of practices, etc., as well as supporting the formation of informal groups across diverse departments, can build trust among employees, and thus foster the exchange of creative ideas. Exchanging, analysing and synthesizing creative ideas during such face-to-face interactions can often speed the development of innovative products or services.22

Third, companies need to cultivate a ‘virtual community culture’ to foster the communication of creative ideas. The widespread use of e-mails, instant messengers and bulletin boards to communicate within the organisation can save employees time in delivering creative ideas and allow them to communicate more candidly with others.23 Companies can also foster internal communication by using systematic e-mail distribution lists, therefore employees with creative ideas can more easily identify people who could benefit from their ideas, and share them via e-mail.

Step 3: From Communication of Ideas to Implementation

Ideas create value only when they are implemented. Failure in gaining support due to internal politics, lack of internal resources, or the elimination of valuable ideas in screening processes can hamper the implementation of creative ideas. Firms will be able to avoid implementation failure through empowering their employees, having lenient idea screening processes, and flexible resource configurations.

First, empowering its employees can ensure a company implements as many creative ideas as possible, as promising ideas are less likely to be screened out than when such decisions are centralized. One way of empowering employees is to accept that those who came up with the original idea are most likely to be knowledgeable and well-informed about it, and give them greater authority in carrying the job through. That frequently means that employees decide what kind of work they are going to do, how to do it and what kinds of goals they should aim for.24 When employees have creative ideas that cannot be handled within the existing work structure, a company can allow them to pursue them privately or in a small group. When implementing a promising idea requires greater company commitment, the company can create a new team, with the person who originally developed the idea as team leader.

Second, a more lenient idea screening process will help companies to implement as many creative ideas as possible. Screening decisions about new services that have not been offered by other firms always involves high degree of uncertainty and subjectivity.25 Due to the inherent uncertainty in estimating the potential revenue contribution of breakthrough innovations - especially those proposing to create new market segments by offering previously untried services - traditional screening criteria (such as profit, sales, return on investment or market share estimates) may not be appropriate. The level of investment required for implementing new ideas should influence the leniency
of the process. In brick-and-mortar industries, where idea implementation usually requires considerable resources, companies tend to apply strict screening processes to innovative ideas. But such strictness would unnecessarily inhibit Internet ventures from implementing creative ideas where large resource investments are not required. More lenient idea screening can allow the company to try out many ideas, which is especially important for a start-up that thrives on employee creativity. A more lenient process will also stimulate the generation of further creative ideas, as employees are more likely to suggest creative ideas when they can see their company is willing to implement them.

Third, flexible resource configuration allows a company to implement as many ideas as possible. Companies need to be flexible in changing jobs among employees, changing organisational structure, spinning off business units, forming strategic alliances, and acquiring other firms. This flexibility enables companies to mobilize internal and external resources swiftly for exploring numerous innovation opportunities as quickly as possible. Companies need to use their strategic alliances and M&As to allow them to mobilize resources to implement creative ideas with more speed and agility than their competitors.26

Step 4: From Implementation of the Ideas to Market Response

The connection between idea implementation and market response can be broken if an organisation is unable to find an exact causal linkage between the implementation of a new idea and the market response. Sometimes, as March and Olsen note, ‘what happened is not immediately obvious, why it happened is obscure, and whether what happened is good is not clear.’ In these ambiguous conditions, organisational members can only infer the causal linkage between innovation and market response, and in many cases can err by falsely attributing the market response to irrelevant organisational actions. (Thus a car maker whose profit increases after a new model’s introduction cannot tell whether their sales success is due to the new product’s characteristics, or to the associated vigorous marketing campaign.)

Companies can use several methods to avoid such false and ambiguous attributions. First, they can test the market before launching new service items with a trial period using beta versions and by providing a wide range of prices.27 The trial period helps companies find whether a new service item would satisfy customer needs, and beta versions can help companies get early feedback from employees and customers and eliminate program bugs. Based on the feedback from potential customers, companies can decide whether to provide the service or not, how much to charge for it, and how it might be improved to attract more customers.

Second, companies need to introduce minor service innovations sequentially if they want to measure each innovation’s effect on customer behaviours. Introducing too many minor innovations simultaneously will hinder firms from figuring out which innovations trigger positive customer responses and which negative ones.28 Sequential introduction will generate knowledge the firm can use to select which service items to strengthen and which to remove.

Third, companies need to set up departments to monitor customer behaviours systematically, to use statistical tools to analyse causal linkages between innovations and customer responses, and to disseminate the information around organisational departments.29 Data mining systems can enable the company to collect customer responses in real time and help attribute changes in customer behaviours to each innovation correctly. Statisticians can use sophisticated tools to infer causal

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linkages between innovations and market response, helping the company learn from its experience in creating innovative services.

**Step 5: Market Response to Creative Ideas**

Once market responses to organisational actions are clearly identified, companies should use their IT systems to disseminate customer behaviour data and causal linkage information throughout the organisation so members can use market information to help generate further creative ideas. The definition of data information recipients should be set to make the information as widely available as possible.

**Operation of the Cycle in Neowiz**

Neowiz has utilized the cycle for exploring new business opportunities as well as for exploiting existing core competencies. Throughout its history, the company has focused on hiring creative and intrinsically motivated people by using multiple interviews to screen job applicants and through the wide use of interns and employee referrals for identifying possible new employees. Neowiz has focused on motivating its employees intrinsically by assigning employees to jobs according to their preference whenever possible. The company has tried to give high recognition to creative work, and to create a work environment favouring creativity by not having a dress code, standardized rules or formal procedures, thus providing as much freedom on the job as possible. The company has also cultivated an open communication culture by instilling the vision in their employees that they have the right to participate in any of the internal meetings and the freedom to speak on any issues or ideas. The virtual community culture was created when the company was founded and still exists today.

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**The company gives high recognition to creative work, creates a work environment providing as much freedom as possible, and cultivates an open communication culture.**

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When the company was small, and its members were literally working and living together, running the cycle did not involve formal routines or organisational units. In its early history, there was no departmentalisation where people worked for their business function only; rather the company was a small group of people who all took up the roles of idea generators, software developers, lead users, salesmen, and market response researchers. When it became larger and departmentalized, however, formal routines and formal organisational units which specialized in connecting the four elements of the cycle became necessary. This formalization started in 2000 when the number of employees reached 100. We illustrated below how the cycle operated for each of the three major services successfully launched by Neowiz. To reduce repetitive description, we have not elaborated on active use of these practices and culture throughout the company’s history.

**The Oneclick Cycle Operation**

When the company was trying to identify its first major revenue source after the failure of ‘Livecast,’ its founders generated and discussed several business ideas, of which developing and distributing ‘Oneclick’ software was just one. Considering the failure of Livecast, one founder identified a possible causal linkage between Livecast and its negative market response. He inferred that its failure was mainly due to small number of Internet users in Korea at that time, due to the difficulty of connecting to the Internet from home, and saw a possible business opportunity in delivering an easy-to-use Internet access program. His idea was confronted with objections from all other organisational members, but, nevertheless, he was allowed to work on the idea with one support staff.
Together, they finally succeeded in launching the Oneclick service which, as noted earlier, became the significant growth engine for the early part of the company’s history. Figure 4 details the Oneclick cycle operation.

After the successful launching of Oneclick, other companies followed suit, with about 35 competitors entering the market in 1999 alone, mostly offering a very similar service. Neowiz held brainstorming sessions every day to generate new ideas to defend its market position, and implemented numerous innovative ideas, while actively forming alliances with other firms to implement their ideas as quickly as possible. Neowiz identified companies that could help enhance the competitiveness of its products and services, formed alliances with them, and used them in its marketing efforts for many important innovations. These companies eagerly distributed the easy-to-install Oneclick software, commission-free, since it enhanced the value of their own products and services. For instance, securities companies allied with Neowiz included the Oneclick software in the free CDs of the home stock-trading program it distributed. Since stock investors with dial-up modems could trade stocks on-line from home via Oneclick, these companies were able to attract many on-line stock traders and outcompete their rivals. Such alliances significantly increased the number of on-line traders in Korea, and also substantially increased the number of Oneclick users. Alliances with PC distributors, who could sell Internet-ready computers by pre-installing Oneclick also helped the company to increase its market share. Such marketing was especially successful with parents wanting to allow their children access to Internet. Alliances with interactive on-line game producers, website constructors and private computer education institutes also significantly boosted Oneclick sales.

**Users’ behaviour was monitored, and new innovations based on customer responses were removed or added every week.**

Neowiz monitored Internet users’ behaviours to generate new customer-oriented innovations, removing or adding innovations on the basis of customer responses on a weekly basis. Neowiz was the first mover in introducing most of the minor innovations in Korean instant Internet access services, and while most turned out to be failures, several successful innovations - such as the distinctive payment system and alliances with securities trading companies - enabled the company to

![Figure 4. Operation of the Cycle in Oneclick](image-url)
protect its market share from its imitators. In sum, running the well-connected creativity-innovation cycle was crucial to Neowiz’s success in the highly contestable Internet access business market.

The Sayclub Cycle Operation
As the revenue generated from the Oneclick service declined, Neowiz explored new business opportunities. Providing an on-line chat site was suggested by a 19-year-old intern, and the idea was discussed at several company-wide conferences, which were possible at the time as the organisation consisted of only around thirty people. The executives of the company were against the idea, since none of the earlier entrants to the on-line chat site business had succeeded in generating revenues, but five young people were allowed to go ahead to construct a chat site. Rarely leaving the office — almost literally living there — this group had excellent teamwork and experienced no serious communication breakdown. They developed the software, used its beta version, removed software bugs, and then tested the market by using Neowiz employees as lead users and further improved the software. Though it only took one month to launch the service, the developers went through the cycle several times before launching the website, in the process both implementing their own creative ideas and effectively mobilizing the ideas of other employees. Figure 5 details the Sayclub cycle operation.

Contrary to the founders’ expectations, the market responses were explosive, quickly convincing management of the chat service’s business growth potential. They hired more employees and invested heavily in computer servers to serve the rapidly increasing number of visitors to the website. The company ran the cycle again to increase the number of visitors, during which employees suggested many ideas for increasing website visitors’ enjoyment. These ideas were delivered via mailing lists to the team responsible for improving the website, which met daily together with any interested employees to screen the ideas. The team changed the chat site every week to implement new ideas and collected data on customer responses to the minor changes, which was disseminated to all employees who then actively suggested extra ideas. Important innovations introduced by the process included providing every possible cyberspace communication tool, such as one-to-one chatting, chatting with multiple participants, community, e-mails, instant messengers, mobile messenger service with wireless phone, etc. Neowiz utilised its alliances with three major Korean mobile telecommunication companies to help develop these communication tools. Running the cycle on a weekly basis made Sayclub Korea’s largest chat site.

Figure 5. Operation of the Cycle in Sayclub
The increasing number of visitors, however, was a double-edged sword. Not charging fees to users meant operating losses from the business snowballed as the site became more and more popular. Many revenue generating ideas were suggested: selling avatars was just one of them. The idea was a product of the daily company-wide morning conferences. Again, industry experts and Neowiz executives were very sceptical about the idea. There were already several examples of Korean companies that experienced a subscriber exodus after beginning to charge fees for their previously free on-line services. Company executives also doubted if people would be willing to spend money on the purely virtual products. Yet the five Sayclub developers were optimistic, and persuaded executives to experiment with the idea. As marketing a purely virtual product had no precedent anywhere, executives were uncertain before the launch how much customers would pay for the avatars. Making a wise move, the company provided both low-priced as well as high-priced avatars when launching the services as part of the Sayclub site. As the high-priced items turned out to be more popular, the company followed a high-price strategy and removed the low-priced items. Again, we can see that operating the cycle helped the company implement the strategy for the initial success of selling avatars.

After the successful launching of the premium avatars, competing firms quickly imitated Neowiz. Faced with this challenge, the company ran the creativity-innovation cycle as tightly as possible, to allow it to introduce many minor innovations that were new to the market. For instance, Neowiz provided unique avatars by allying with clothes manufacturers, game developers, athletic goods sellers, mobile telecommunication companies, and character creating boutiques, with notable alliance partners including Nike, Harley Davidson and Mattel, the Barbie doll company. It also introduced brand new items, used items, items sold for limited time, and items purchasable by reservation only. While most innovations turned out to be failures, some helped the company increase the repurchase rate and build a loyal customer base.

The number of employees grew rapidly after the Sayclub launch, and Neowiz began to formalise organisational routines and specialised departments to run the cycle as tightly and quickly as possible, and to avoid being dislocated by the increased number of employees. In January 2001, the company set up a service operation department to specialise in analysing Sayclub customer behaviours. The department set up an IT system that automatically collected data on customer behaviours and reported it to all employees on a daily basis. In July 2002, the company established a quality assurance department that specialised in testing innovative services as lead users and suggesting ideas for improvements before their launch. These two departments helped to tighten two of the cycle’s connections: the connections between creative idea implementation and market response and between market response and employees’ creative ideas.

The On-line Games Cycle Operation

Oneclick and Sayclub both had elements of serendipity. Executives of the company were not enthused about either idea at first, and their entrance onto the market owed more to the ‘skunk works’ of a small group of employees working with a high degree of autonomy and comparatively unhampered by bureaucracy, than to the company’s overall strategic planning efforts. Encouraging employees to experiment with new ideas and giving their ideas support, no matter how far-fetched they may seem, were very important elements in the creativity-innovation cycle, and led the company to find these two new growth engines.

In contrast, the strategy to enter the on-line games market was chosen by company executives, who asked employees to suggest new business ideas. A lot of business ideas were suggested and discussed, from which executives made this choice, with serious consideration being given to which
market segment of Neowiz could enter successfully and how it should be done. The company chose web board-games as the market segment and acquisition of a games development boutique as the entrance strategy, choosing acquisition rather than internal development mainly because of the difficulties in hiring professional on-line game developers and the time involved in the company developing its own on-line game services. Figure 6 details the operation of the cycle for on-line games and publishing.

After developing the game programs’ alpha version, company executives asked all employees to debug the program and suggest ways to make the game more fun to play than competitors’ offerings. While quality assurance department was formally responsible for improving the program, most of Neowiz’s employees actively participated in the process as well. These ideas were delivered to the game developers who used them to improve the game. The same process was operated again after developers released the closed beta version to Neowiz’s employees and outside volunteers, and the company also actively mobilized potential customers’ ideas with an open beta version. Using active employee participation and potential customer responses in the development stage helped Neowiz to overcome the liability of being a late entrant into the market. The cycle, which was run on a weekly basis, leading to weekly website updates, allowed Neowiz to introduce many incremental innovations and add new web board-games. Despite being a late entrant, running the cycle tightly enabled Neowiz to become a leader in the web board-games market within three years.

Neowiz began to publish on-line games developed by other companies in 2003. Special Forces and FIFA Online were among twenty on-line games published by Neowiz. Special Forces was the one and only blockbuster success in Korean game publishing industry as of December 2006. Executives of the company attributed the success to its creativity-innovation cycle. The company collaborated with a game developing company, Dragon Fly, from the very early development stages, applying the cycle and deploying more than 100 employees into the project. As in developing its own web board-games, more than half the employees working in other business developments actively suggested creative ideas when the alpha, closed beta, and open beta versions were released, which, together with potential customers’ responses to the beta versions, were used by the developers to improve the game. In this sense, games were not simply published, they were co-developed with the customers. Applying the cycle allowed the company to use many creative ideas to make the

![Figure 6. Operation of the Cycle in On-line Game](image)
game as fun as possible, and after the launch, the company continued to run the cycle on a weekly basis to introduce minor innovations based on creative ideas of employees.

**Failure vs. Success and the Operation of the Cycle**

So far, only the success stories have been described: but there were several failures in launching new businesses. For instance, ‘Monkey Nuts,’ an on-line game developed by 20 highly competent developers at Neowiz in 2004 and 2005, was never even launched. The company applied the cycle in the game developing process, but could not get positive responses from its alpha version lead users, and, considering likely costs involved, decided not to develop a beta version. It is not clear whether this case represents a success or failure as it was never launched. Several other business ideas were experimented by applying the cycle but turned out to be failures. Early in its history, the company invested a great deal of resources to develop and sell Oneclick Pay as a convenient on-line payment system, but which turned out to be a total failure. The company also invested more than US$30 million and spent three years in developing a role-play game called ‘Yokurting’ that was launched in 2005. Although the creativity-innovation cycle was applied in developing the game, it turned out to be a failure, and revenue from the game has been negligible.

To generate more value from its existing businesses, Neowiz introduced many minor innovations that its competitors have never attempted, and these innovations have made the company recognised as the most innovative among Korean Internet service companies. Though most of these innovations did not contribute to sales growth, some helped the firm build entry barriers and become a market leader in highly contestable market segments.

This history of Neowiz suggests that applying the creativity-innovation cycle to explore new business opportunities and introduce innovations to strengthen existing businesses cannot guarantee success. Failure of some innovations was inevitable due to the nature of the market segment and the company’s innovation policy, which meant it was attempting to create new market segments by introducing innovative services that had not previously been tried by any company. The high degree of uncertainty and ambiguity about key success factors in such segments could not be fully resolved, even with the company operating the cycle as tightly and quickly as possible. The company’s policy to introduce as many innovations as possible was designed to allow it to introduce breakthrough innovations to compensate for decreasing revenues from its extant Internet services, and minor innovations to help protect its market position in very competitive market segments, and implementing such a policy inevitably caused some of these innovative efforts to fail.

*The high degree of uncertainty and ambiguity about key success factors could not be fully resolved, even with the cycle being run as tightly and quickly as possible.*

We would claim that the cycle enhanced the probabilities of success in exploring new business opportunities. No Korean Internet service company had successfully changed its major service areas twice, and the successful introduction of four different kinds of services — Oneclick, selling avatars, web board-games and game publishing — over its ten-year history, and becoming a leader in each of the market segments it entered, proves the cycle’s usefulness. A further proof of the cycle’s value is given by the fact that only two published games, both developed by applying the cycle, have generated big revenues for the company, while eighteen others developed without using the cycle — even though they had been fully developed by other games companies - have failed to contribute substantially to the company’s revenues.

We also maintain that the cycle is very effective in creating more value from existing businesses. Using the cycle, the company has introduced numerous customer-friendly and revenue-generating
minor innovations ahead of its competitors, which have enabled the company to increase its market share in its existing businesses. This is evident from the experiences of Oneclick, Sayclub and the on-line games initiative.

**Lessons from the Case Study**

This article has examined how Neowiz, a Korean Internet company, successfully introduced exploratory service items three times in three different and hyper-competitive market segments. While most existing literature shows that most successful firms evolve through long periods of convergence punctuated by frame-breaking change, Neowiz substantially changed its market segment by launching new service items over short time spans. We have identified a creativity-innovation cycle operating at the company as a source of its success, and offer the following lessons for executives interested in using employee creativity to gain competitive advantage.

First, this study suggests that the four elements of the cycle must be continuously connected for an organisation to be innovative. A single attenuated connection can spoil the operation of the whole cycle, and executives are therefore recommended to identify the weakest link in the cycle. Erroneous identification of weak connections will waste valuable time and resources that could have been used elsewhere, and once the weakest link is identified, executives should concentrate on strengthening it. It is also recommended to run the cycle faster than their competitors - in introducing minor innovations, Neowiz ran the cycle on a weekly basis, which was more frequently than its competitors. The frequency and speed of running the cycle helped the company beat its competitors to the introduction of numerous minor innovations.

Second, executives should devise procedures and management practices that are friendly to the cycle, which will differ across companies depending on their size, history, and product characteristics. However, executives of any company should cultivate a corporate culture that favours creativity and innovation in order to run the cycle successfully. This corporate culture is the backbone that strengthens every connection of the cycle, since the culture stimulates the participation of all employees in every cycle connection. Hiring creative and hard-working people, honouring creative activities and performance, removing bureaucratic procedures, and utilising strategic alliances and acquisitions are part of creating a culture favourable to tight and fast cycle operation.

Third, executives should create innovation-oriented organisations to utilise employee creativity for competitive advantage. Employees in innovation-driven organisations are encouraged to come up with creative ideas, communicate and test them, and monitor market responses to them. Doing something new is considered more valuable and meaningful than doing predetermined work, albeit with higher efficiency. Jobs are broadly defined and individual job assignment is not rigid but flexible to change. Organisational members rarely rely on standard operating procedures but are asked to find better ways of performing their jobs. Employees have more leeway in choosing what to do and how to do their work. In these organisations, employee creativity is treated as the most important source of competitive advantage, since such creativity leads to value-enhancing innovations.

Fourth, executives of newly founded companies should aim to overcome the liability of newness by using logic that differs from the dominant management logic of established companies to manage their companies. The large chaebols that dominated Korean economy relied on employees conforming to bureaucratic managerial practices and culture. Playing different games in hiring and motivating people and cultivating innovation-oriented culture helped Neowiz attract creative and hard-working people who were reluctant to work in such bureaucratic settings.

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**Focusing on just a single part of the creativity-innovation cycle may not generate successful results.**
In sum, the most important lesson from Neowiz is that business leaders must think about the whole picture that makes their organisations innovative. Focusing on a single part of the creativity-innovation cycle may not generate results that they intend. Emulating Neowiz might be a good strategy for small companies whose market segment requires a stream of innovative products and services. As today’s competitive environments render innovativeness more important for organisational survival than ever before, large companies should also embrace more elements of the creativity-innovation cycle into their existing systems. From the case presented here, they can learn how to enhance their competitiveness by mobilising as much of their employees’ creativity and potential as possible.

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Appendix
Methodology
We chose to use a case study to develop a creativity-innovation cycle. Although we had only one company to investigate, there were three cases of successful operations of the cycle to examine, which we believe make our model more valid than a single case study. We developed our model in three steps as shown in Table 1.

To improve the validity of our model, we collected data from both within and outside the company. To understand the company, we personally experienced the services it offered by exploring its website, as well as gathering information about its business by searching news sites. In developing the model, we interviewed company executives to find out about the mechanisms behind the successful launches of 3 completely different services, as well as investigating prior research on creativity and innovation. Once we had developed our model, we sought to validate it by collecting data via 4 different channels: interviewing the managers of the teams referenced by the executives; monitoring the cycle in operation by exploring the company website; verifying the interview data from publicly available information, such as annual reports and news; and interviewing the executives of a competing dot.com to obtain a more objective view on Neowiz.

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References
5. Wall Street Journal 3, (May 2001); M. Lee, South Korea: From the land of morning calm to ICT hotbed, Academy of Management Executive 17, 7–18 (2003).
7. Avatar originally means the incarnation of a Hindu deity, especially Vishnu, in human or animal form. In cyberspace, it means a virtual self or cartoon that represents a user on chat sites and thus shows his/her ideal self-portrait.
9. We have used an exchange rate of US$1 = 930 Korean Won throughout this article, which was an exchange rate as of December 31, 2006.


31. According to the Korean Securities Dealers Association (http://www.ksda.or.kr), the portion of cyber stock trading among total stock trading volume in Korea grew from about 5% in January, 1999 to 55% at the end of 2000.


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