Knowledge Innovation Management
-Innovation Entrepreneurship Process

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Abstract

This article looks into the use and application of Knowledge Management Process (KM Process) in innovation management. This concept was first introduced in my book (Tan, 2013), by incorporating the four perspectives of knowledge processes. These were referred to as the “Knowledge 4Cs”: Knowledge Creation, Knowledge Conversion, Knowledge Communication and Knowledge Change.

In applying the original four perspectives of knowledge processes in knowledge innovation management, the adapted process is referred to as an “Innovation-Entrepreneurship Process”™: these include Knowledge Creation (innovation creation), Knowledge Conversion (innovation commercialisation), Knowledge Communication (innovation-communication) and Knowledge Change (innovation-change). The changed process is set out in figures 2 below.

Keywords: Innovation-entrepreneurship Process, Innovation Creation, Innovation Commercialisation, Innovation-Communication, Innovation-Change, Entrepreneurship and Innovopreneurship.

1. Knowledge Innovation Management

Knowledge innovation management is a continuous process of managing innovation by creating, commercialising, communicating and changing the right product and service in the right place at the right time in the marketplace. The four perspectives in knowledge innovation management include knowledge creation (innovation creation); knowledge conversion (innovation commercialisation); knowledge communication (innovation-communication); and knowledge change (innovation-change).
2. Innovation-Entrepreneurship Process™

In the “Innovation-entrepreneurship Process™”, the innovation is a function of entrepreneurship. The main premise of this concept is about creating and commercialising new innovative products and services; to communicating its value prepositions to its stakeholders through high value entrepreneurship; and subsequently disrupting and redesigning products and services in the changing marketplace.

High value is an important aspect of the “Innovation-Entrepreneurship Process”. The first dimension is the innovation, which includes creating and commercialising an innovative new product or service. The second dimension is entrepreneurship. This involves entrepreneurial communication with various stakeholders externally and internally, and how an innovopreneur manages innovation change in a disruptive environment and marketplace.

3. The Four Modes of the Knowledge Innovation Management Process

This concept was first introduced in my book (Tan, 2013), by incorporating the four perspectives of knowledge processes. These were referred to as the “Knowledge 4Cs”: Knowledge Creation, Knowledge Conversion, Knowledge Communication and Knowledge Change, as shown in figure 1 below.

In applying the original four perspectives of knowledge processes in knowledge innovation management, the new process is referred to as an “Innovation-Entrepreneurship Process™”. As shown in figure 2 below, these include Knowledge Creation (innovation creation), Knowledge Conversion (innovation commercialisation), Knowledge Communication (innovation-communication) and Knowledge Change (innovation-change).
Figure 1 – The Four Modes of the Knowledge Management Process

Knowledge Conversion  Knowledge Communication

Knowledge Creation  Knowledge Change

Low Value  High Value

Low Sharing  High Sharing

Value-Sharing Process

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Figure 2 – The Four Modes of the Knowledge Innovation Management Process

Knowledge Conversion (Innovation Commercialisation) | Knowledge Communication (Innovation Communication)
---|---
Knowledge Creation (Innovation creation) | Knowledge Change (Innovation Change)

Low | High
---|---
Entrepreneurship

“Innovation-Entrepreneurship Process”™

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3.1. Knowledge Creation (Innovation Creation)

The knowledge creation process in innovation management examines the process of innovation creation of the new products and new services applications in a new market place. To create a new product or service application is a starting point. The new product or service application faces many challenges, such as a disruptive market place and ever-changing customers’ tastes and preferences for new products and service applications.

3.1.1 Start-Up

At the innovation creation stage, the start-ups or business founders will focus on creating new products and services. They will try to introduce their new products and services to existing and new customers.

The recent development of start-up eco-system has seen many types of new start-up in difference sectors include:

- ICT and digital contents, particularly in the mobile applications
- Social mobile applications
- eCommerce platforms
- Robotics and artificial intelligence
- Bio-technology
- Medical-technology
- Life science

3.1.2. The Challenges facing new start-up

The business founders in a start-up face many challenges include:

- design appropriate products and services at the right time and in the right marketplace;
- sourcing sufficient financial assistance either from the public or private sectors to commercialise their products and services;
- ability to complete with the competitors;
• ability to cultivate an innovative team and subsequently retaining them;
• ability to balance costs, pricing and profit; and
• Last but not least, the ability to manage cash flow.

However, at the initial start-up stage, the business founder knows that only with considerable promotion can they persuade the funders to provide financial assistance to commercialise their products as will be discussed below.

3.2. Knowledge Conversion (Innovation Commercialization)

The knowledge conversion process in innovation management examines the process of innovation commercialization. *Innovation commercialisation is a process of converting, launching, exploring and monetising initial ideals, products or contents in the marketplace.* In short, it relates to the processes on how the business founders or start-up, converting or commercialising their new products and services into a marketplace.

3.2.1 Innovation Commercialisation

At the innovation commercialisation stage, the business founders or start-up will focus on moving their new products and services from the lab to market space.

A critical goal is to commercialise their intellectual properties. Application and registration of product and service patents is an important process in commercialisation because it increases the value of their products and services.

3.2.2. Pre-commercialisation and Commercialisation

In Malaysia, there are many government agencies which exist to help the local start-up with grants and funding, in the pre-commercialisation and commercialisation stages, so as to enable them to move their initial ideals to viable projects. These include:
• **MSC Malaysia** provides various initiative and programmes to attract, nature and retain ICT and ICT enabled business. The local technopreneurs or business founders with a viable business plan may require funds for prototype developement as a step towards commercialisation;

• **Ministry of Science, Technology and Innovation (MOSTI)**, has introduced various initiatives and seeding funding to undertake pre-commercialisation technologies;

• **Multimedia Development corporation (MDEC)** has provided various initiatives and fundings to assist local SMEs and technopreneurs, who have innovation and commercially focused digital contents projects; and

• **Cradle Fund**, an agency under the Ministry of Finance, provides pre-seed funding programmes to innovators and aspiring start-ups to transform their raw technology-oriented ideas into commercially viable ventures.

In addition to the government initiatives and financial assistance, a local start-up in Malaysia may commercialise its projects by raising funds from the private sector. This can be through:

- **Equity crowd-funding** and peer to peer lending, approved by the Securities Commission Malaysia, is a platform for raising funds for the start-ups and SMEs;

- **Angel Investors** are a class of investors who take a higher risk and reap a higher reward. There are willing to invest their personal wealth in start-up companies in return for an equity stake;

- **Interest scheme**, under the supervision of Companies Commission of Malaysia, is an alternative method to raise fund for the SMEs and new start-up;

- **Cyberview Living Lab Accelerator (CLLA) programme.** Its objective is to assist new fintech start-ups to pilot and validate their innovations before commercialisation
In summary, the initial start-up’s commercialisation has been largely involved in the public agencies in the past. However, more recently, there has been an increasing trend for private sector involvement from such bodies as private equity crowdfunders, angel investors, interest schemes, incubators, accelerators and venture capitalists. Some of these private funders are working closely with the relevant regulators to raise funds from the public as an alternative to the traditional banking facilities.

Thus, in a highly competitive market, there are many new and substitute products and services. The initial commercialisation will not guarantee a success or a sustainable launch for their products and services. In this case, it follows that in order to sustain their new products and services, the business founders need to employ the sort of “innovation-communication mix strategy” to be discussed in the following paragraph.

3.3. Knowledge Communication (Innovation-Communication)

The knowledge communication process in innovation-communication process looks into how the business founder or entrepreneur communicates with such stakeholders as financial funders and bankers, investors and shareholders, customers and distributors, suppliers and venture partners, and talented and creative workers. It relates to how a business founder can carry out an innovation-communication mix strategy through entrepreneurial skills and create high value propositions for various stakeholders. In short, it is a process of entrepreneurship.

3.3.1. Innovation-Communication Mix and Entrepreneurship

In the narrow sense, entrepreneurship is defined in Wikipedia “as the process of designing, launching and running a new business, which typically begins as a small business, such as a start-up company.” In a broader sense, it relates to how a business founder or entrepreneur carry out various innovative communication mix strategies, through communications and collaborations with their stakeholders and their employees, to ensure the business continues to grow and be sustainable. Such strategies include:
• Communication with the funders and bankers to get their continuous support through regular reporting;

• Communication to ensure that investors, interest scheme owners and shareholders are happy and willing to invest additional capital if necessary.

• Continuous communication and engagement with customers by providing a good experience through high value service propositions and getting feedback from customers on the products and services. In addition, they can turn their existing customers into direct distributors (in multi-level network);

• Ensuring continuity of supply from the suppliers; the business founders may collaborate with their existing suppliers to become their joint venture partners (up-stream or down-stream);

• Collaborating with stakeholders, employees or potential investors, by creating a business network or franchise business, to help the business founders to expand their business with capital contributions from such franchisees; and

• Continuing to promote a culture of innovation, and to cultivate creative talent in an innovation environment. In addition, to reward and communicate with talented employees, in order to retain them.

By applying a proper innovation-communication mix strategy and entrepreneurial skills, the business founders or entrepreneur can promote growth and increase their market share for their products and services.

These strategies are inter-related and integrated with each other. For example, failure to source for additional finance or to meet a cash flow problem may hinder a business expansion plan or cause insolvency; similarly failure to continue innovating and improving their products and services may result in obsolescence of your products and services with eventual loss of market share. Also, ability to retain their talented and innovative employees is equally important.

In summary, to be successful, an entrepreneur must possess a entrepreneurial skills in order to growth and sustain their businesses. However, in a highly
competitive and disruptive market, there are many new ideals, new products and services being launched. Existing products and services may become obsolesce and thus not sustainable. In such a disruptive environment, it follows that in order to survive, the business founders needs to employ the sort of innovation-change strategy or *innopreneurship* skills to be discussed in the following paragraph.

### 3.4. Knowledge Change (Innovation-Change)

The knowledge change process in innovation management examines the process of innovation-change strategy. An innovation-change process is concerned with how an innovative entrepreneur (*innopreneur*), constantly and continuously, re-designs and launches new products and services, responding to technological changes and innovations in a disruptive marketplace.

This is a necessary journey in the innovation management process in order to survive in the marketplace. The *innopreneur* faces many challenges and competition from their competitors seeking to introduce similar or close substitute new products or new business applications. The following are some of the competitive and closely substitute applications and products like:

- Yahoo and Google search;
- Friendster and Facebook social media;
- Uber and Grab applications; and
- Nokia and Apple mobile phones etc

From the early stage of a start-up and commercialization, some continue to grow with bigger market shares, some have lost their popularity and many have disappeared in the marketplace. Therefore, in order to survive, the *innopreneur* needs to continuously disrupt their products and services, and constantly apply their *innopreneurship* skills processes.
3.4.1. Innovation-Change and Innopreneurship

In the innovation-change process, the innopreneur need to apply its innopreneurship skills. The need for innopreneurship can arise out of changes in technology and in the marketplace. An innopreneur must constantly review, reinvent and re-design their product and services, and re-engage with their customers while targeting new customers in an ever-changing innovation space (Tan, 2016).

This always presents new challenges for an innopreneur for the following reasons:

• The rise of online shopping and e-commerce platforms. These have led to the decline of previously successful enterprises. For example, in the last few years, Parkson China retail stores have seen a decline in profit and performance. Similarly, traditional bookstores such as the Borders bookselling chain in the US have closed down due to the challenge from Amazon. The rise of e-commerce, of companies like Alibaba and Amazon in recent years, mean dealers and retail stores generally must re-engage with their customers (Tan, 2016).

• The advance of various forms of digital media in the changing technology space. This has seen the music industry moving from CDs and DVDs to online downloading through iTunes and Youtube. Similarly the digital camera has put the traditional photo film product out of business (Tan, 2016).

• The highly innovative and technological smart phone, with a range of possible apps, has opened up new mobile horizons for all enterprises including SMEs.

In summary, the disruptions caused by new technology require the innopreneur to re-design and re-engage with their customers; success can mean survival in the challenging changing and disruptive business environment.
4. Knowledge Innovation Management Process Map

A detailed summary of the above processes is set out in Figure 3 as a Knowledge Innovation Management Process Map. The purpose of a knowledge innovation management process map is to assist the business founder, entrepreneur and *innopreneur* in creating a long term management plan and processes. It draws on the four modes of the knowledge innovation management process.
## Figure 3 – KM Process Map

<table>
<thead>
<tr>
<th>Innovation Low</th>
<th>Innovation High</th>
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| Knowledge Creation (Innovation creation)  
  • Start-up | Knowledge Change (Innovation-change)  
  • *Innopreneurship* |
| Knowledge Conversion (Innovation commercialization)  
  • Commercialization | Knowledge Communication (Innovation-communication)  
  • Entrepreneurship |

Entrepreneurship

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5. Conclusion

In summary, the main premises of knowledge innovation management are innovation creation, innovation commercialisation and innovation-communication through the innovation-communication mix strategy and innovation-change through constantly reviewing, reinventing and re-designing their products and services, and re-engaging with their customers while targeting new customers in an ever-changing innovation space. In the disruptive to innovation space and new technology space, the innovpreneur needs continuously to redesign their products and services, and re-engage with their customers. Such innovpreneurs are more likely to survive in the modern challenging, changing and disruptive business environment.

References
