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Huawei: An Exemplar for Organizational Change in a Modern Environment¹

Huawei Technologies Inc. (hereafter Huawei), a world leading Information and Communications technology (ICT) solutions provider, has become the world's largest telecoms-equipment-maker by surpassing Sweden's Ericsson in its annual revenue in 2012 (The Economist, 2012).

Huawei's development is an extraordinary transformation. Its founder, Mr Ren Zhengfei, a veteran of China's Liberation Army, started Huawei as a one-man sales agent selling PBXs (Private Branch Exchange) in 1987. By 1993, Ren had built a Research and Development (R&D) team, and Huawei designed its very own digital PBX. From 1995, Huawei started entering overseas markets. Today, 25 years since Huawei started, this little known electronics manufacturer has reached sales revenue of US\$35.35 billion, employing over 150,000 staff around the world, and having a product presence in over 140 countries, serving more than one third of world's population (Huawei, 2013). From an unknown one-man sales agent to an international telecommunications equipment giant, this transformation is a quantum leap. One clear observation can be made about this case: Huawei is a Master of Change.

Situated in a fast changing modern environment and facing relentless international competition, Huawei has so far thrived. However, Huawei now faces a decision point. Given that continuous growth will yield increased pain, should Huawei choose to settle into their market and perhaps stagnate or should it reinvent itself and continue its youthful, but painful, path towards market growth?

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A Framework for Huawei's Change

Change is an essential skill all organizations must master in order to maintain a competitive and sustainable position in their market (Burke, Spencer, Clark, & Coruzzi, 1991, p. 88; Church, Siegal, Javitch, Waclawski, & Burke, 1996, p. 25; Jones, 2010; Kanter, 1983, pp. 37-40). One way to classify change can be taken from a model by Nadler and Tushman (1995). In this model, change can be ordered according to two dimensions. In one dimension the extent of a change ranges from incremental, which is small but continuous change events, to transformational, which is major change that will have a large impact on the organization. In the other dimension, change can be classified as either proactive, which is planned and in advance of market forces, to reactive, in which change is enacted in response to market forces. This model is shown in Figure 1. From these two dimensions, four change typologies can be derived: Tuning, Adaption, Re-orientation and Re-creation.



Figure 1: Types of organization Change (Adapted from: Nadler and Tushman, 1995, p. 24)

Each of these typologies is discussed below with special emphasis on how Huawei fits into each type.

Re-creation: When this type of change occurs, change is generally recognized too late, as a crisis is usually imminent or actual. Re-creations occur where time and resources are strained. The resulting change is desperate, broad, and irreversible. Organizations facing this type of change need to re-create themselves with fast, focused and furious effort (Jones, 2010). Nadler and Tushman (1995) refer to this as frame-breaking change in contrast to frame-bending as many elements of the organization are broken, discarded and replaced. “Frame” here can be understood as the organization’s existing systems.

Huawei is not afraid of “breaking the frame”, and it constantly employs “transformational” change. For example, when Huawei’s first 3G (third Generation) network was deployed in the Middle East, it was asked to supply mobile phones for its infrastructures. However, when all mobile phone suppliers refused to sell phones to Huawei, the company made the decision to develop its own mobile phones, which was a totally unknown business area for it. Today, Huawei has overtaken LG and is ranked number three in the global smartphone market share, right after Samsung and Apple (Fingas, 2013). These activities can be categorized as “Re-creation” according to Nadler and Tushman’s model, as opposed to “re-orientation”, as Huawei was forced into the mobile phone business rather than entering into it with an anticipatory mindset.

Tuning and Adaption: Tuning is a change which occurs in anticipation of external forces and adaptation occurs in reaction to external forces. However, both of these result in incremental or gradual change (Jones, 2010).

Huawei embraces these incremental changes as a way of straddling its market opportunities. A tuning approach is used in its technology development, management processes, and marketing strategies. The

company constantly releases technology updates and rapidly delivers customized solutions in accordance with customer feedback to create maximum value (The Indian Express Ltd., 2010). For example, in the traditional wireless data access field, Huawei constantly improves its products, including product appearance, functions, and user experiences. In the machine-to-machine field, Huawei provides customized solutions for vehicles, power, and other industries (Huawei, 2013; Morris, 2013).

These incremental changes with both reactive and proactive approaches allow Huawei to refresh and remain in a state-of-art presence in the field.

Re-orientation: Change which commences in anticipation of external forces, but is discontinuous and transforming, is called re-orientation. This type of change results in major changes to core elements of the organization, “including identity, values, culture, strategy, and structures” (Jones, 2010, p. 7).

Huawei set its eyes on newer technologies, such as LTE (Long Term Evolution), and delivered the world’s first commercial LTE network early in 2009 (Huawei Annual Report 2009). In 2012, Huawei also launched its Ascent smartphone series, shifting focus from feature phones to smartphones and entering into the lucrative smartphone market. These changes demonstrate Huawei’s “Re-orientation” by proactively “bending the frame” in the change management process.

Diagnosing Huawei’s Change

A fundamental question to ask is “why does Huawei need to change, and what does it need to change?” A “diagnosis” of Huawei needs to be performed to be able to answer it squarely.

Organization Change Diagnosis Theory

Many theories of organizational diagnosis exist, and this case study refers to Burke-Litwin’s (1992) Model for guidance. For the purpose of this case study, the module has been adapted by highlighting and classifying the elements in the original module into three levels, as set out in Figure 2.

Overall, the model is an open system which has its input, output, and its internal throughput system. There are causal linkages among the elements in this open system. More impacts are exerted by the elements on the top level than on the lower level, as they determine the organization’s strategy, goals and resource distribution. The relationships between the levels and elements affect the process of change, and individual and organizational performance. The model also distinguishes the two change types - transformational and incremental changes. In which, it points out that transformational change involves the elements on higher level (level 1 and 2), and incremental change is associated with the elements on level 3.

These elements are discussed and analyzed in the following sections (Sections *External Environment* and *Inside Huawei*).

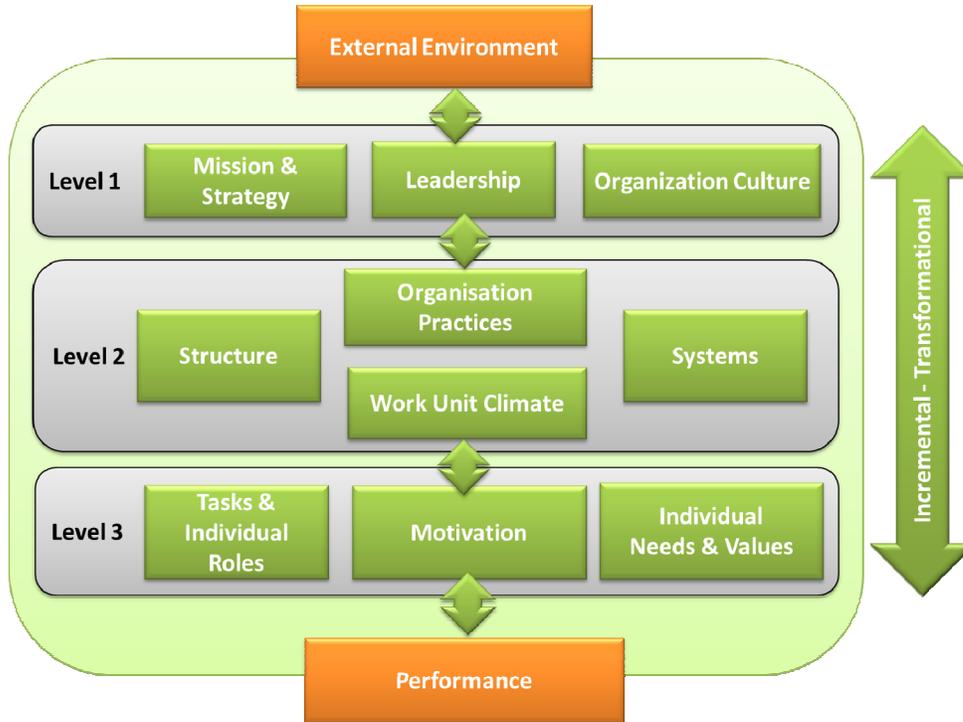


Figure 2: Adapted from the Burke-Litwin (1992) Causal Model of Organizational Performance and Change

External Environment

Political Element

Huawei’s transformation has been subject to political pressures.

In February 2011, Huawei was blocked from acquiring the assets of a US networking hardware start-up. In the same year, the US again blocked Huawei from participating in the construction of a nationwide public-safety LTE network. In October 2012, the US congress claimed that Huawei posed security risks to the US, because “their equipment could be used for spying on Americans” (Gorman, 2012).

In the same year, the Australian government banned Huawei from bidding to build the national broadband network, and it further overruled a push to relax the ban in 2013 (Financial Review, 2013).

These incidents reflect the political and security barriers for Huawei, while some of them are genuine, many were created by the target nation’s desire to protect their own industries (Greenberg, 2012). However, whatever the intention is, they have a large impact on Huawei’s reputation and growth.

Economic Element

The world’s industrial economies have been charting a downward spiral since the Global Financial Crisis (2007-2008). In particular, Europe and the European Union have met severe economic pressures. Europe is a key international market for Huawei. As a result, the economic downturn continues to affect Huawei’s key customers – the telecommunication carriers who continued to survive despite tough economic conditions – were, and are going to continuously seek to improve their financial position by postponing their investments in infrastructure and while cutting overall costs.

Technological Element

Huawei's products are largely in the category of computing hardware, which is characterized by rapidly changing technology and evolving industry standards. As Moore's law observes, these computing products become obsolete about every 18 months, and new designs and products are a norm of industry expectation and practice. Huawei must manage its technological risk in this rapid product cycle, and at the same time, create new products and services to respond to the changing technological environment through continuous high levels of technological innovation.

The Telecommunications Industry

The telecommunications industry is at a growth stage in its new industry life cycle. Its markets are intensely competitive, factors such as price, functionality, service quality, and timing of new products and services can severely affect competitiveness. Huawei's competitors include Alcatel-Lucent, Cisco Systems, Datang Telecom Technology, Hewlett-Packard, Juniper Networks, Ericsson, Nokia Networks Solution, Motorola Solutions, NEC, and ZTE. These competitors work hard to maintain their own share of the total market leading to high competitive pressure.

An additional peculiarity of this industry is the rapid technological development and the artificial threshold for premature obsolescence. For example, mobile phones are released with accelerated technological functionality to a market whose consumers have heightened expectations for technical advancement and perfection. This results in hastened product development timeframes and short life cycles with lower returns on investment. Further, the industry's consolidation (e.g., the merging of large players and the evolution of the global telephone companies) has largely increased the bargaining power of the telecommunications carriers. These novel factors create ferocious market conditions, what Kim and Mauborgne (2005) call a Red Ocean environment. These factors add pressure to Huawei to deliver their products to the market, especially in terms of their ability to do this sustainably.

Merger and Acquisition Pressure

In the past decade, mergers and acquisitions have been a feature of the industry. For example, in November 2006, Alcatel and Lucent completed a US\$11 billion merger, forming one of the world's leading communication solutions providers (CBC, 2006). Nokia, the world's largest manufacturer of mobile phones, and Siemens Information and Communications, merged their mobile and fixed-line phone network equipment business in order to create one of the world's largest network firms. The resulting firm, Nokia Siemens Network, was created in June 2006 (The Guardian, 2006). This merger has recently been followed by another merger for US\$7.2 billion between Nokia and Microsoft (Reuters, 2013).

In these cases of mergers and acquisitions, Huawei's competitors benefited through increased multi-national reach, improved revenue generation and cost savings and enhanced global capacity for research and development. Such mergers and acquisitions pose an ongoing great threat to Huawei's market share.

Despite these threats to its market share, Huawei has not only maintained its share in the market, but has managed to increase it (Huawei, 2013). This is largely due to its ability to manage organizational change.

Inside Huawei

Mission & Strategy, Leadership and Organizational Culture Elements

Huawei has a sharp vision, a vision to enrich life through communication. It focuses on its customers' challenges and needs and strives to create maximum value through excellent service (Huawei, 2013). It has three pillars of businesses, reaching from the telecom carrier network, to the enterprise business, and

the consumer business. Its strategy (see Figure 3) can appear to be technology centered, but two key themes are apparent – customer-centered innovation and win-win cooperation.

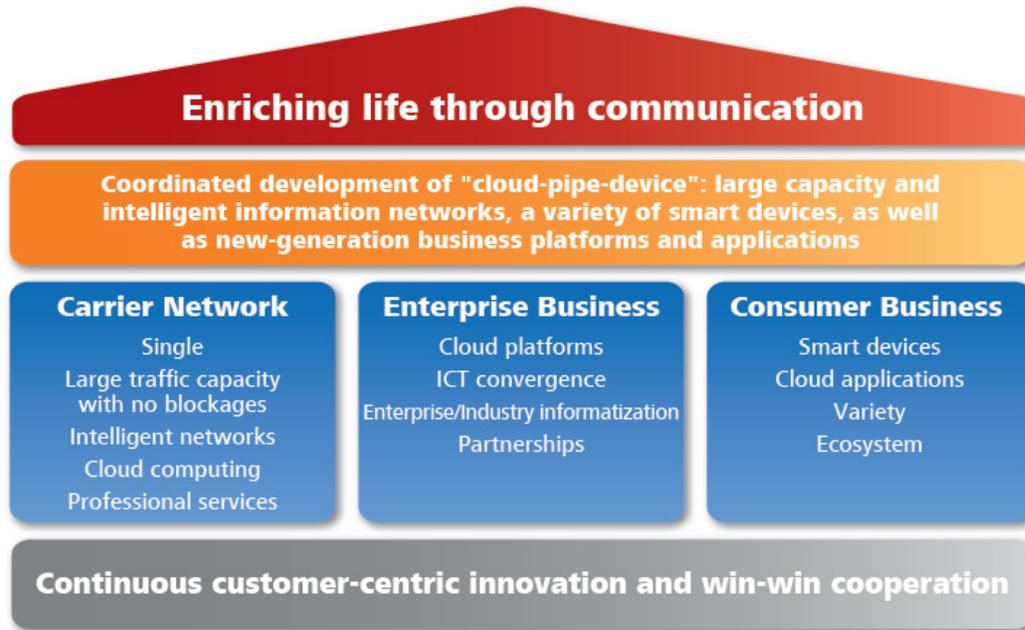


Figure 3: Huawei Strategy (Sourced from Huawei Annual Report 2012 (Huawei, 2013))

In terms of its leadership, Mr Ren is said to be a philosophical, reflective, visionary and inspirational leader, who exerts great influence on Huawei’s culture, morale and organizational development (Lou, Cacchione, Junkunc, & Lu, 2011).

Confucianism permeates in Huawei’s organizational practices, stressing diligence, harmony, and respect. From the perspective of Hofstede’s (2001) dimensions of national culture, Huawei scores high on collectivism and long-term orientation, which can be seen through its investments in venturing in the European market. In which case, it sacrificed profits in early business dealings in order to gain ground and market share. Huawei also has a “Mat culture”, which is often-mentioned in literature and news articles (Lou et al., 2011; The Economist, 2011). Each of Huawei’s staff has a mat under their desk, which is for an after-lunch nap or when staff need to rest when working late. Such a practice further reflects Huawei’s climate of diligence and industriousness. To encourage and enforce its employees’ dedication, Huawei rewards its employees according to their performance and contribution, and by offering growth platforms and development opportunities (Huawei, 2010).

Structure and System Elements

The Burke-Litwin Model (1992) includes the elements of structure and systems when defining the internal system. Observations about Huawei’s governance can be made (Refer to Figure 4).

First, its governance structure is clearly defined with a supervisory board and board of directors, which is supported by key function committees. Second, it has well-defined Business Groups (BG) with well-shared group central supported functions. Huawei’s departments widely adopt the shared service model to consolidate global resources (Annual Report 2012). The Economist awarded Huawei the prestigious ‘Corporate Use of Innovation Award’ in recognition of its remarkable ability to create particularly innovative environments and quickly respond to market trends (The Indian Express Ltd., 2010).

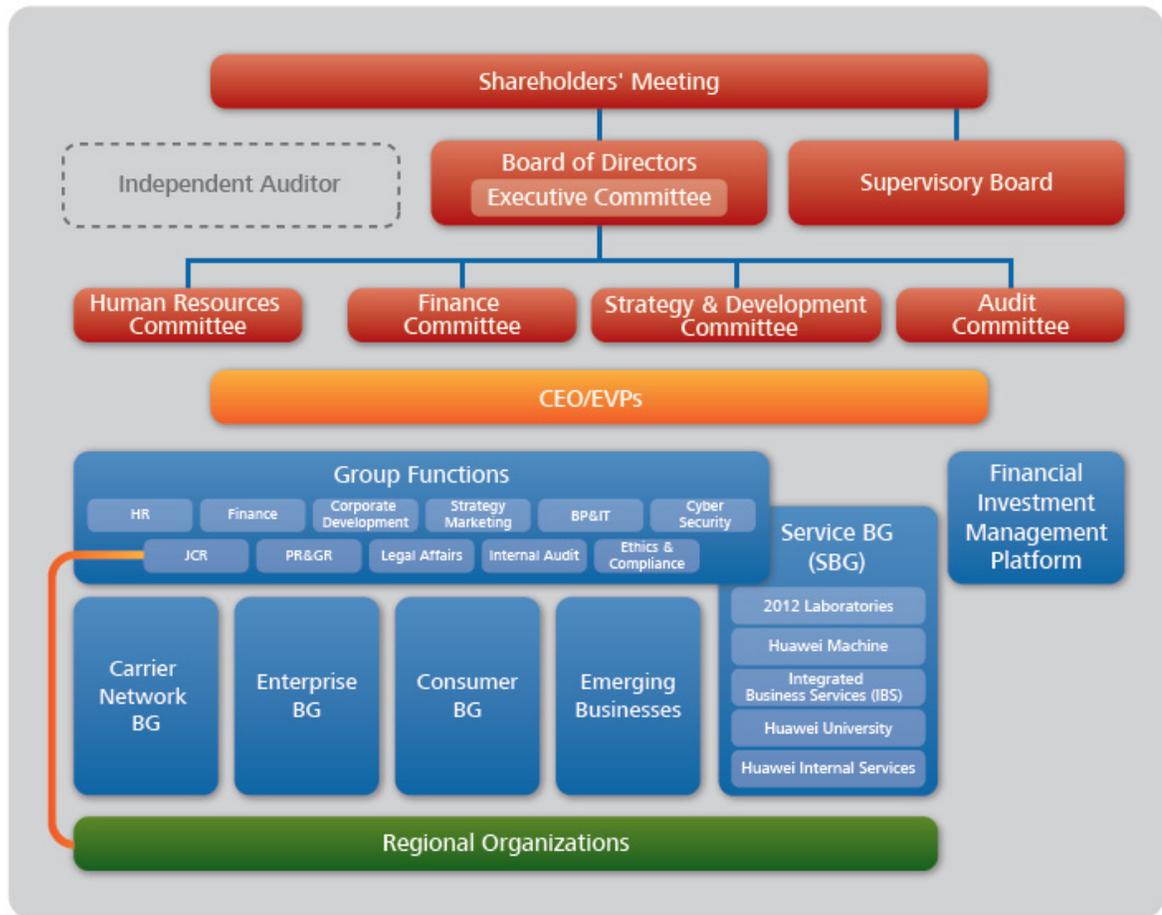


Figure 4: Huawei's Corporate Governance Structure (Sourced from Annual Report 2012)

Huawei also employs world-class management systems, which are based on ISO9001 (an international standard for quality management systems) and TL9000 (an international standard for quality management systems of the telecom industry); through these systems, Huawei has developed its capabilities to self-assess and improve its services and products on an ongoing base (Huawei, 2013). Huawei also reviews its performance through balanced scorecards, through which organizational performance goals are measured at all groups and levels down to an individual employee.

These structure and systems ensures Huawei's vision and strategy are well understood across the company, and it aligns its vision and strategy to its organizational and individual objectives.

Individual Roles, Motivations and Values Elements

Individual motivation, needs/values, and performance are elements included on the third level in the open system of the adapted module; they are identified as the key elements for the incremental changes, as they are related to day-to-day operations.

Insight into the motivation and value of its employees can be gained from the quarterly magazine published by Huawei for its employees, called "Huawei People". The magazine, comprising many stories that

are written for and by Huawei's individuals, gives the overall impression of high moral, high loyalty, and the individual value that aligns with the value of the company.

These individual roles, motivations and values impact on each other, and also feedback to impact the higher levels.

Huawei's Transformation

As discussed above, Huawei operates in an environment, which is subject to change (political, economic, etc.). In order to succeed in this environment it has developed a unique culture combining winning aspects from its aspiration, drive, values, and its staff. It has faced, and will continue to face, many changes in order to survive and thrive. A number of critical changes have been observed in Huawei, which have tapped into this culture.

From Imitator to Leader

Unsurprisingly, Huawei has transformed itself from a technology imitator to technology leader (Liu, 2013). This is not incidental; this is a clear reflection of its re-orientation, adaption, tuning, and recreation strategies.

Huawei has about half of its staff working on R&D with over 16 R&D centers and 28 joint innovation centers around the world (Huawei, 2013). Its wide range of products includes not only the traditional network equipment, but also wireless infrastructure, optical networking, datacom, enterprise solutions, and handsets. It was a world leader in designing and employing the world's first 3G network, it has led, and is continuing lead, the world in the development of the 4G LTE (Long Term Evolution) network (Telecoms 2012), and it has recently delivered the world's fastest high performance computer (FNN, 2013). In particular, with its far-sighted vision, while 4G is still new, it has already commenced work on 5G, which is expected to be commercially delivered by 2020 (Forbes, 2013). 5G will give mobile broadband speed up to 10 gigabytes – 100 times faster than 4G mobile.

These R&D initiatives have played a critical role in propelling Huawei through this change into a position of global leadership.

From China's Countryside to Developed Countries

Huawei's initial markets were in China's rural countryside. Its well-quoted strategy during this period was to encircle countryside first and then capture cities (Business Today, 2009; The Economist, 2012; IntoChina.Asia, 2012). Through the years, its international forays included Southeast Asia, Russia, Africa, Latin America, and Europe. Over the years, Huawei has tuned and adapted its strategy to "developing countries first, developed countries after" (Frost & Sullivan, 2007). This tuning and adoption allowed Huawei to gain sustainable traction in the international market, and helped it to transform its internal organizational structure and gear the company towards establishing an international presence. In 2004, Huawei's overseas sales had surpassed that of the domestic market. It now has most of Europe's major telecommunications corporations among its customers. Its Europe, Middle East and Africa region contributed US \$12.4 billion to its revenue, nearly one third of its global revenue (ZDNet, 2013).

Global Operation Expansion

Even with the uncertain political environment, Huawei strategically set out to gain economic and technological advantages in different geographic areas. It has employed "re-creation" to increase its speed of internationalization since 2001 by creating its localized operations globally. The following examples demonstrated Huawei's global expansion.

- Initially launched a small software development operation in India in 1999, then opened an R&D center in 2001. The Indian R&D center now is the largest and most important asset outside China.
- Launched FutureWei, a fully owned US subsidiary, in 2002, demonstrating its commitment to international business, and in particular, to the North American market.
- Huawei's European headquarters are strategically located in the UK in order to tap into this dynamic and innovative telecommunications market and raise its profile in the European markets.

Building Strategic Alliances

Entrepreneurial partnerships have become pillars of an overall international venturing strategy for Huawei (Lou et al., 2012). Huawei applies a "re-creation" strategy to make multiple strategic alliances with universities and companies, including competitors and world leading companies, such as Intel, Texas Instruments, Altera, Motorola, Oracle, and Sun. Some of Huawei's joint ventures are listed below:

- a joint venture with Siemens for developing 3G mobile communication technology products;
- a joint R&D center with Motorola to develop UMTS technologies;
- a joint-venture with security firm Symantec to develop security and storage solutions to market to telecommunications carriers; and
- a joint venture with a UK-based marine engineering company, Global Marine Systems, to deliver undersea network equipment and related services.

Huawei's mergers and acquisitions support its strategy to become impregnated with its partner's technology by internalizing it, leading to a more efficient and cost effective method than developing the technology in-house, and at the same time increasing market reach and leveraging brand equity (Lou et al., 2012).

Managing the Change

Change needs to be managed, otherwise failure may result. How did Huawei manage its change?

A Change Agent

Huawei is a great change agent. Its entrepreneurial growth strategy is in many ways reflected in the entrepreneurial characteristics of the change agent - Ren Zhengfei (Luo et al., 2012). The change agent's critical role cannot be over played enough.

Ren is the change catalyst and the agent who initiates, sponsors, leads, and executes changes. For example, he realized the necessity of expanding abroad as early as 1995 and pointed out, "We should not wait to expand abroad until everything is ready. Instead, we will get familiar with the markets and then conquer them in the process of learning from our international competitors..." (Luo et al., 2012). When he realized the importance of having international management operations, he made the decision to spend up to 3% of revenues buying advice from Western companies like IBM (The Economist, 2012).

With Ren's far-sighted vision and unwavering support and drive, Huawei was undergoing constant organizational change leading it to become an indisputable telecommunications giant.

Sense of Urgency

Sense of Urgency is the first and most critical step in John Kotter's 8-step process of leading change (Kotter, 1996). An "emotional stir up" is critical in order to "break open the shell of complacency and self-righteousness" in organizations (Lewin, 1951, p. 229). Huawei has this sense of urgency well induced.

Ren once said, “We don’t have the reputation and networks that our international rivals do. Thus we have no choice but to make strenuous efforts. We can make good use of our rivals’ coffee time” (Lou et al., 2011). He cautioned his employees that that complacency leads to crisis in the highly competitive telecommunications market. “It is spring now, but that means winter is not too far away, so we will have to ponder about the problems in winter during spring and summer... Huawei must prepare itself” (Wagstaff & Yee, 2012). Ren shares his deep pools of insight about life, strategy, and the company through speeches and publications with his employees. This strong sense of urgency imbued by Ren permeates in Huawei and stirs Huawei’s employees to constantly change and transform.

Collective Learning

Lank and Lank (1995) emphasize that the quality of individual and organizational learning is an important determinant of organizational effectiveness. De Geus (1988) also states that the ability to learn faster than competitors may be the only sustainable competitive advantage. Learning plays a pivotal role in organization development and change. Huawei is a living example of applying organizational learning, which consequently renders it a sustainable competitive advantage.

Ren once said, “We have not yet got rid of our guerrilla style, and the new management style for international expansion has not yet established. ... We must learn from our international competitors” (Lou et al., 2011). In order to catch up to the international best management practice, Huawei imported a world-class management system of technology from IBM to establish and refine the technology management. It actively cooperates with leading management and consultancy companies such as IBM, Hay Group, KPMG, and PwC.

On the R&D front, after the realization that it needed to develop its own technological capabilities because of the fierce competition amongst manufacturers, Huawei tirelessly learned from its competitors and collaborators in order to catch-up and Lead (Liu, 2013). As Barbieri et al. (2013) commented, Huawei’s “double face identity” allows it to be a contributor as well as be a learner in alliance with different leading prestigious companies. The ability to learn from its alliance-based network from leading players has been critical and a springboard for Huawei to shorten its learning curve, stimulate R&D investment and enhance its technological innovation (Zhang & Duysters, 2010).

These collective learnings allow Huawei to acquire and assimilate essential advanced knowledge to increase its global profile.

Communication

Organizational scholars have long acknowledged the importance of the communication process in enabling successful organizational change. Lewis et al. (2009) in particular, demonstrate how communication can enhance understanding of change implementation activities.

Huawei has established information and communication channels to ensure timely acquisition of information, including its online forum for employees, communication channel for customers & suppliers, and the management meetings at all levels. Managers and process owners regularly organize training programs on business process, internal control to ensure information is up-to-date and is available (Huawei Annual Report 2012).

Huawei’s quarterly magazine, [Huawei People](#), is not only an inspiring read but a powerful communication vehicle – communicating the vision and inspiration for its company and its employees.

Looking Back

Huawei is a master of change. It has gone through tremendous transformational changes as well as incremental changes on a day-to-day basis. It tackled these changes in a proactive way, as well as, in some circumstances, reactively.

Through diagnosing Huawei's change needs, we understand that the company operates in a particularly complex political environment and an uncertain economic environment, along with extremely competitive technological and industry pressure. Inside Huawei, it is a well-designed machine. It has its own unique vision, value, and culture; its own structure and systems; its employees and their motivation. The machine is run from the very top with a unified vision under the uncertain external environment, the machine has feedback from every element within it, and it produces the results we see today.

Huawei has transformed. It changed itself from a technology imitator to a technology leader. Its markets have expanded from the mere countryside to the whole world. Its operations have also expanded internationally in order to become a real international player, learn more and build stronger position. It has purposely created strong alliances with partners and competitors alike to speed up its development process and again build a stronger position.

In terms of change implementation, Huawei has a great change agent, a founder, who is visionary and decisive. He imbues a strong sense of urgency and leads the change. Huawei's organizational development is highlighted by on-going learning. It learns from world-class management processes; from its leading technologies; and, anything beyond to allow it to achieve its vision.

Looking Forward

Huawei is at a high point and a critical point. It is an extraordinary and inspiring story, exemplifying Napoleon's awakening dragon prediction which he made two hundred years ago. Without going through tremendous changes and transformation, Huawei would not have achieved what it is today. However, the future is tenuous for all companies: the once giant telecommunications company Nortel is now bankrupt; and the once business-favorite Blackberry is now in demise. Huawei is facing even more challenges ahead of it.

How can Huawei sustainably maintain its competitive position in a Red Ocean (Kim & Mauborgne, 2005) environment? How can it overcome the well-established perception that its products and services are always cheaper than its competitors' and possibly have less superior quality? How can Huawei not become complacent and stagnant in the face of its long lasting success?

Perhaps Huawei will need to extend into new markets by developing a new breed of products and services which have lower market competition; or perhaps Huawei will need to focus on internal operations ensuring they maintain an edge through exceptionally efficient and effective management and production; or perhaps Huawei will need to reimage itself by creating and promoting high-end products and services which are largely associated with superiority; or perhaps Huawei will need to purposely nurture its staff and executive shaping them into scarce and immutable resources and successful agents of change giving Huawei a sustainable competitive advantage.

Regardless of what the strategies are, we are certain that Huawei will need to go through continuous change to remain at its current front-runner position, and most importantly at some point in time it will need to implement radical changes in order to reinvent itself. However, the final solution remains elusive.

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