Innovation Leadership
創新型領導

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We are living in an age of uncertainty. As new technologies emerge, not to mention with short product life cycles, companies are rising and falling, at a much faster pace than ever before. This phenomenon is further amplified by increasingly faster changes in customers' demands for a new mix of products and services. In addition, there is environmental uncertainty which refers to the uncertainty of the macroeconomic environment and government policy (Furr, N., & Dyer, J., 2014). As a result, product cycle is not only much shorter than before but also manifested an abrupt sigmoid curve at the end stage. It has been proven that leadership is an influencing factor in how innovation occurs in organization. Leadership is one of the most critical factors for determining the degree to which employees strive for innovation (Amabile et al., 2004; Peterson, 2009). Trait, skill, style, servant approach is leader centric. Situational, contingency, and path-goal theory is follower centric. Leader-member exchange, transformational leadership is process centric while adaptive leadership is leader, follower, and process approach. The progression of leadership theories demonstrates an evolution from command and control, to transformational, to relationship and networking. However, the traditional linear thinking does not align with the world filled with uncertainties, interrelationship, and self-organization, particularly in addressing the "How" which is an art rather than a science. In fact, organizations need the capacity to adapt their approaches, their economic models, their thinking and their leadership in order to survive in the today's contemporary environment. Adaptive leadership embraces the ideal more readily than older leadership approaches which are insufficient to solve the complex problems of today's business environment (DeGenring, S. 2005). As such, this study tries to explore "How" leadership can thrive innovation through an ethnographic approach to a number of innovative Companies in Hong Kong, by which best practices can be shared and advocated

Literature review

Leadership is a process whereby an individual influences a group of individuals to achieve a common goal. A summary of leadership theories based on Northouse, P. G. (2016) has been tabled in Appendix A for reference. The contemporary ones are the Authentic, and Adaptive Leadership. They are applicable to innovation in one way or the other. Back to 2002, a 360-degree leadership assessment tool called the leadership Practices Inventory (LPI) had been created by Kouzes, J. M. and Posner, B.Z. (2002) to assess individual leadership competencies. It consists of five fundamental practices: model the way, inspires a shared vision, challenge the process, enable others to act, and encourage the heart. A more extended leadership feedback instrument presently used in executive programs called the Global Leadership Life Inventory (GlobeInvent) which identified twelve dimensions viewed as essential for exemplary leaders: Envisioning, Empowering, Energizing, Designing and controlling, Rewarding and giving feedback, Team-building, Outside orientation, Global mindset, Tenacity, Emotional intelligence, Life balance and Resilience to stress. The reliability and internal consistency had been validated by Kets de Vries et al., (2004). Another scholar Goleman, D. (2000) derived six basic leadership styles from different emotional intelligence competencies:

我們生活在充滿不無確定因素的時代。新技術的興起，產品生命週期變短，企業興起和衰敗的速度，達到了以前所未有的速度。隨著消費者對新型組合的產品和服務需求的不斷改變，這種現象被進一步放大。另外，環境的不確定性指的是宏觀經濟和政府政策的不確定性(Furr, N., & Dyer, J., 2014)。因此，產品週期不僅比以前更短，而且在最後階段將呈現S型曲線。經證明，領導能力是企業創新的影響性因素。領導能力是決定員工努力創新程度的一個關鍵性因素之一(Amabile et al., 2004; Peterson, 2009)。特色，技術，風格，僕人方式是以領導人為核心的。情景，突發事件和路徑-目標理論以下屬為中心的。領導成員變動，變革領導能力是以流程為中心；而適應領導是以領導，追隨者和過程方法為中心。領導理論的發展說明了從命令和控制到變革，聯繫和交際網的演變過程。然而，傳統的線性思維不滿足如今的世界。因為它充滿不確定因素，相互聯繫以及自我組織，尤其是在處理「怎麼樣」的問題時，這是一門藝術而不是科學。實際上為了在當代環境中生存，企業需要能力去改變方式，經濟模式，思維模式以及自身的領導能力。與未能解決現今商業環境複雜問題的老套領導方法相比較，自適型領導更加富含新穎的想法(DeGenring, S. 2005)。同樣的，本研究試圖探討「怎麼樣」領導，通過民族志研究法對香港若干創新企業的創新研究，共用最佳實踐和主張。

文獻綜述

領導能力是通過個人影響一群個人，從而實現共同目標的過程。Northouse P. G.(2016) 的一個領導理論的概括可參照附錄一。當代領導是真實的和自我調整的，不管如何都適用於創新。回溯到2002年，Kouzes, J. M.和Posner, B.Z. (2002)創造了一個稱測評工具(LPI)的360度的領導力評估工具，用來評估當代個人領導能力。它有五個基本的做法：調整方式、激發共同的願景、挑戰過程、鼓勵他人行動和激勵內心。全球領導生命清單(GlobeInvent)是目前在高管課程使用較廣的領導回饋工具，定義了領導者眼中必不可少的十二維度：展望、活力、設計和控制、獎勵和回饋、團隊建設、外部引導、全球思維、堅韌、情商、生活平衡和抗壓能力。Kets de Vries et al., (2004)已證明可靠性和內部一致性是有效的。另一位學者Goleman, D. (2000)從不同的情商能力推導出六種基本的領導方式：

- The coercive style. A "Do what I say" approach works best in a crisis and turnaround situation.
- The authoritative style. A "Come with me" approach works well when a new vision is needed.
- The affiliative style. A "People come first" approach aims at motivating people during stressful circumstances.
- The democratic style. A "Give worker a voice" approach for building buy-in, consensus or input from valuable employees.
- The pacesetting style. A "Leader sets standard" approach works best with a highly motivated and competent team to get quick results.
- The coaching style. A "Personal development" approach for improving employee performance and long term strengths.

Innovation leadership is defined as the synthesis of different leadership styles in organizations to influence employees to produce creative ideas, products, services and solutions (Adjei, D. 2013). There are two components of Innovation Leadership: An innovative approach to Leadership, and Leadership for Innovation. The former implies new thinking and method in leadership while the latter is using this new approach for Innovation method.

A number of studies on the influence of leadership theories on creativity and Innovation had been explored over the years, a broad review of all of leadership theories demonstrate that they are incomplete without the attribute of innovation leadership (Alsolami et al., 2016). As illustration, Dyad leader– member relationships (Liao et al., 2010), transformational leadership (Shin, S. J. & Zhou, J. 2003), and servant leadership (Neubert et al., 2008) has been found having positive influence on employee creativity which is the most important determinant of innovation. Servant leaders positively promote the individual and the collective's leader identification which in turn foster individual creativity and collective innovation (Yoshida et al., 2014). There are direct effects of authentic leadership on team innovation, cross-level effects on creativity, and also mediating effects of perception of support for innovation with regards to perceived authentic leadership (Černe et al., 2013). Chan et al., (2013) that revealed transformation leadership is positively associated with innovation climate, whereas development exchange leadership is negatively associated with innovation climate in the construction industry. A transformational leader motivates followers to achieve higher levels of performance by nurturing their personal value systems and facilitating their creative ways of thinking, fostering organizational innovation through charismatic, inspirational, intellectually stimulating, and individualized consideration leadership. In contrast, development exchange leadership motivates followers with extrinsic rewards that emphasizes masculine traits and does not facilitate innovation in an organization because innovation is not a one-off task but a multistage process that requires nurturing for a continuous innovation climate to be maintained. The findings are applicable in other industries. CEOs' transformational leadership positively influences corporate entrepreneurship, which in turn can improve innovation performance, the plotted interactions; however

- 強制型。「按我説的做」的方法在危機和轉型時期最有效。
- 權威型。「跟我來」的方法在組織需要新的方向時是最合適的。
- 親和型。「以人為本」的方式旨在激勵處於壓力環境中的員工。
- 民主型。「給員工發言權」的方法用來建立認可，形成共識或者招聘高品質員工。
- 榜樣型。「領導設置標準」的方法能夠利用團隊強烈的動機和能力來快速獲取結果。
- 指導型。「人員培養」方法用來提高員工業績和長期能力。

創新領導指企業內部的不同領導風格綜合影響員工產生創意、產品、服務和解決方案(Adjei, D. 2013)。創新領導能力包括兩部分：以創新領導方法領導，以領導鼓勵創新。前者意味著在領導方面有新的思路和方法，而後者是使用這種新的方法來創新。

這些年來，一些研究探討了關於創造力和創新領導理論的影響，廣泛研究所有領導理論發現這些理論因缺乏創新領導屬性而不完善(Alsolami et al, 2016)。實例證明，二元領導－成員關係(Liao et al., 2010)，變革型領導(Shin, S. J. & Zhou, J. 2003)，和僕人領導(Neubert et al., 2008) 對員工的創造力產生積極的創造力，這是創新的決定性因素。僕人式領袖有助於識別個人和集體的領導者，反過來又促進個人的創造力和集體創新(Yoshida et al., 2014)。Cerne et al., 2013認為真實的領導對團隊創新有直接影響，交叉水準影響，及支持創新的調節影響。Chan et al., (2013)表明，變革領導和創新氣氛有積極聯繫，而發展交流式領導在建築行業的創新氛圍有負面影響。

變革型領導人激勵下屬實現更高水準的業績，通過培養他們的個人價值體系和創造性思維，促進企業創新魅力，鼓舞人心，智力刺激，個別關懷領導。反之，發展交流領導用外在的獎勵來激發下屬，強調陽性特質不會促進企業創新，因為創新不是一次性任務，而是一個分階段進行的過程，需要持續營造創新氛圍。這項結果同樣也適用於其他行業。CEO的變革型領導積極影響著企業事業，從而提升創新績效，交互影響；但如果企業的科技定位太低，CEO的變革型領導也會對公司的創業和

CEOs' transformational leadership may have negative effects on corporate entrepreneurship and innovation performance if the technology orientation of the corporate is too low (Chen et al., 2014). Kesting et al., (2016) developed a framework putting directive and participative leadership, interactive leadership, charismatic leadership, transformational leadership, transactional & instrumental leadership, strategic & CEO leadership, and shared & distributed leadership into four generic dimensions: people, means, effects, and goals, and found that different innovation stages and types raise different demands on leadership. All these studies reveal the relation of leadership and innovation; however the answer to the question of "How" to lead innovation remains sketchy.

Innovation process is a nonlinear social process that requires complex and nonlinear behaviours (Weberg, D. 2016). There is no one-size-fits-all leadership style can assure successful implementation of innovation under this uncertain environment. The best leaders don't know just one style of leadership. They are skilled at several, and have the flexibility to switch between styles depending on the circumstances. The innovation leadership thus have to be adjusted accordingly as disruptive technologies are emerging every day. As such, Uhl-Bien, M. and Marion, R. (2008) posits the complexity leadership theory which recognizes the dynamic interactions within organizations as they change, create innovation, and evolve with a focus on complex relationships and network interaction. It consists of three leadership behaviours: administrative, adaptive, and enabling. Administrative leadership is conceptualized as the formal hierarchy of the organization. Adaptive leadership is the source of change arising from the diverse opinions, conflicts, and heterogeneity of the system. Enabling leadership brings together diverse agents in a system and creates a catalyst for the execution of adaptive leadership. Based on the complexity theory, Weberg, D. (2016) identified seven innovation leadership characteristics as influencing the movement of the organization toward adaptation of changing conditions: boundary spanning, risk taking, visioning, leveraging opportunity, adaptation, coordination of information flow, and facilitation.

- Visioning: Groups of interconnected agents display the characteristic of visioning organization. Formal leaders provide input and suggestions but not create the vision in isolation.
- Leveraging opportunity: looking for creative solutions to opportunities that present themselves in the organization and in the environment.
- Coordination of information flow: enabling leadership behaviours as team members influence one another by changing how artefacts and values are communicated to influence how other members perceive an innovation.
- Risk taking: experimenting with untested technologies or practices and gather information about them.
- Boundary spanning: the process of making connections to otherwise unconnected groups.

Their findings are in fact echoed the research conducted by Zenger, J. & Folkman, J. (2014) in defining the traits of

創新績效產生負面影響(Chen et al., 2014)。Kesting et al., (2016)開發了一個框架，把指導和參與式領導、互動式領導、魅力型領導、變革型領導、事務及指導型領導，戰略及CEO式領導、共用和分散式領導分成四個主要維度：人力、方法、效果和目標，並發現不同創新階段和類型，對領導提出了不同的要求。這些研究表明，領導力和創新的關係；然而，關於「怎麼樣」去引領創新的答案仍是不清晰。

創新過程是非線性的社會進程，需要複雜的非線性行為（Weberg, D.2016）。沒有萬能領導風格可以保證在這個不確定的環境之下成功創新。最好的領導人也不是只懂得一種領導風格。他們擅長根據情況靈活轉變風格。因此，創新領導必須根據每天出現的顛覆性技術做出相一致的調整。就此，Uhl-Bien, M. and Marion, R. (2008)提出了動態相互作用的複雜性領導理論，認同企業變化，創新和發展之間存在著動態互動，重點關注複雜聯繫和網路互動。該理論組成了三種領導行為：行政、適應以及運用。行政型領導被概念化為正式組織的層次結構。適應型領導是不同意見產生，衝突和系統不均勻性的源頭。運用型領導彙集體系中的各種代理，並創建一個適應型領導的執行催化劑。基於複雜的理論，Weberg, D. (2016)確定了七大創新領導作用的特點是影響組織適應環境變化的動向：包括跨越邊界、承擔風險、願景規劃、利用機會、自我調整、協調資訊流動和引導。

- 願景規劃：相互關聯的代理組顯示的企業願景的特點。正式的領導人提供意見和建議，但不單獨創建願景。
- 利用機會：尋找創造性方案的機會並借此機會在企業和環境中展示自我。
- 協調資訊流動：運用型領導對團隊成員有相互影響作用，通過改變行為和價值觀，影響其他成員對創新的看法。
- 承擔風險：試驗未經檢驗的科技和實踐，並收集相關資訊。
- 跨越界限：與沒聯繫的集體建立聯繫的過程。

研究結果實際上與Zenger, J. & Folkman, J. (2014)的創新領導者特徵的研究結果相吻合。作者將訪談和360度回饋

innovative leaders. The authors combined the interviews with the 360-degree feedback, 10 distinctive behaviors emerged as innovation leaders which are listed below in descending order of importance:

- Display excellent strategic vision.
- Have a strong customer focus.
- Create a climate of reciprocal trust.
- Display fearless loyalty to doing what's right for the organization and customer.
- Put their faith in a culture that magnifies upward communication.
- Are persuasive.
- Excel at setting stretch goals.
- Emphasize speed.
- Are candid in their communication.
- Inspire and motivate through action.

The process of innovation is commonly viewed as being organized in two key phases: idea generation and conceptualization, and product development and launch. The former phase is full of uncertainty and requires creativity and vision while the second phase requires discipline and efficiency, and, very often, time is of the essence. These two steps obviously require different kinds of leadership but are inseparable and complementary in determining the success of the new venture. The first step can be further sub-divided into exploratory or value added innovation. Exploratory innovation refers to the generation of novel ideas, strategies, and solutions through the use of strictly open behaviors exhibited most often by transformational leaders. Value added innovation involves redefining exiting product and service, thus less risk taking. Transaction form of leadership is appropriate for this stage (Oke et al., 2009). Bel, R. (2010) posits two sets of leadership attributes for idea generation and conceptualization respectively. The first phase includes Inspiring, Driving, Enabling, and Advising while the second phase requires Advocating, Rewarding, Managing linkages, and Supporting. Dyer et al., (2009) posited the similar traits as the Innovator's DNA. Successful innovation requires two leadership skills, namely discovery skill for generating new ideas, and delivery skill for execution. The discovery skills include the ability of Associating, Questioning, Observing, Experimenting, and Networking. The delivery skills comprise of the ability of Analyzing, Planning, Detail oriented, and self disciplined. The capability of both skill sets in a Corporate should be well balanced to implement a cost effective successful innovation. Some people who may possess both skills are called developers. The details of two attributes are summarized in table 1:

結合起來，依照降冪重要性順序列出10種獨特的創新領導者行為：

- 戰略眼光優異。
- 客戶焦點感強 。
- 營造相互信任氣氛。
- 對企業與客戶服務充滿無畏的忠誠。
- 將信任融入溝通文化。
- 具有說服力 。
- 擅長設定彈性目標。
- 強調速度。
- 坦誠溝通。
- 行動鼓舞和激勵。

創新過程通常分為兩個關鍵階段：創意萌發和概念化，產品研發和發佈。前階段充滿不確定性因素且需要創造力和眼光，而第二階段要求紀律和效率，通常時間才是本質問題。這兩個步驟顯然需要不同種類的領袖，但在決定新企業的成功中是不可分割、相輔相成的。第一步可進一步分為探索性或增值創新。探索創新是通過變革型領導最常表現的嚴格公開的行為，而產生新奇的想法、戰略和解決方案。增值創新包括重新定義現存產品和服務，因此風險較低。領導的處理方式適合於這個階段(Oke et al., 2009)。Bel, R. (2010) 分別提出了兩個創意和概念化的領導屬性。第一階段包括激勵、驅動、啟用和建議，而第二階段需要宣導、獎勵、管理聯繫和支持。Dyer et al., (2009) 提出的類似創新者DNA的特質。成功的創新需要兩種領導技能，即發現萌發新想法的技能和交付執行的技能。這種發現技能的能力，包括聯想、質疑、觀察、實驗和關係網。交付技能包括分析、規劃、注重細節，和自律能力。企業中設置的這兩種技能的能力，在實現成本效益的成功創新時應該得到很好的平衡。具有這兩種技能的人被稱為開發人員。表一總結了兩個屬性的細節：

Discovery skill for generating new ideas, and delivery skill for execution

	Discovery skill 發現技能	Delivery skill
Bel, R. (2010)	• Inspiring: articulate a vision that people can identify with and that can generate excitement and commitment. • Driving: lead the people who make innovation happen. • Enabling: include the ability to listen, understand, and show empathy for the individuals involved. • Advising: guide and coach the teams and organizational units that are involved in innovation. • 激勵：闡述一種人們認同並產生興奮，做出承諾的願景。 • 驅動：帶領實現創新人才的能力。 • 啟用：包括傾聽、理解和對參與的人感同身受能力。 • 建議：引導並訓練團隊和參與創新的組織單位。	• Advocating: promote and defend a vision at a higher level. • Rewarding: reward—both positive and negative—to encourage desired innovation behaviors. • Managing linkages: ensure innovation-related activities in various parts of the organization are strategically aligned and coordinated internally, and bring external perspective inside, tap into ideas, resources, and technologies from the outside, or organize co-innovation with partner organizations for new solutions or systems. • Supporting: provide teams with the necessary resources and structuring tools to implement innovation. • 宣導：促進和維護較高水準的願景。 • 獎勵：優缺點都要獎勵，鼓勵創新動機。 • 管理聯繫：確保企業中有與創新有關的活動，在戰略上一致並與內部協調，並引進外部觀點，挖掘理念、資源和技術，或在新的方案或系統方面與搭檔合作創新。 • 支持：為團隊提供必需資源和工具完成創新。
Dyer et al., (2009)	• Associating: the ability to successfully connect seemingly unrelated questions, problems, or ideas from different fields. • Questioning: ask questions that challenge common wisdom. • Observing: scrutinizing common phenomena, particularly the behavior of potential customers. • Experimenting: act like scientists, innovative entrepreneurs actively try out new ideas by creating prototypes and launching pilots. • Networking: find and test ideas through a network of diverse individuals. • 關聯：成功聯繫表面不相關的疑問，問題，或不同領域的想法的能力。 • 提問：提出挑戰常識的問題。 • 觀察：細查常見的現象，尤其是潛在客戶的行為。 • 實驗：如科學家，創新的企業家一般，通過創建原型和開辦試點，積極嘗試新的想法。 • 關係網：通過不同個人關係網發現和試驗想法。	• Analyzing: based on data, logic, realism, and facts. • Planning: excel in breaking down goals into smaller tasks required to achieve them. • Detail oriented: pay attention to all the details. • Self disciplined: prepare and complete task regardless of any obstacles. • 分析：根據資料、邏輯、唯識論及事實。 • 規劃：擅長于將目標分解成需要實現的小任務。 • 注重細節：關注所有的細節。 • 自律：不管面對任何困難，都要準備和完成任務。

Table 1: Leadership skill in Discovery and Delivery stages of Innovation
表一：領導能力在發現和交付階段的的創新

Most of the founders of Startups possess both Discover and Delivery skills, however, when the Company grows bigger, they will shift to the former skill and leave the delivery one to their followers. It doesn't imply that followers are inferior, and in fact they are equally important throughout the whole innovation process in an interactive manner. Followership is the ability to take direction well, to get in line behind a program, to be part of a team and to deliver on what is expected of you. Most people are just eager to strengthen their leadership but show little concern about followership. Indeed, every great leader starts from being a good follower. Qualities of good followers are in fact coherent with those of a great leader (http://iveybusinessjournal.com/publication/followership-the-other-side-of-leadership/):

- Judgement
- Good ethic
- Competence
- Honesty
- Courage
- Discretion
- Loyalty
- Ego Management

Hunter et al., (2011) proposed a framework illustrating the direct and indirect ways leaders enhance innovation through the range of behaviors and activities as shown in Figure 1. The idea is initiated by an individual, then move through the creative process in a team by which the core concepts are refined and moved forward. Prototypes may be built with simulation program, and then implemented in the organization level. No stage in the innovation process is independent to the next, and each level of analysis feeds into the stages that precede and follow it in a backward and forward influence manner.

然而，大多數創始人雖然在創業過程中有發現和交付技巧，公司規模擴大後，他們會迅速將交付技能交給下屬。這並不是說下屬是卑微的，實際上他們是同等重要的，並以互動的方式貫穿于整個創新過程。追隨力是指把握好方向、跟蹤項目、融入團隊以及交付期望產品的能力。大多人只是想增強他們的領導能力，卻很少關注追隨力。的確，偉大的領導者都是以優秀下屬為起點。優秀下屬和偉大領導者的品質實際上是相一致的。(http://iveybusinessjournal.com/publication/followership-the-other-side-of-leadership/)：

- 判斷力
- 道德良好
- 有能力
- 誠實
- 勇敢
- 謹慎
- 忠誠
- 自我管理

Hunter et al., (2011)提出了一個框架説明領導者用於鼓勵創新的直接或間接方式，如圖表一的行為和活動。這個想法由個人發起，以團隊推進這個創造性過程，改進和推行核心概念。原型用類比程式構建，再在企業內執行。在創新過程中沒有任何階段是獨立的，每個層次的分析都會融入之前或之後的階段，並產生影響。
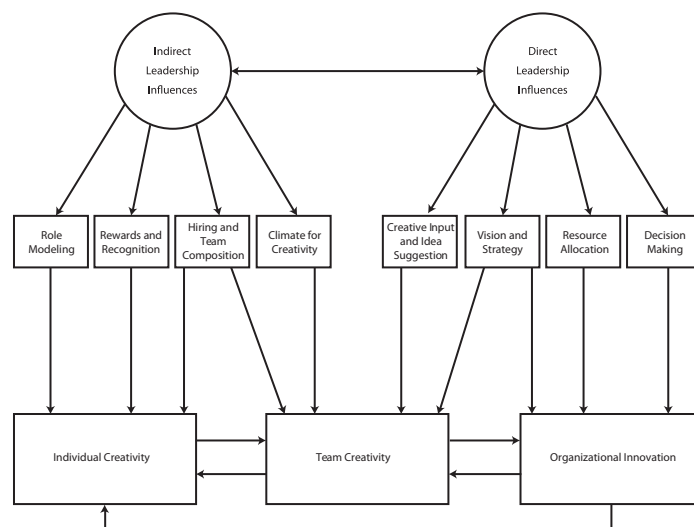

Figure 1: Model of direct and indirect leadership influences on the processes of innovation (Hunter et al., 2011)
圖表一：直接和間接領導對創新過程影響的模型(Hunter et al., 2011)

The traditional innovation process is shown in Figure 2. It is a linear process starting from defining the Company Strategy, followed by serious research and analysis. It normally took years and involved a lot of resources before a product is ready. However, as explained above, it is doubtful this method is still effective in this Uncertain Age. Dyer et al., (2014) posited a contemporary Innovator's method as shown in Figure 3.

Step 1. Insight: savor surprises. Leverage the behaviors identified in the Innovator's DNA (Dyer et al., 2009) — questioning, observing, networking, and experimenting to ignite the associational thinking, thus creativity.

Step 2. Problem: discover the job-to-be-done. Rather than starting with solutions, start by exploring the customers' need or problem — the functional, social, and emotional job-to-be-done.

Step 3. Solution: prototype the minimum awesome product. Instead of developing full scale products, develop a minimum awesome product.

Step 4. Business model: validate the go-to-market strategy through validation of the components of the business model, including the pricing strategy, the customer acquisition strategy, and the cost structure strategy.

傳統的創新過程如圖表二所示，是一個線性過程，從確定公司戰略，到一系列的研究和分析。通常在產品定型前要花費幾年，消耗大量資源。然而，如上所述，在如今這個充滿不確定性的時代，這個方法的有效性受到質疑。Dyer et al., (2014) 提出了當代創新者的方法，如圖表三所示。

第一步，洞察力：享受驚喜。 利用創新者的DNA所識別的行為(Dyer et al., 2009)—提問、觀察、聯繫和試驗，刺激聯想思維從而激發創造力。

第二步，問題：發現待解決問題。 不是從方案開始，而是從探索客戶的需要或問題開始—實用的、社交的和情感的。

第三步，方案：以少數的高品質產品為原型，而不是研發全面的產品，研發少數的高品質產品。

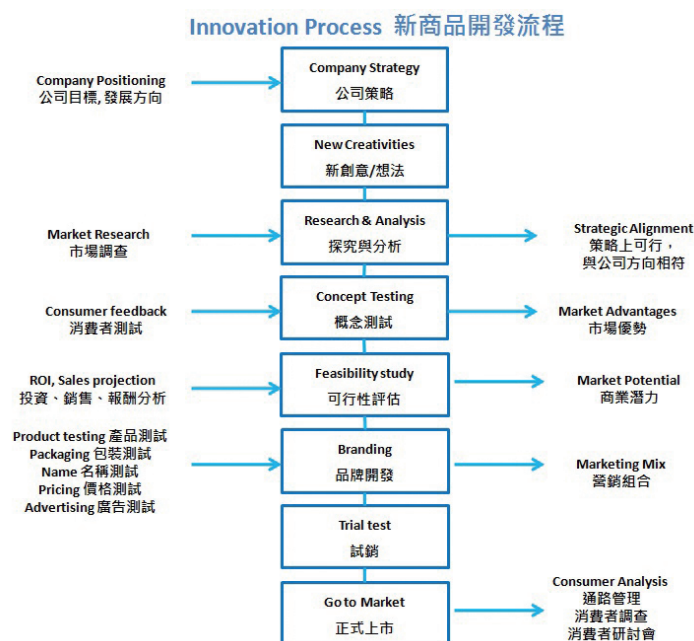第四步，商業模式：通過商業模式內容來驗證上市的策略，包括價格策略、顧客收購策略、成本結構策略。

Figure 2: Traditional Innovation Process
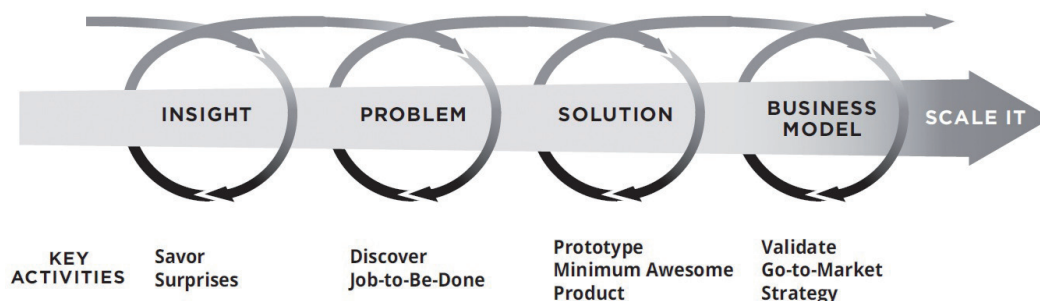圖表二：傳統創新過程

The innovator's method

Figure 3: The Innovator's Method (Dyer et al., 2014)
圖表三：創新者方法(Dyer et al., 2014)

Instead of the traditional innovation dichotomy, namely technology push and /or market pull. The beauty of this method is to pinpoint the customer needs (job-to-be-done) with an insight, and minimize the product development time or at least test the market response accurately with a minimum awesome product, and thus the risk which is the most critical success factor in this Age of Uncertainties. However, as discussed above, Innovation process is a nonlinear social process that requires complex and nonlinear behaviours (Weberg, D. 2016). All the four steps may happen in an overlapping manner and not in a sequential order in reality. Each Company must develop its core skill in technical know-how, domain knowledge, and customer service in order to maintain a sustainable competitive edge. Other factors such as outsourcing, off-shoring, crowdsourcing, collaboration, centralized or decentralized R&D function, backward or forward integration, and justification in term of market size, return in investment, opportunity cost, and so on should also be taken into account. All these require a host of complementary changes to the rest of the organization under the umbrella of Innovation Strategy. Pisano, G. P., (2015) posited there are four essential tasks in creating and implementing an innovation strategy. The first is to answer the question "How are we expecting innovation to create value for customers and for our company?". The second is to create a high-level plan for allocating resources to the different kinds of innovation. The third is to manage trade-offs. The forth is recognizing that innovation strategies must evolve. As a result the innovation process is best represented as shown in Figure 4. Again, this is an art rather than a science, maneuvered by Innovation Leadership.

科技推動或市場拉動替代了傳統創新二分法。該方法能憑藉洞察力精確定位客戶的需求(待解決的問題)，減少產品開發時間或用少數優良的產品準確測試市場反應，因此在這個充滿不確定因素的時代，風險是最關鍵的成功因素。然而，如上所述，創新過程是非線性的社會進程，需要複雜的非線性行為(Weberg, D. 2016) 。以上四步可能重疊發生，也可能沒有按實際順序發生。企業必須發展其在技術訣竅，領域知識與客戶服務方面的核心技巧，以便維持可持續競爭。還需要考慮其他因素，如外包，離岸，眾包，合作，集中或分散式研究與發展功能，向前或向後一體化，市場規模、投資收益、機會成本的正當性。以上因素要求企業在創新策略的保護傘下，進行大量變革。Pisano, G. P., (2015) 假定在創造和執行創新策略過程中有四項重要任務。首先，回答問題：「我們期待創新理念如何為顧客和企業創造價值？」。其次，制定高水準規劃為不同創新分配資源。再次，權衡取捨。最後，創新策略必須發展。最終創新過程如圖表四所示。這也是藝術而非科學，通過創新領導來操縱。
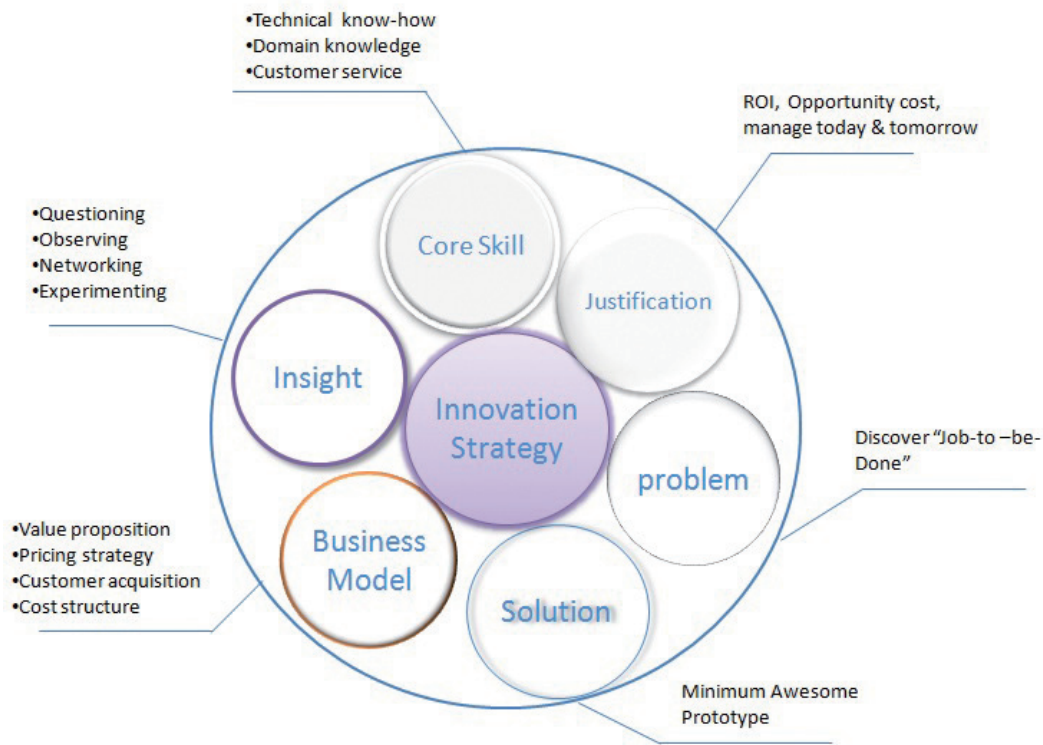
Figure 4: The Innovator's Method (Dyer et al., 2014)
圖表四：創新者方法(Dyer et al., 2014)

Lessons learned from outstanding Leaders

Although academics have developed various models in innovation Leadership, there is persistent gap between theory and practice. The qualitative analysis based on multiple case studies method is adopted to explore the "How" in Innovation Leadership. A series of interview with leading practitioners who were willing to share their valuable set of successful experience (please refer to the detail interview content in the following section of this book) had been conducted. The summary of the interviews according to the alphabetic order of the leaders' surname was listed below to reveal the "How" in Innovation Leadership:

傑出領導人的經驗

雖然學者研發了關於創新領導的多種模式，但理論和實踐仍然存在差距。定性研究法基於多案例研究方法，探討「怎麼樣」在創新領導力中的作用。本研究實行了一系列對願意分享的頂尖實踐者的訪談，分享其成功經驗（詳細訪談內容請參考這本書下面部分）。根據領導者姓名的首字母，我們列出下列揭露「怎麼樣」在領導創新訪談中的摘要：

Leader 領導人	Company 企業	Leadership style 領導方式	"How" 怎麼樣
Mr. Sunny Cheung	Octopus Cards Limited: Electronic payment system. 八達通有限公司：電子支付系統。	The democratic style, Put their faith in a culture that magnifies upward communication, Boundary spanning. 民主式領導，一種信任向上溝通、跨越界限的文化 。	• Promotes positive creativity and allows colleagues to communicate directly with the management team via the Impactful Innovation Award scheme. Any employee can submit a proposal, & will be given a chance to give a 15 to 30 minute presentation to the management team. The cash bonuses will be given to staff members according to scores given by the management. • Take care of different customer needs. Partnered with 759 Store & AEON to launch the Top Up with Change Service for those customers do want the automatic add value service. • Well aware of the market trend. Launched the O! ePay in April 2016 as an network-based Octopus mobile payment service, developed and operated by OCL. It enables customers to enjoy P2P payment services and transfer money instantly between O! ePay accounts and to the registered Octopus. • 促進積極的創造力，並允許同事通過有效的創新獎勵體制，直接與管理團隊溝通。所有的員工可提交建議，並給予15-30分鐘向管理團隊介紹的機會。根據管理團隊給出的分數，給予工作人員現金獎勵。 • 關照不同顧客的需求。與759商店和AEON合作，為需要自動增值服務的客戶推行充值服務。 • 充分瞭解市場趨勢。2016年4月發佈O!電子支付網路八達通移動支付服務，由OCL開發和運作。顧客能夠享受P2P支付服務和利用O!電子支付帳號與註冊八達通帳戶之間實現快速轉帳。
Mr. Ronny Ho & Mr. Ignatius Lau	SML: Produce label, a RFID chip manufacturer and a RFID retail software company for Apparel industry. A one-stop technology solution for retailers worldwide. SML：為服裝行業生產商標的RFID晶片製造商和RFID的軟體零售公司。為全世界的零售商提供綜合技術方案。	Adaptive style, People-centric management style, Display excellent strategic vision. Have a strong customer focus. 適應型，以人為中心的管理模式，良好的戰略眼光，強烈的客戶導向。	• SML acquired a RFID chip manufacturer, a RFID retail software company, and set up research and development centers in Europe and the United States and invested huge resources and efforts in RFID technology development. • Respect talents and establish collaborative team spirit. • Senior management as key role model. • Objective-oriented, take ROI into account, not mater for improvement of the existing solutions or chasing quick business wins. • Rely on frontline staff to drive the innovations of RFID application via sharing the latest market needs with the R&D team. • Provide a comprehensive platform to the staff that have been doing business in traditional way and help them to evolve and adapt to the new business model. • Management meetings take place at least once a month. During which the management shares the demand or requirements from customers and also the successful case studies.

Leader 領導人	Company 企業	Leadership style 領導方式	"How" 怎麼樣
			• SML擁有RFID晶片製造商和RFID的軟體零售公司，並在歐洲和美國設立研發中心，為RFID技術開發投入大量資源和精力。 • 尊重人才，建立團隊合作精神。 • 高管核心角色榜樣 • 目標導向，考慮ROI，不受改善現有方案或追求短期業務利潤的影響。 • 依靠前線職員推動RFID應用程式創新，通過和R&D團隊分享最新市場需求。 • 提供傳統商業模式的員工方式綜合平臺，明其發展和適應新的商業模式。 • 管理會議至少一個月召開一次。管理部門分享客戶的需求或要求，分享成功案例。
Mr. Vincent Hui	Bank of East Asia (BEA): Banking services 東亞銀行：銀行服務	Visionary, Having strong customer focus. Excel at setting stretch goals. Emphasize speed. 有遠見、強烈的客戶導向、擅長制定彈性目標、強調速度。	• Established a dedicated IT research and development team to develop online banking services, and became the first bank in Hong Kong to launch this kind of service successfully. • Created an entry point of traditional banking services transformation by launching i-Teller services, using video conferencing to provide one-to-one customer service followed by a series of digital devices, digital branch, iP2P, & i-Coupons. • BEA renovates one traditional branch into a digital branch on average every week. • Established a 3,500 square-foot Innovation Centre in Kwun Tong, aiming to gather staff from different departments to develop a wide range of innovative solutions and realize creative concepts in 3 key areas – the iCentre, iHub, and iLab. • The team at Innovation Centre has also started using big data to analyze customer preferences and purchasing behaviors, which enables it to provide specialized banking services to different kinds of customers. • Personalization is the cornerstone of the design concept, and the bank makes user experience its top priority. • 成立專門的IT研究和開發團隊，開發網上銀行服務，成為香港第一家成功推出這類服務的銀行。 • 通過開辦智慧櫃檯服務，實現傳統銀行服務轉型，採用視訊會議提供一對一的客戶服務，配套一系列數位設備，數位分行，iP2P，智慧優惠券。 • 東亞銀行平均每週將一個傳統分行改進成資料銀行。 • 在觀塘建立一個3500平方英尺的創新中心，讓不同部門的職員一同研製多種創新方案，實現iCentre，iHub，iLab • 3個關鍵領域的創意概念。 • 創新中心的團隊還開始使用大資料分析顧客偏好和購買行為，從而為不同類型的客戶提供專門的銀行業務服務。 • 個性化是設計理念的基石，也是銀行用戶體驗的首要任務。

Leader 領導人	Company 企業	Leadership style 領導方式	"How" 怎麼樣
Dr. Stella Kwan	Ngong Ping 360: A tourist spot providing a unique natural and cultural experience on Lantau Island with Cable Car, Ngong Ping Village, and culturally themed attractions. 昂坪360： 在大嶼山纜車提供獨特的自然和文化經驗旅遊的景點，昂坪市集和文化主題景點。	Democratic style, Put their faith in a culture that magnifies upward communication, Having strong customer focus, Boundary spanning. 民主型領導，一種信任向上溝通，強烈客戶導向和跨越界限的文化	• Embrace the VMV (Vision, Mission and Value) approach. • Collect opinions and suggestions from guests, front line staff, citizens and the media. Bottom-up approach of creating new ideas with management leading the process. • Invested huge resources in preventive maintenance, repair engineering and situation-based maintenance. • Using a lot of technologies, such as big data, to gather related data about its guests. Embrace digital marketing using different social media channels. • Slogan: "Creating guest memories starts with you". • 包含VMV（視覺、使命、價值）的方法。 • 收集顧客、前線員工、市民和媒體的意見和建議。自下而上創造新觀念的方法，以管理為主導。 • 為預防維護、維修工程和情景式保養投資大量資源。 • 採用大量技術，例如用大量資料收集客戶相關資料，包括用不同的社會媒體管道做資料行銷。 • 口號：「從你開始，創造顧客記憶」。
Mr. Franky Lai	WiseSpot: Specializes in the development of innovative technologies & products for the telecommunication industry. 斯博智庫科技有限公司： 專攻創新技術研發及電信產品。	The pacesetting style, Path-goal theory, Inspire and motivate through action. 標杆式，途徑-目標理論，鼓舞和激勵行動。	• Established a "Focus Group" process for project selection. From experience, WiseSpot will only select 1-2 projects out of every 10 proposed to focus on for further development. • Put a lot of emphasize on the pre-development evaluation and in-progress implementation abilities. • Company's senior management guides fellow colleagues to understand the importance of optimal allocation of the Company's limited resources. • The Group must be firm towards selecting projects with time-to-market within the next 18-24 months. • Three major emphases: 1) Financial Planning, with adequate risk evaluation and profit management; 2) Deciding on the direction for future product development via regular Focus Meetings, and 3) Human Resources Management for team adhesion and talent cultivation. • Motto: "Always Finish What You've Started". • 在專案篩選過程中建立一個「焦點小組」。斯博智庫按照經驗只從每10個推薦的專案中選出1-2個作為進一步研發對象。 • 把重點放在開發前評估和過程執行能力上。 • 公司的高層管理指導同事瞭解公司有限的資源優化配置的重要性。 • 團隊篩選專案時必須以企業為導向，爭取在18-24個月上市。 • 三個關鍵： 1）資金規劃、充分的風險評估和利潤管理； 2）通過定期的焦點會談決定未來產品研發方向 3）人力資源管理團隊合作和人才培養。 • 座右銘：「做好你的第一步」。

Leader 領導人	Company 企業	Leadership style 領導方式	"How" 怎麼樣
Mr. Thomas Lam	Henderson Land: Property developer 恒基兆業地產有限公司：房地產開發商。	Visionary, Create a climate of reciprocal trust, Coordination of information flow, Display excellent strategic vision. 有眼光、創造相互信任的氛圍、協調資訊流動、展現宏偉的戰略藍圖。	• Use of smart home technologies long before its competitors are belatedly following suit, and before companies like Apple and Google are building the technologies in their smart phones, over 14 years ago. • Adopt a new "top-down construction method". Compressing the project schedule by as much as one third, thus allows the developer to apply for Occupancy Permit much earlier. • Support creative environment from Top Management. • Stimulate creative thinking through open & free communication with presales team members, comprising of architects, surveyors and other professionals. • Allows a level of autonomy and freedom to accomplish tasks in ways the subordinates see fit. • Decision to go or not is based on whether the ideas deviate from our group culture and whether it is justified from the risk management's perspective. • 在智慧居家技術應用方面，恒基遠遠先於後來效仿的競爭者，並先於蘋果和穀歌14年將這項技術植入智慧手機中。 • 採用新型「自下而上建築法」。壓縮了專案大約三分之一的時間，使開發商可以提前享用「分期佔用許可」。 • 從管理高層做起，支援創新氛圍。 • 鼓勵售前團隊、工程師、調查員和其他專業人員之間進行開放自由的交流，激發創造性思維。 • 允許下屬擁有一定程度上的自主和自由，以合適的方法完成任務。 • 根據該創意是否偏離小組文化、是否符合風險管理，決定是否採用。
Dr. Raymond Leung	Altai: A super WiFi technology company targeting global WiFi solution market. 奧泰爾：面向全球提供WIFI方案市場的超級WIFI科技公司。	Visionary, Team work, Have a strong customer focus. Risk taking. 有眼光、團隊合作、強烈的顧客導向、冒險。	• Focused on Super WiFi technology development to fulfill the huge market needs. • Organized visits to different customers with a team of salespeople and technology developers for direct communications. • Pay attention to the changing technology world, directly engage with customer and then quickly respond to the market. • Enhances the transparency of the company through weekly review on business with all colleagues. • Setup mechanism to reward the team and helps them to develop their career. • Reserved 20% shares to reward their staff and motivate them to achieve the common goal. • Motto: "We will not charge our clients unless the product meets our high standard ".

Leader 領導人	Company 企業	Leadership style 領導方式	"How" 怎麼樣
			· 關注超級無線技術發展，以滿足巨大的市場需求。 · 安排不同的客戶、銷售團隊以及技術研發者進行直接溝通。 · 關注變化的科技世界，直接與客戶接觸，對市場迅速做出反應。 · 全體人員進行每週審查業務，提高公司的透明。 · 建立機制來獎勵團隊，並幫助他們發展他們的事業。 · 保留20%股份獎勵員工，激勵他們達成共同的目標。 · 口號：「產品不符合標準，絕不收取客戶費用。」
Mr. Eric Moy	KBQuest: IT consulting, system integration and software development services to leading US, China and Japanese companies. KBQuest: IT諮詢、系統整合和軟體發展服務，引領美國、中國、日本。	Adaptive style, Transformational, Put their faith in a culture that magnifies upward communication, Risk taking. 適應型，轉型的，相信向上交流和承擔風險的文化。	· Encourage trying new things but won't rush for short term benefits nor put all the eggs in one basket. · Learning and applying new or innovative technologies and products, but not developing them from scratch. · Use adaptive model in providing platform to encourage participation in Company's innovation and business development. · Smaller teams for 4 to 5 combinations of businesses, embracing paralleled development approach. · Let colleagues to choose the projects that they prefer to join. · Encourage colleagues to participate through fostering "internal Startups" approach. · 鼓勵嘗試新事物，但不盲目追求短期利益，把雞蛋放在一個籃子裡。 · 學習和運用新的或創新的技術和產品，但不是從零開始。 · 運用自我調整模型提供平臺，鼓勵參與公司的創新和業務發展。 · 4至5個較小的小組的業務組合，包括平行研發方法。 · 允許同事選擇參加喜歡的項目。 · 鼓勵同事積極參與扶持「內部創業」的專案。
Dr. Suen, Wai-Mo	ClusterTech: Provision of advanced computing technology solutions to improve operational efficiency. 聯科集團：提供先進的電腦技術方案，提高運轉效率。	The affiliative style, Hiring & team composition, Excel at setting stretch goals. 親和型：招聘&團隊組建，擅長設定彈性目標。	· Respect all kinds of innovative ideas from colleagues and encourages staff to explore solutions. · It is utmost important to respect talents with different skills and characters. · Persuade those who lack foresight to leave the company right away, and respects colleagues willing to stay for the long-term by giving them freedom and flexibility.

Leader 領導人	Company 企業	Leadership style 領導方式	"How" 怎麼樣
			• Guidebook of "Desired Qualities/ Abilities of our Staff", listing what the company values in terms of the personal characters of its staff. • 尊重同事不同的創意，鼓勵員工探討解決方案。 • 包容各有所長和性格不同的人才至關重要。 • 請走目光短淺的員工，尊重願意長期留下的員工，給予自由和彈性空間。 • 「員工必備品質和能力」指導書，列出公司看重的員工個人性格。
Mr. Albert Wong	HK Science Park: Dedicated in planning, building and creating an innovation and technology-led vibrant economic ecosystem in Hong Kong. 香港科技園：專注於香港的規劃和建造，開發創新，技術導向，有生機的經濟生態系統。	Servant leadership, Strong customer focus. 僕人式領導，強烈的顧客導向。	• Adopts a "3Cs Strategy" which stands for, "Connect", "Collaborate" and "Catalyze". • Strengthen the tenant networks with various stakeholders in the society particularly the start-ups by leveraging resources and networks of investors. • Promotes successful start-ups' stories to the media and investors; and at the same time collaborates closely with universities and educational institutions to enhance the interest of youth and students' in STEM (science, technology, engineering & mathematics) subjects. • Devote most of the time to communicate with people in order to understand what start-up entrepreneurs think. • 採用「3Cs戰略」，即「連接」「合作」「催化」。 • 加強與不同的股東的合作，尤其通過利用資源和投資者關係網來創業。 • 向媒體和投資商發佈成功創業的故事，同時與大學或教育機構建立密切的合作，提高青少年和學生對STEM(科學、技術、工程及數學)科目的興趣。 • 花大量時間與創業企業家交流，更好地理解他們的想法。

Discussion

Market and Technical uncertainties are the consequences of Digitization via Demonetization, Dematerialization, and Democratization (Diamandis, P. H., & Kotler, S., 2016). Demonetization means a lot of innovations such as browser, GPS navigation, Long distant call, Apps are free because a much different business model is in play. Dematerialization implies the operating Company doesn't need to own the assets to provide services. The top carmakers in Detroit had nominal revenues of $250 billion, a market capitalization of $36 billion and 1.2m employees in 1990. The top three companies in Silicon Valley had revenue of $247 billion, market capitalization of over $1

討論

數位化的非商業化、非物質化、和民主化共同導致了市場和技術的不確定性(Diamandis, P. H., & Kotler, S., 2016)。非商業化即各種創新的免費使用，如流覽器、GPS導航、長途電話、APP，一種全新的商業模式在形成。非物質化指運營企業無需自身的資產提供服務。1990年，汽車製造商底特律名義上有2500億美元收入，資本市值360億美元，員工120萬名。2014年，矽谷前三名企業的收入為2470億美元，市值超過10000億美

trillion but just 136,000 employees in 2014. Democratization happens when the hardware cost is so low and affordable to every innovator. Innovation becomes an elegant integration more than an invention. Unlike the industrial era companies which used economies of scale to drive out competitors, innovative companies use technologic innovation to expand their market by shifting the market attention from supply side to demand side. It seems good news for small innovative company and the startups. However, according to the Economist (September 17th 2016), more firms are dying out than being born. "Free" services are squashing competition. Founders dream of selling their firms to giants rather than of building their own titans. This is reflected in the annual number of mergers and acquisitions which is more than twice what it was in the 1990s. As such, there must be some valuable lessons we can learn from those interviewees who are so successful despite of all the above digitization challenges. In additional to the traditional leadership style such as Situational, Transformational, Path Goal Theory, and Leader-Member Exchange Theory which has been manifested in the behaviors of all interviewees, all leaders enhance innovation through the range of behaviors and activities directly and indirectly posited in the framework of Hunter et al., (2011) as shown in Figure 1. The major finding is a shift from an "either/or" mindset to a "both/and" approach. They are not managing seemingly conflicting goals but in fact embracing and striking a balance between two polarities in this age of uncertainty. All of them are visionary leaders who are looking a long term commitment on one hand but emphasizing on speed to market on the other. Some interviewees are more rely on technical driven innovation before the market is ready while almost all on them are showing strong customer focus. Some are putting a lot of resources in talent cultivation but setting goals to be achieved. There is always a balance between control and giving the work back to people. Top-down approach has been replaced by bottom-up one in most cases, but the final decision still remains on the Top Management. The lessons are summarized below:

1. **An excellent strategic vision and emphasize on time to market:** Manage today and tomorrow. A firm's long term survival depends of risk taking, investment and learning from failure in innovation, and also catches the market with an effective innovation method, and makes the most of existing products/services. The findings echoed Govindarajan V. (2016) "Three Boxes" leader's innovation tool kit, namely: Box 1: The present--Manage the core business at peak profitability; Box 2: The past--Abandon ideas, practices, and attitudes that could inhibit innovation; Box 3: The future--Convert breakthrough ideas into new products and businesses.

   BEA established an Innovation Centre for as a long term commitment, and emphasis speed in turning traditional branch into digital one; Henderson adopted

元,但員工僅有13.6萬名。只有當硬體成本低,每位元創新者負擔得起時,才有民主可言。創新是一次優雅的整合,並非發明。工業時代的企業往往憑藉經濟規模擠跨競爭對手;而創新型企業採用技術創新來開拓擴張,將市場焦點從供應轉移到需求。這對小型創新企業和初創企業來説是好消息。然而,《經濟學人》(2016年9月17日)顯示相比新生的企業,更多的是在消亡。「免費」服務正在擠進競爭行列。創業者希望將企業出售給大企業,而不是建立自己的王國。年度合併和收購的數量反映了這點,數量已超過二十世紀九十年代的兩倍。因此,我們需要學習這些受訪者,如何在面對數位化挑戰仍然成功經營。受訪者的行為不僅表現了傳統的領導方式,如情景式、變革型、道路目標理論和領導-成員變動理論,這些領導者還通過圖表一Hunter et al., (2011)展示的框架直接或間接的行為和活動來促進創新。主要發現是從一個「非此即彼」的心態轉變到「兩全」的方針。

他們並非在管理看似矛盾的目標,實際上是在接受和平衡這個充滿不確定的時代的兩端。這些受訪者都是有遠見的領導人,他們在尋找長期的投資的同時強調上市的速度。部分受訪者在產品上市前更加依靠科技驅動創新,但都有強烈的客戶導向。部分受訪者在人才培養方面投入很多資源,也設定目標。控制和分配員工工作需要平衡。在多數情況下,自下而上模式取代了自上而下模式,但最後的決定權仍屬於高層管理。經驗總結如下:

1. **制定宏偉的戰略藍圖,強調上市時間:**
   統籌現在和未來。企業長期的生存依靠風險承擔、的投資和創新失敗中學習的經驗,以有效的創新方法搶佔市場,成就多數已有的商品和服務。研究結果與Govindarajan V. (2016) 提出的「三個盒子」領導者創新工具箱相吻合:盒子1:當前-管理核心業務以獲得最大效益;盒子2:過去-摒棄阻礙創新的想法,實踐和態度;盒子3:將來-在產品和業務中融入突破性創意。

   東亞銀行建立了一家創新中心作為長期投入,搶先將傳統支行轉換成資料銀行;恒基兆業14年前就採用了家居自動化,並採用「自上而下建築法」縮短

home automation 14 years ago, and use the "Top down Construction Method" to shorten the turnaround time; Mr. Franky Lai of WiseSpot identified the market gap but selected project with time to market with 18-24 months, Dr. Raymond Leung of Altai pays attention to the changing technology world, directly engage with customer and then quickly respond to the market. SML made long term investment and takes ROI into account, no matter for improvement of the existing solutions or chasing quick business wins.

周轉時間；斯博的賴永雄先生偵察市場商機，卻用18-24個月篩選專案上市的時間。奧泰爾的梁少康博士關注變化的科技世界，直接與客戶接觸並迅速做出市場反應。SML長期投資，考慮ROI，不受改善現有方案或追求短期業務利潤的影響。

2. **Create an Innovation Climate with an innovation strategy:** Bottom up approach is more effective in innovation provided that an open innovation climate is there. Innovation strategy stipulates how their firm's innovation efforts will support the overall business strategy. With that, tradeoff decisions can be made to choose the most appropriate practices and set overarching innovation priorities that align all functions. It is the prime responsibility of the leader who can orchestrate the processes, structures, talent, and behaviors that shape how an organization searches for innovation opportunities, synthesizes ideas into concepts and product designs, and selects what to do (Pisano, G. P., 2015).

Dr. Raymond Leung of Altai designed mechanism to reward the team and helps them to develop their career, and telling them not to charge client unless the work finished with high standard; Octopus encourages employees submit proposal to the management team. The cash bonuses will be given to staff members according to scores given by the management; SML respects talents and establish collaborative team spirit. They co-ordinate the efforts of various departments to unleash colleagues' potential and

2. **以創新策略營造創新的氛圍：**

自下而上的方法更能夠提供開放的創新氛圍。然而，必須篩選出超出業務範圍的多元想法。創新戰略確保企業的創新付出如何能支持所有業務戰略。這樣，權衡決策可以選擇最適當的做法，並設定包含所有功能的創新重點。領導的首要負責編排過程、結構、人才和行為，並組建團體，致力於如何尋找創新機會，綜合思想理念和產品設計，並選擇策略(Pisano, G. P., 2015)。

奧泰爾的梁少康博士設計獎勵團隊機制，助其發展自己的事業，並告誡他們若非工作高水準完成，不能收取客戶費用。八達通鼓勵員工向管理團隊提交建議，根據管理部門給出的分數，為職員發放現金獎勵。SML尊重人才，建立團隊合作精神。不同部門互相協調努力，發揮同事的潛力和創造力。昂坪360的關敏怡博士採用自下而上模式，創造主導管

creativity; Dr. Stella Kwan of Ngong Ping 360 uses bottom-up approach of creating new ideas with management leading the process; Mr. Sunny Cheung of Octopus allows colleagues to communicate directly with the management team via the Impactful Innovation Award scheme.

理過程的創新想法。八達通的張耀堂先生允許同事通過有效的創新獎勵體制，直接與管理團隊溝通。
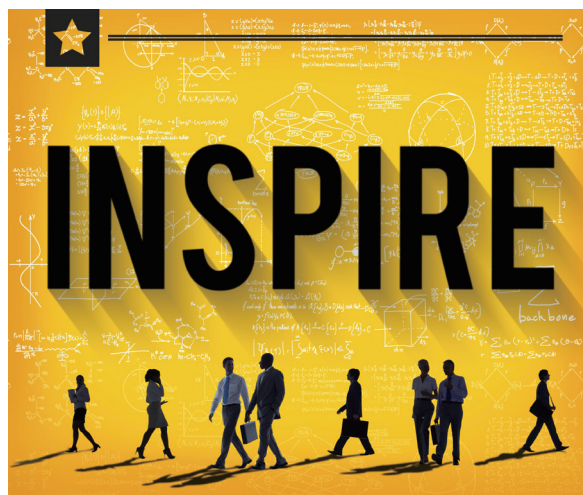
3. **Talent Cultivation and set goals:** Talent cultivation takes time and recourses. The intention of talent cultivation is to strengthen the colleagues' capability and bonding through education, exposure, and in-house training. It is also a value alignment within an organization and an intrinsic motivation which can foster creativity. There must be a good mix in diversity training and job specific ones. Some companies ask their colleagues to attend training in voluntary basis while the others are compulsory. It was found that leaders need to set appropriate goals and requirements so that individuals will aspire to be creative (Shalley et al., 2000). Sometimes compulsory likes the authoritative leadership style is required. It works well in almost any business situation particularly effective when a business is adrift which needs a new course and a fresh long-term vision.

Dr. Suen Wai Mo of ClusterTech persuades those colleagues who lack foresight to leave the company right away, and respects colleagues willing to stay for the long-term by giving them freedom and flexibility on one hand, and gives his guidance of the team behavior in his Guidebook of "Desired Qualities/ Abilities of our Staff" on the other; Mr. Albert Wong of Science Park strengthens the capability of the Startups via "Connect", "Collaborate" and "Catalyze" and expect they will become independent after the incubation period; Mr. Eric Moy of KBQuest facilities annual job rotation and Internal Startups. Mr. Franky Lai of WiseSpot requests his colleagues to finish what they had started.

3. **人才培養和目標設定：**

人才培養需要時間和資源，其目的是通過教育、接觸和內部訓練，加強同事的能力和聯繫。這對於企業內部很有價值，驅動內部創新。還是在一個組織內的值對齊，可以促進創造性的內在動機。多元化培訓和工作具體化必須要優化組合。部分企業要求同事自願參加培訓，而其他的是強制性要求。結果表明，領導人需要設立適當的目標和要求，才能激發個人創造性渴望。（Shalley et al., 2000）。有時必須發揮權威式的強制性作用。當業務沒有著落，需要新的方向和長期的藍圖時，這種方式幾乎適用於所有商業情況。

聯科集團的孫緯武博士，說服缺乏遠見的員工離開企業，重視願意長期留下的員工，並給予他們自由和靈活空間；他還在指南書《職員必需品質/能力》為團隊行為提供指導。科技園的黃克強先生通過「連接」「合作」「催化」強化員工的創業能力，期望他們在潛伏期後更加獨立； KBQuest 的梅力恒先生促進年度工作調動和內部創業。斯博的賴永雄先生要求職員做好第一步。

4. **Investing in their core skill through acquisition and developing in house:** No matter if is a forward, backward integration or technology driven started from the very beginning, each company has to develop or acquire its core skill in order to stay competitive in a long run. In fact, the ultimate objective is to build a learning organization. One of the learning theories called Connectivism is most applicable in Innovation. It is considered to be the learning theory of the digital age, "a successor to behaviorism, cognitivism, and constructivism". It is an integration of the principles explored by chaos, network, and complexity and self-organization theories (Siemens, 2004). The principles emphasize on connections with information sources, different fields, and ideas. This connection can be made through social networks which are built on the premise of collaboration and sharing.

Altai stays focus on Super WiFi technology; SML acquired a RFID chip manufacturer, a RFID retail software company, and set up research and development centers in Europe and the United States and invested huge resources and efforts in RFID technology development. BEA established a dedicated IT research and development team to develop state of the art innovations in Banking; Ngong Ping 360 uses a lot of technologies, such as big data, to gather related data about its guests; Octopus developed different kinds of P2P payment.

5. **Technical driven and strong customer focus:** In the market-pull and technology push dichotomy, quantum leaps in product performance can be enabled by breakthrough technologies while improved product solutions enabled by better analysis of users' needs. In reality, both drivers are interdependent to each other and deployed at the same time. The new source of competitive advantage is customer centricity: deeply understanding your customers' needs and fulfilling them better than anyone else (Driest F et al., 2016).

4. 通過購買和內部研發投資核心技能：

不管是前進、後退的整合還是一開始的技術科技驅動，為了長期保持競爭力，企業必須研發或購買核心技術。實際上，最終目標是建立學習型企業。其中一個稱「連接主義」的學習理論在創新過程很受用。它被認為是數字時代的學習理論，「行為主義、認知主義和建構主義的繼承者。」通過原則整合對網路、複雜性和自我組織理論(Siemens, 2004)進行探索。原則強調資訊源的連接，不同領域和想法。這種連接得以通過社會網路成立，以合作和共用為基礎。

奧泰爾重點發展超強WIFI技術；SML並購RFID晶片製造商與RFID零售軟體公司，並在歐洲和美國和設立研發中心，以及在RFID技術開發中投資大量資源和精力；東亞銀行成立專攻IT研究和開發的團隊，研發銀行藝術創新狀況；昂坪360採用多種技術，如大資料，收集顧客相關資料；八達通開發不同種類的P2P支付方式。

5. 技術驅動和強烈的客戶導向：

在市場拉動和技術推動的二分法中，技術突破可以帶來產品性能突破，同時更好地分析使用者需求，改善產品方案。實際上，這兩個驅動力相互依存又相互利用。競爭優勢的根源是客戶導向：深入瞭解客戶需求並滿足至關重要。

Mr. Eric Moy of KBQuest encourage colleagues to try new things but not develop them from scratch; Mr. Ronny Ho and Ignatius Lau of SML get frontline staff involved in the innovations of RFID application via sharing the latest market needs, the demand or requirements from customers and also the successful case studies with the R&D team; Dr. Stella Kwan of Ngong Ping 360 collects opinions and suggestions from guests, front line staff, citizens and the media; Dr Raymond Leung of Altai arranged direct communication for the sales people, R&D personnel with customers. Octopus is well aware of market trends and works with different partners; Mr. Albert Wong of Science Park devotes most of the time to communicate with people in order to understand how start-up entrepreneurs think; BEA emphasizes on Personalization via user experience as its top priority.

6. **Control and Give the work back to people:** Top Management has to impose a proper control to make sure the innovation is on the right track and it is part of the Corporate Governance on one hand but leave rooms for the working level on the other. Give work back to people is one of the leader behaviours in the model of Adaptive Leadership (Appendix A). People want leaders to provide some direction and structure to their work but not too much control which may decrease people's confidence to solve problems on their own and suppress their creative capacities.

Mr. Franky Lai of WiseSpot provides the team the guidance in resource allocation, but leaves them to complete the tasks; Mr. Thomas Lam of Henderson allows autonomy and freedom to his team in generating creative ideas, but makes the final decision based on whether the ideas deviate from our group culture and risk assessment. SML Senior management sets key role model, provides a comprehensive platform to the staff that have been doing business in traditional way and help them to evolve and adapt to the new business model. KBQuest uses adaptive model in providing platform to encourage participation in Company's innovation and business development.

KBQuest的梅力恒先生鼓勵員工嘗試新事物但不是從零開始；SML的何景華先生和劉嘉慈先生允許前線員工通過和研發團隊分享最新市場需求、客戶需求和要求、以及與研發團隊研究成功案例，參與射頻識別應用創新。昂坪360的關敏怡博士收集客戶、前線員工、市民和媒體的意見和建議；奧泰爾的梁少康博士組織銷售人員、研發人員和顧客進行直接溝通。八達通對市場趨勢敏感，與不同的搭檔合作；科技園的黃克強先生花費了大部分時間與他人交流，瞭解創業企業家的想法；東亞銀行把客戶體驗個性化放在首要位置。

6. **控制力和分配職員工作：**
高層管理必須行使適當的控制力，確保創新沿著正確的軌跡前進，這不僅是企業管理的一部分，也給員工留一定空間。分配職員工作是適應型模式中領導人的行為之一（參見附錄1），職員希望領導為自己的工作提供一些方向和結構，而非過多的控制。因為控制會減低職員獨立解決問題的信心，壓制他們的創造力。

斯博的賴永雄先生在資源配置方面給予團隊指導，但允許他們獨立完成任務；恒基兆業的林達民先生給團隊創意自主和自由空間，但根據該創意是否偏離小組文化、是否符合風險管理，最後決定是否採用。SML的高層管理設立一個核心模式，提供傳統模式的員工一個綜合平臺，幫助他們發展和適應新的商業模式。KBQuest採用適應型模式提供平臺，鼓勵參與公司的創新和業務發展。

"What if, and I know this sounds kooky, we communicated with the employees."

Limitations and future research

There is no one size fits all leadership style. It is a mix and match art depending on the internal and external factors of each Company. Although there are heterogeneities amongst the interviewees, the sample size can be further expanded to explore more findings in different conditions. The scope of this article can only cover the "How" of the new thinking in leadership but not the detailed innovation method. Further research can be pursued in this area. Furthermore, Innovation Leadership should be applied in National level through Government policy. National success in innovation depends on a variety of complex factors including various measures of the quality of education; of pure and applied science research; of infrastructure, business climate, entrepreneurship, and risk taking; as well as of the effectiveness of national policies and the availability of financing for new ventures and a variety of other factors according to the assessment criteria of contemporary innovation ranking. Based of it, Mroczkowski, T. (2014) proposed an Innovation pyramid as shown in Figure 5. The "layers" of the pyramid are interdependent, and for the entire innovation system to function, they must work together in a coordinated fashion. Science must work in harmony with business needs with the support of States Policy at all levels. Further study can be conducted to analyze this model in strengthening the innovation capability of our City.

局限性與未來研究

領導風格不是萬能的，它是一種混合搭配，需要考慮企業內外部因素。雖然受訪者領導風格不一，但可根據不同條件增加受訪人數探究更多的發現。本文只覆蓋了領導創新思維中的「怎麼樣」方面，並沒有提供具體的創新策略。進一步的研究可以探究這方面。另外，創新型領導需要通過政府政策在全國實行，而全國範圍的成功創新需要考慮多種複雜因素，包括衡量教育的品質，基礎設施，商業氛圍，創業精神，風險承擔，國家政策的有效性，新的金融風險，其他與當代創新有關的因素。在此基礎上，Mroczkowski, T. (2014) 提出一個創新金字塔（如圖表五所示）。金字塔各層相互聯繫，各層協力共存發揮整個創新系統的功能。科學必須與商業需求相結合，多方位支持國家政策。未來的研究可分析這個模式促進香港的創新能力。
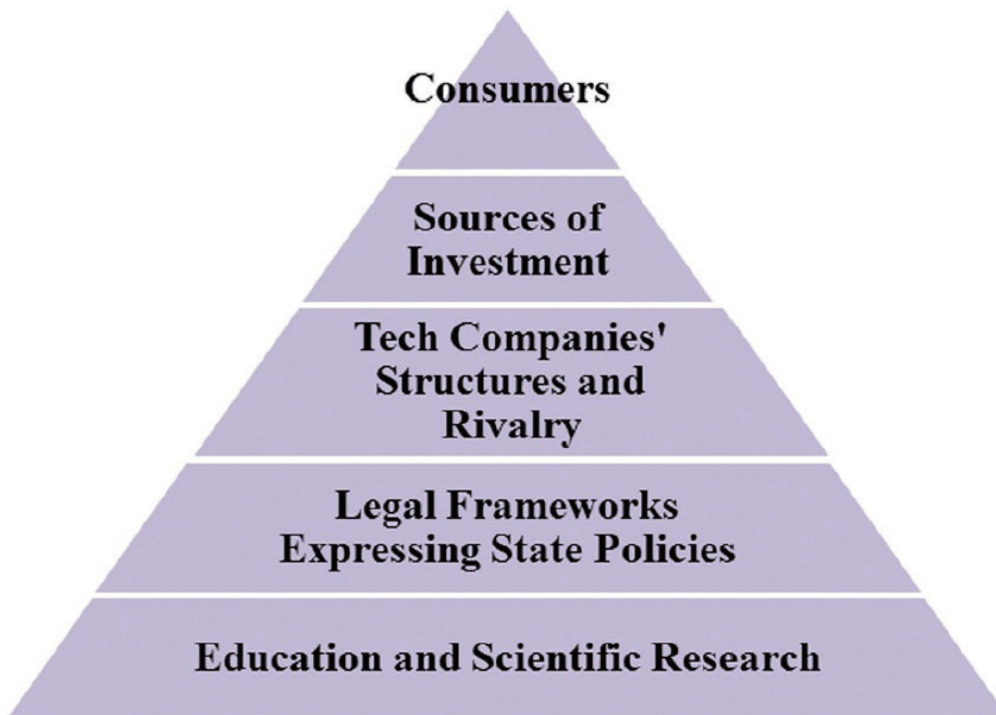

Figure 5: Innovation Pyramid Mroczkowski, T. (2014)
圖表五：創新金字塔Mroczkowski, T. (2014)

Appendix A

Type of Approach	Description	How This Approach Works	Strengths	Criticisms
Trait Approach	• One of the oldest approaches • Great person theories • What traits differentiate leaders? • Stogdill's 1948 survey • Stogdill's 1974 survey • Research in the 1990s	• Focuses on the leader • Find the "right" people • Personality type assessments	• Intuitively appealing • Backed by century of research • Focuses on leader • Providers benchmarks	• Could not delimit a definitive list of traits • Failed to take situations into account
Style Approach	• Very different from trait approach • Two major kinds of behaviours: task relationship • Blending task and relationship is critical	• Leaders have an impact on others through tasks they perform as well as n relationships they create • To balance task and process behaviours		
Situational Approach	• Extensively used in training and development • Focuses on the situation • Leader analyzes situation and adapts style to followers	• Leaders diagnose where followers are on the development continuum for a particular task and adapt their leadership style accordingly • Leaders cannot use the same style in all situations • Flexibility is important	• Widely used in training and development • Practical, easy to understand, and applicable across contexts • High in prescriptive value • Unique in stressing leader flexibility	• Not substantiated with published research findings • Unclear conceptualization of development levels in the SLII model • Unclear conceptualization of commitment • Prescriptions of model not fully substantiated • Does not address issue of one-to-one and one-to-many
Contingency Approach	• Contingency because effective leadership depends on the match between the leader's style and the demands of the situation • Based on the analysis of thousands of leaders in the military • By studying which leaders were effective, Fiedler created a model which matches styles to situations.	• The theory posits that certain styles will be effective in certain situations. • Low LPCs will be effective in extremes (very favourable and very unfavourable situations) and highs will be effective in moderate situations	• Supported by a great deal of empirical research • Stresses the link between style of leader and situation • Has predictive power • Does not require that we be effective in all situations • Provides useful data for developing leadership profiles	• The "black box" problem • LPC scale has validity and workability problems • The theory is cumbersome for ongoing organizations

Type of Approach	Description	How This Approach Works	Strengths	Criticisms
Path-Goal Theory	• Path-goal theory is based on the tenets of expectancy theory, which suggests that subordinates will be motivated if they believe that • They are capable of performing their work • Their efforts will result in a certain outcomes • The payoffs for doing their work are worthwhile • Leaders help subordinates define their goals and clarify their work • They remove obstacles and provide support • Leaders need to select a style of leadership that is best suited to their subordinates	• It is theoretical and pragmatic • The leader's job is to help subordinates reach their goals by directing, guiding, and coaching them along the way. • Based on the task and subordinates' characteristics, it suggests which style is most appropriate for leaders	• Links leadership style with task and subordinate characteristics • Is grounded in the principles of expectancy theory • Is very practical	• Is difficult to utilize fully • Has only limited support from research findings • Fails to explain adequately the link between leadership styles and motivation • Suggests a one-way impact from leader to follower that could promoted dependency
Leader-Member Exchange Theory	• LMX theory places the dyadic relationship of leaders and followers at the focal point of leadership • First appeared 25 years ago as Vertical Dyad Linkage theory • Stresses the leader's relationship with each of her/ his subordinates	• It describes and prescribes leadership • Working with an-in-group allows a leader to accomplish more than if s/he were working alone. • In-group member do more and help to advance the organization's goals • By creating high-quality relationships with the entire work group and others throughout the organization, the leader helps him/herself and the organization	• Makes intuitive sense • Accurate describes real organizations • Unique in making the leader-subordinate dyad central to leadership • Directs attention to the importance of communication for effective leadership • Supported by research linking leadership to positive outcomes	• Runs counter to the basic value of fairness (discriminates) • Not a fully developed model • Lacks explanatory theorems • Lacks strong measurement of leader-member exchanges

Type of Approach	Description	How This Approach Works	Strengths	Criticisms
Transformational Leadership	• A contemporary approach stressing that a leader needs to be concerned with values, ethics, standards, and long-term goals. • The leader needs to access followers' needs and help them reach their full potential • Vision setting and chairman play an important role in transactional leadership	• Leaders become role models who set the vision for an organization. • They act as change agents who implement new directions • They become social architects who are out front in interpreting and shaping new meanings for an organization	• Widely researched and current leadership approach • Is intuitively appealing • Treats leadership as a process that includes leaders and followers • Emphasizes followers' needs, values, and morals	• Lacks conceptual clarity • Interpreted as "either-or" rather than a matter of degree • Treats leadership as a personality trait • Gives an anti-democratic impression of leadership • Based on qualitative data • Has potential to be abused

Authentic Leadership	• Authentic leadership is about the authenticity of leaders and their leadership.
	• Authentic leadership can be differentiated into two areas
	  • Practical approach
	  • Theoretical approach
	• Authentic leadership is a lifelong developmental process, which is formed and informed by each individual's life story
		• Practical
		• Leader who strongly demonstrated five qualities: purposeful, value cantered, relational, self-disciplined, and compassionate.
		• Theoretical
		• Leaders demonstrate self-awareness, an internalized moral perspective, balanced processing, and relational transparency.
		• They develop these attributes through a lifelong process that is often influenced by critical life events.
		• Emphasizes the development of qualities that help them to be perceived as trustworthy and believable by their followers
			• Expressed need for trustworthy leadership in society.
			• Provides broad guidelines for individuals who wan to become authentic leaders.
			• An explicit moral dimension
			• Authentic values and behaviours can be developed in leaders over time.
			• Can be measured using the Authentic Leadership Questionnaire (ALQ)
				• The concepts and ideas presented in George's practical approach are not fully substantiated.
				• The moral component of authentic leadership is not fully explained.
				• The role of positive psychological capacities in authentic leadership theory is difficult to measure

Type of Approach	Description	How This Approach Works	Strengths	Criticisms
Adaptive Leadership	• Focuses on the adaptations required of people in response to changing environments. • Adaptive leaders prepare and encourage people to deal with change. • Adaptive leadership is concerned with how people change and adjust to new circumstances	• Adaptive leadership centres on the adaptations required of people in response to changing environments and how leaders can support them during these changes • Leaders are willing to engage in all leader behaviours with the intention of helping followers do adaptive work	• Emphasizes the phenomenon of leadership is a complex interactive process comprising multiple dimensions and activities. • Encapsulates leadership as all behaviours and actions leaders need to engage in to give followers the greatest opportunity to do adaptive work. • Help followers deal with conflicting values that emerge in changing work environments and social contexts. • Provide a recipe for what leaders and followers should do to facilitate adaptive change. • A holding environment as an integral part of the leadership process	• Based on ideas and assumptions, but not on established research. • Conceptualization of the process of adaptive leadership needs further refinement. • Without clear conceptualizations of recommended behaviors, then leaders may infer their own conceptualizations of prescriptions • The link between adaptive work and achieving social values is not clear

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