

Innovation Strategy Applications in Kenya

Stanley Chege¹, Gregory Wanyembi², Constantine Nyamboga³
Enterprise Computing, Computing and Informatics, Mount Kenya University, Thika, Kenya.

Abstract: *A disruptive innovation or technology is one that displaces an established technology and shakes up the industry or a ground-breaking product that creates a completely new industry. Disruptive technology is separated into two categories: sustaining and disruptive. Sustaining technology relies on incremental improvements to an already established technology. Disruptive technology lacks refinement, often has performance problems because it is new, appeals to a limited audience and may not yet have a proven practical application.*

Keywords: *Innovation Strategy, Disruptive Innovation, Technology, Disruptive Technology, Strategy.*

I. Introduction

The personal computer (PC) displaced the typewriter and forever changed the way we work and communicate. The Windows operating system's combination of affordability and a user-friendly interface was instrumental in the rapid development of the personal computing industry in the 1990s. Personal computing disrupted the television industry, as well as a great number of other activities. Email transformed the way we are communicating, largely displacing letter-writing and disrupting the postal and greeting card industries. Cell phones made it possible for people to call us anywhere and disrupted the telecom industry (TechTarget, 2019a). The laptop computer and mobile computing made a mobile workforce possible and made it possible for people to connect to corporate networks and collaborate from anywhere. In many organizations, laptops replaced desktops.

Smartphones largely replaced cell phones and PDAs and, because of the available apps, also disrupted: pocket cameras, MP3 players, calculators and GPS devices, among many other possibilities. For some mobile users, smartphones often replace laptops. Others prefer a tablet. Cloud computing has been a hugely disruptive technology in the business world, displacing many resources that would conventionally have been located in-house or provided as a traditionally hosted service. Social networking has had a major impact on the way we communicate and; especially for personal use; has disrupted telephone, email, instant messaging and event planning (TechTarget, 2019a).

Problem Statement

Business owners and managers lack the strategies to spawn and implement innovation in their organizations. The lack of innovation strategies undermines sustainability, profitability and growth. As noted in the PwC Innovation Survey, 54% of innovating companies struggle to bridge the gap between innovation strategy and business strategy. To make the connection, manufacturers must support a collaborative approach to R&D, have a keen sense of how changing customer needs will impact product design and solution offerings, and, embrace a business-wide understanding that innovation drives jobs and is critical to economic success (IndustryWeek, 2019). The specific problem is that managers in the Kenyan organizations lack strategies to drive and exploit innovation.

II. Literature Review

Innovation Strategy

Business Dictionary defines Innovation Strategy as a plan made by an organization to encourage advancements in technology or services, usually by investing in research and development activities. For example, an innovation strategy developed by a high technology business might entail the use of new management or production procedures and the invention of technology not previously used by competitors (Businessdictionary, 2018).

Innovation strategy is not about selecting activities to pursue that are different from those of competitors. This is the myth that misleads. Selecting activities is not a strategy. An innovation strategy is about creating winning products, which means products that are in an attractive market, target a profitable customer segment, address the right unmet needs, and help customers get a job done better than any competing solution. Only after a company produces a winning product or service should it consider what activities are needed to deliver that product or service (Strategyn, 2018).

Types of innovation strategies

Innovation strategies can be classed as proactive, active, reactive and passive (Dodgson et al. 2008).

- Proactive: Companies with proactive innovation strategies tend to have strong research orientation and first-mover advantage and be a technology market leader. They access knowledge from a broad range of sources and take big bets/high risks. Examples include Dupont, Apple and Singapore Airlines. -The types of technological innovation used in a proactive innovation strategy are:
-1. radical - breakthroughs that change the nature of products and services
-2. incremental - the constant technological or process changes that lead to improved performance of products and services.
- Active: Active innovation strategies involve defending existing technologies and markets while being prepared to respond quickly once markets and technologies are proven. Companies using this approach also have broad sources of knowledge and medium-to-low risk exposure; they tend to hedge their bets. Examples include Microsoft, Dell and British Airways. These companies use mainly incremental innovation with in-house applied research and development.
- Reactive: The reactive innovation strategy is used by companies:
 - which are followers
 - have a focus on operations
 - take a wait-and-see approach
 - look for low-risk opportunities.

They copy proven innovation and use entirely incremental innovators. An example is Ryanair, a budget airline which has successfully copied the no-frills service model of Southwest Airlines.

- Passive: Companies with passive innovation strategies wait until their customers demand a change in their products or services. Examples include automotive supply companies as they wait for their customers to demand changes to specification before implementing these (Queensland Government, 2018).

The Need for an Innovation Strategy

It is a rare CEO who doesn't list innovation as a top priority. But innovation remains an elusive beast for most. Massive R&D investments have been made, processes built, training courses run, and yet successful outputs – exciting new products and services – are few and far between. Why is it so hard? Not because of failure to execute, according to innovation and competitive strategy expert Gary Pisano. The problem is the lack of innovation strategy. It sounds simple. Companies regularly define their overall business strategy (their scope and positioning) and specify how various functions – marketing, operations, finance, R&D – will support it. Yet, "during my more than two decades studying and consulting for companies in a broad range of industries, I have found that firms rarely articulate strategies to align their innovation efforts with their business strategies," explains Pisano. Like the creation of any good strategy, the process of developing an innovation strategy should start with a clear understanding and articulation of specific objectives related to helping achieve a sustainable advantage. This requires going beyond all-too-common generalities. Managers must innovate to grow (Stern Strategy Group, 2018).

A robust innovation strategy should answer three pivotal questions:

- How will innovation create value for potential customers?
- How will the company capture a share of the value its innovations generate?
- What types of innovations will create and capture value, and what resources are needed?

Based on his research and that of other authorities in the field, including Harvard Business School colleagues Clayton Christensen and Rebecca Henderson, Pisano characterizes four categories of innovation: routine, disruptive, radical and architectural. Critics tend to discount routine innovation that leverages a company's existing technical capabilities and business model and extol disruptive innovation. But Pisano believes that thinking is simplistic. In fact, most of the profits are created through routine innovation – think Intel, Microsoft, Apple. "here is no magic formula... (it's) one of balance and mix," he explains. And because innovation cuts across functions, only senior leaders can determine the right innovation recipe and set the strategy. In doing so, Pisano says, they must recognize that "Like the process of innovation itself, an innovation strategy involves continual experimentation, learning and adaptation (CIOIndex, 2018)

The Innovation Landscape Map

When creating an innovation strategy, companies have a choice about how much to focus on technological innovation and how much to invest in business model innovation. The matrix which considers how much a potential innovation fits with a company's existing business model and technical capabilities can assist with that decision.

REQUIRES NEW BUSINESS MODEL	<p>DISRUPTIVE</p> <ul style="list-style-type: none"> • Open source software FOR SOFTWARE COMPANIES • Video on demand FOR DVD RENTAL SERVICES • Ride-sharing services FOR TAXI AND LIMO COMPANIES 	<p>ARCHITECTURAL</p> <ul style="list-style-type: none"> • Personalized medicine FOR PHARMACEUTICAL COMPANIES • Digital imaging FOR POLAROID AND KODAK • Internet search FOR NEWSPAPERS
LEVERAGES EXISTING BUSINESS MODEL	<p>ROUTINE</p> <ul style="list-style-type: none"> • A next-generation 3 series FOR BMW • A new index fund FOR VANGUARD • A new 3-D animated film FOR PIXAR <p>LEVERAGES EXISTING</p>	<p>RADICAL</p> <ul style="list-style-type: none"> • Biotechnology FOR PHARMACEUTICAL COMPANIES • Jet engines FOR AIRCRAFT MANUFACTURERS • Fiber-optic cable FOR TELECOMMUNICATIONS COMPANIES <p>REQUIRES NEW</p>

Figure 1: Source: (HBR, 2015).

Innovation Strategy Implementation

Firstly, you'll have to define clearly what is the desired outcome, what it is that you want to get from your innovation efforts. Do you want to:

- Develop a new product?
- Protect or expand your market share?
- Sell or license your company/product to another organization?
- Create greater staff retention?
- Improve operational efficiency?
- Increase recognition in the marketplace?

These are all questions that should be carefully considered before moving forward. Once you have decided of what is most important for you and your organization, you'll then need to take steps towards putting an innovation strategy plan in place. To develop an innovation strategy there are a few points that need to be considered, as these will set the direction for the innovation execution and will enable everyone in the organization to "sing from the same hymn sheet", so to speak:

- An innovation strategy needs to be inspiring and communicate the organization's vision clearly.
- Needs ambitious objectives that will make an organization stand out from the competition and have a real competitive advantage.
- The development process needs to be open and take different visions into consideration.
- The innovation strategy must be time specific – meaning that it should be done specially for the period in which it was developed so that any gaps can be closed
- The strategy also needs to be flexible, to allow tweaks and updates over time.
- The innovation strategy needs to ultimately tie in with the overall business strategy to ensure that you're working towards the same objectives.

These are only, of course, just a few ideas to inspire and give you a starting point. However, the importance of dedicating some time and effort to getting an innovation strategy right from the start will pay off in the end (Wazoku, 2018).

III. Disruptive Innovation

The theory of disruptive innovation was first coined by Harvard professor Clayton M. Christensen in his research on the disk-drive industry and later popularized by his book *The Innovator's Dilemma*, published in 1997. The theory explains the phenomenon by which an innovation transforms an existing market or sector by introducing simplicity, convenience, accessibility, and affordability where complication and high cost are the status quo. Initially, a disruptive innovation is formed in a niche market that may appear unattractive or inconsequential to industry incumbents, but eventually, the new product or idea completely redefines the industry (Christenseninstitute, 2018).

What makes a technology or innovation "disruptive" is a point of contention, and the term may be used to describe technologies that are not truly disruptive. The Internet was disruptive because it was not an iteration of a previous technology, while the Model T car is not considered disruptive because it was an improvement on

an existing technology. Investing in a disruptive innovation can be complicated. It requires an investor to focus on how companies will adopt new disruptive technology, instead of focusing on the development of the technology itself. Companies such as Amazon, Google, and Facebook are examples of companies that have heavily focused on the Internet as a disruptive technology, which has become so ingrained in the modern world that the companies that have failed to integrate the disruptive innovation into their business models have been pushed aside (Investopedia, 2018).

Four Key Elements of the Theory of Disruptive Innovation

- Incumbents are improving along a trajectory of innovation. ...
- The pace of sustaining innovation overshoots customer needs. ...
- Incumbents have the capability to respond but fail to exploit it. ...
- Incumbents flounder because of the disruption (MIT Sloan Management Review, 2018).

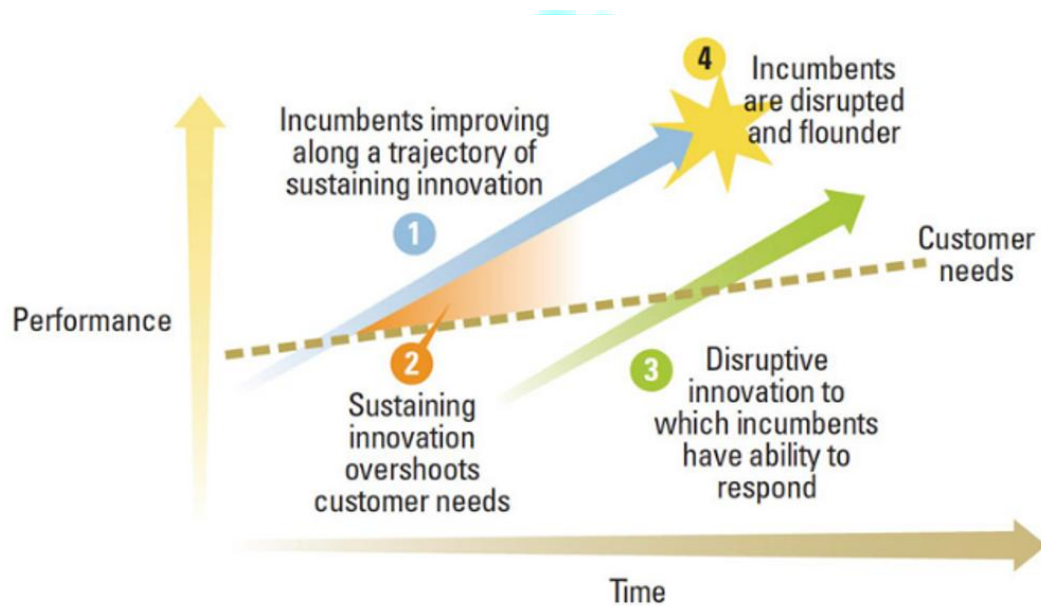


Figure 2. Source: (MIT Sloan Management Review, 2018).

The Disruptive Innovation Theory

Christensen argued that disruptive innovations can hurt successful, well-managed companies that are responsive to their customers and have excellent research and development. These companies tend to ignore the markets most susceptible to disruptive innovations because the markets have very tight profit margins and are too small to provide a good growth rate to an established (sizable) firm. Thus, disruptive technology provides an example of an instance when the common business-world advice to "focus on the customer" can be strategically counterproductive. While Christensen argued that disruptive innovations can hurt successful, well-managed companies, O'Ryan countered that "constructive" integration of existing, new, and forward-thinking innovation could improve the economic benefits of these same well-managed companies, once decision-making management understood the systemic benefits. Christensen distinguished between "low-end disruption", which targets customers who do not need the full performance valued by customers at the high end of the market, and "new-market disruption", which targets customers who have needs that were previously unserved by existing incumbents. "Low-end disruption" occurs when the rate at which products improve exceeds the rate at which customers can adopt the new performance. Therefore, at some point, the performance of the product overshoots the needs of certain customer segments. At this point, a disruptive technology may enter the market and provide a product that has lower performance than the incumbent but that exceeds the requirements of certain segments, thereby gaining a foothold in the market.

In low-end disruption, the disruptor is focused initially on serving the least profitable customer, who is happy with a good enough product. This type of customer is not willing to pay a premium for enhancements in product functionality. Once the disruptor has gained a foothold in this customer segment, it seeks to improve its profit margin. To get higher profit margins, the disruptor needs to enter the segment where the customer is willing to pay a little more for higher quality. To ensure this quality in its product, the disruptor needs to innovate. The incumbent will not do much to retain its share in a not-so-profitable segment and will move up-market and focus on its more attractive customers. After several such encounters, the incumbent is squeezed into

smaller markets than it was previously serving. And then, finally, the disruptive technology meets the demands of the most profitable segment and drives the established company out of the market. "New market disruption" occurs when a product fits a new or emerging market segment that is not being served by existing incumbents in the industry. The extrapolation of the theory to all aspects of life has been challenged, as has the methodology of relying on selected case studies as the principal form of evidence. Jill Lepore pointed out that some companies identified by the theory as victims of disruption a decade or more ago, rather than being defunct, remain dominant in their industries today (including Seagate Technology, U.S. Steel, and Bucyrus). Lepore questions whether the theory has been oversold and misapplied as if it were able to explain everything in every sphere of life, including not just business but education and public institutions (Wikipedia, 2018).

Examples of Disruptive Innovation

Some examples of disruptive innovation include:

Disruptor	Disruptee
Personal computers	Mainframe and mini computers
Mini mills	Integrated steel mills
Cellular phones	Fixed line telephony
Community colleges	Four-year colleges
Discount retailers	Full-service department stores
Retail medical clinics	Traditional doctor's offices

Figure 3. Source: (Claytonchristensen, 2018).

Is Uber a Disruptive Innovation?

Let's consider Uber, the much-feted transportation company whose mobile application connects consumers who need rides with drivers who are willing to provide them. Founded in 2009, the company has enjoyed fantastic growth (it operates in hundreds of cities in 60 countries and is still expanding). It has reported tremendous financial success (the most recent funding round implies an enterprise value of about \$50 billion). And it has spawned a slew of imitators (other start-ups are trying to emulate its "market-making" business model). Uber is clearly transforming the taxi business in the United States (HBR, 2018).

According to the theory, the Uber is not disrupting the business. Uber's financial and strategic achievements do not qualify the company as genuinely disruptive—although the company is almost always described that way. Here are two reasons why the label does not fit:

- Disruptive innovations originate in low-end or new-market footholds: Disruptive innovations are made possible because they get started in two types of markets that incumbents overlook. Low-end footholds exist because incumbents typically try to provide their most profitable and demanding customers with ever-improving products and services, and they pay less attention to less-demanding customers. In fact, incumbents' offerings often overshoot the performance requirements of the latter. This opens the door to a disrupter focused (at first) on providing those low-end customers with a "good enough" product. In the case of new-market footholds, disrupters create a market where none existed. Put simply, they find a way to turn nonconsumers into consumers. For example, in the early days of photocopying technology, Xerox targeted large corporations and charged high prices to provide the performance that those customers required. School

librarians, bowling-league operators, and other small customers, priced out of the market, made do with carbon paper or mimeograph machines. Then in the late 1970s, new challengers introduced personal copiers, offering an affordable solution to individuals and small organizations; and a new market was created. From this relatively modest beginning, personal photocopier makers gradually built a major position in the mainstream photocopier market that Xerox valued. A disruptive innovation, by definition, starts from one of those two footholds. But Uber did not originate in either one. It is difficult to claim that the company found a low-end opportunity: That would have meant taxi service providers had overshot the needs of a material number of customers by making cabs too plentiful, too easy to use, and too clean. Neither did Uber primarily target no consumers; people who found the existing alternatives so expensive or inconvenient that they took public transit or drove themselves instead: Uber was launched in San Francisco (a well-served taxi market), and Uber's customers were generally people already in the habit of hiring rides. Uber has quite arguably been increasing total demand—that's what happens when you develop a better, less-expensive solution to a widespread customer need. But disrupters start by appealing to low-end or unserved consumers and then migrate to the mainstream market. Uber has gone in exactly the opposite direction: building a position in the mainstream market first and subsequently appealing to historically overlooked segments.

- Disruptive innovations do not catch on with mainstream customers until quality catches up to their standards: Disruption theory differentiates disruptive innovations from what are called "sustaining innovations." The latter make good products better in the eyes of an incumbent's existing customers: the fifth blade in a razor, the clearer TV picture, better mobile phone reception. These improvements can be incremental advances or major breakthroughs, but they all enable firms to sell more products to their most profitable customers. Disruptive innovations, on the other hand, are initially considered inferior by most of an incumbent's customers. Typically, customers are not willing to switch to the new offering merely because it is less expensive. Instead, they wait until its quality rises enough to satisfy them. Once that's happened, they adopt the new product and happily accept its lower price. (This is how disruption drives prices down in a market.) Most of the elements of Uber's strategy seem to be sustaining innovations. Uber's service has rarely been described as inferior to existing taxis; in fact, many would say it is better. Booking a ride requires just a few taps on a smartphone; payment is cashless and convenient; and passengers can rate their rides afterwards, which helps ensure high standards. Furthermore, Uber delivers service reliably and punctually, and its pricing is usually competitive with (or lower than) that of established taxi services. And as is typical when incumbents face threats from sustaining innovations, many of the taxi companies are motivated to respond. They are deploying competitive technologies, such as hailing apps, and contesting the legality of some of Uber's services.

How can companies survive disruption?

Google is developing self-driving cars, Amazon is experimenting with drones to deliver shopping, and there's a chance that in future we could 3D print medication in our own homes. With these potentially disruptive innovations on the horizon, how should existing companies respond? While the mantra "disrupt or be disrupted" may strike fear into the heart of many a large firm, true disruptive innovation is surprisingly rare. Companies need to react to disruption, but they should not overreact by dismantling a still-profitable business (Christensen, Raynor & McDonald, 2015). The answer is instead to bolster relationships with key customers by investing in "sustaining innovations". In addition, companies can create a new division tasked with going after the growth opportunities resulting from disruption. "Our research suggests that the success of this new enterprise depends in large part on keeping it separate from the core business. That means that for some time, incumbents will find themselves managing two very different operations," they write. "Of course, as the disruptive stand-alone business grows, it may eventually steal customers from the core. But corporate leaders should not try to solve this problem before it is a problem (Weforum, 2018).

Innovation and Company Culture

Innovation often features high on CIOs' agendas because it is recognized as being an important means by which information systems and technology can contribute positively to the evolution and performance of the business. However, in practice, the execution often falls short of the ambition. Reasons for this range from the mundane, such as there being insufficient time or capacity to devote to it, to the more fundamental, such as organizational or cultural barriers, or insufficiently defined processes and governance for capturing ideas and seeing them through to fruition (Computerweekly, 2018).

A Model for Funding Innovation

The final blocker to innovation covered in this paper applies to organizations where the business is expected to pay for IT projects. In these situations, a common issue is that the first business unit to implement

an innovative solution has to invest more in the IT than other business units that subsequently exploit the same solution once it is proven. The answer is to have a budget ring-fenced for innovation projects, separate to the operations budget. The level of the budget is set during the budget planning process and reflects all approved innovation projects in the demand plan. There are three models for how this could be rolled out- centralized, decentralized, and federated (Kurt Salmon, 2018).

Centralized: one option is to have a central fund for IT innovation projects which can be accessed on a first-come, first-served basis. However, it may be difficult to govern and manage the central fund, particularly in larger organizations and may blur lines of accountability where an organization is typically de-centralized in other respects.

De-centralized: this option involves each business unit having its own innovation budget. The drawback of this approach occurs when a project spans multiple business units.

Federated: this model is typically the best because it allows local innovation projects to be funded and measured locally while providing a funding solution to pan-organization projects. Managing funding is addressable, as are the other inhibitors, by good governance and following a structured method. These are both keys to driving innovation in the enterprise, as is commitment across both the IT function and the business. This means cementing a culture that promotes and rewards the contribution of ideas and the drive required to convert those ideas into new products and services, or more efficient and effective ways of working. Once that mindset is established, an organization is well on its way to being innovative (Kurt Salmon, 2018).

Innovation Strategy and Defining how to Manage Uncertainty

If one looks objectively at the act of innovating, one of the primary outcomes of any innovation endeavor is to turn uncertainty about the future, which companies find difficult to deal with, into risk, which companies are very comfortable dealing with. The unknown distribution of future possibilities gets turned into tangible artifacts that affect the future and, although those artifacts are very often very risky, these are risks that a company can quantify and determine, with a certain amount of confidence, what the future will look like (Theinovogroup, 2018).

The reason for approaching innovation strategy in this way is that it clarifies many issues related to innovation strategy. For example, a good way to address uncertainty is to get the inputs of many diverse perspectives. Hence crowdsourced or open innovation efforts might be a good tool to use and the tactics a company employs might include these types of efforts.

Given this perspective on innovation strategy, here are some relevant innovation strategy questions managers should answer:

Where is the world going? What major transformations will take place over the next 10 – 20 years and how will they affect the current business and open new opportunities for us?

The answers to these questions give definition to uncertain but plausible futures. If your company does not have a well-defined and functioning future proofing process, then it is lacking a key component of an innovation strategy.

What domains (that are revealed by our view of the future) should managers be focusing on to find new opportunities?

A view of plausible futures informs which realms it makes sense for a company to explore for new opportunities. If managers do not have a clear definition of where to explore then they have an incomplete innovation strategy.

What new cultures, organizational structures, brands, relationships etc. do we need to develop new competencies in?

Introduction of new artifacts changes behaviors, the company's and others. New behaviors necessitate new organizational structures, competencies, processes and people. If managers do not have an explicit vision of how the company should evolve in these areas, then they do not have an innovation strategy.

How should managers allocate our innovation resources and efforts in the space defined by the dimensions of new-to-the-world and new-to-the-company There is only so much time, attention and money to spend on innovation. The allocation of resources to tactical vs. strategic innovation (or incremental vs. disruptive, sustaining vs. breakthrough etc.) determines a company's approach to managing uncertainty. If managers do not have an explicit and shared definition of how the company's innovation resources should be allocated (and why), then they do not have an innovation strategy.

How do managers innovate innovation? How do managers advance the innovative capacity through new processes, methods, and tools? How do managers create an innovation system that is more than the sum of its parts?

Any innovation strategy must address the issue of how the company improves their innovative capacity. This does not mean that the strategy needs to identify specific tools and methods. It does mean that the strategy needs to address what innovation competencies the company wants to develop, and the amount and type of resources allocated to developing its own core innovation competencies (Theinovogroup, 2018).

Strategy is about long-term thinking. Long-term thinking must accommodate the uncertainties inherent in the dynamics of the complex system our companies live in. In most things a company does, there is a relatively tight feedback loop between cost and benefit. Companies can ramp their spending up and down according to the impact they see. For innovation strategy, this is very counterproductive. Companies need to take a different approach to innovation strategy knowing that the feedback loop is often beyond even their longest strategic planning horizons. They need to commit to an innovation strategy that will survive changes in leadership, corporate reorganizations and generational changes in their people. This is the way to manage uncertainty and to control their own destiny (Theinovogroup, 2018).

The Design Flaw in Design Thinking

The process is sometimes summarized as define, research, ideate, prototype, choose, implement, and learn. What makes design thinking so effective is its relentless focus on the needs of the end user. Instead of starting with a set of features, it begins by asking what the final experience should be and then works to define a solution. Designers develop products through a series of prototypes and continuously improve and refine them through testing.

So, for example, instead of developing a mobile phone by asking, "what should the keypad look like? A design thinking engineer would start by asking "What does the user want to do with the phone?" In a similar way, a design thinker would not start designing a doctor's office by asking where the waiting room should go, but by asking, "what is the purpose of the waiting room?"

As Apple has clearly demonstrated, design thinking can be tremendously helpful when you're working with mature technologies that are well understood. Unfortunately, they're not much help when you're venturing into the unknown to, say, find a new cure for cancer or develop a new approach to artificial intelligence, which may be why Apple has gotten bogged down lately (Inc.,2018).

The Disruption Dilemma

When the basis of competition changes, because of technological shifts or other changes in the marketplace, companies can find themselves getting better and better at things people want less and less. When that happens, innovating products won't help, managers must innovate your business model (Inc.,2018).

Open Innovation

There is the value in adopting the open innovation approach. When companies have a tough problem, it often helps to expand skill domains beyond specialists in a single field.

However, most of the time we need experts in specialized fields to improve performance in areas that are well understood. Many innovation "experts" derisively call this "incremental innovation," but that's how most of the value from innovation is produced. The steady improvements of Moore's Law have driven the digital revolution (Inc.,2018).

Innovation Matrix

Design thinking, disruptive innovation, lean startup methods and open innovation have all become buzzwords because they have produced real results. Yet none of them is a cure-all. Each performs well with some classes of problems, but not so well in others. That's managers should use the whole innovation toolbox. The trick is to match the right type of problem with the right type of solution.

Innovation Matrix

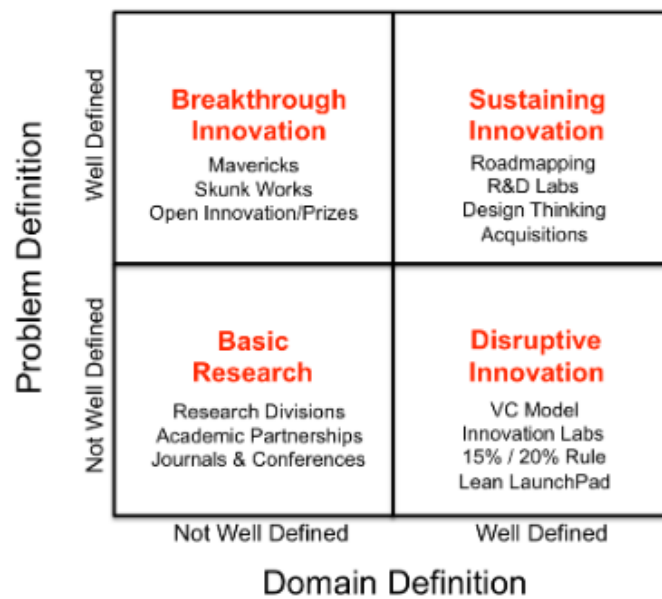


Figure 4. Source: (Inc., 2018).

The truth is many organizations get stuck because they end up locking themselves into a single strategy. They find something that works and say, "this is how we innovate" and end up trying to apply essentially the same solution no matter what the problem is. Eventually, that ends badly. That is why many organizations once billed as great innovators so often fall behind. They essentially become square-peg companies in a round-hole world and lose relevance. Every strategy fails eventually because managers must match solutions to problems, not the other way around (Inc., 2018).

Innovation Playbook

Searching for "one true path" to innovation is nothing more than a distraction. It is more likely to set managers on a wild goose chase and waste enormous amounts of time and money than anything else. What managers need is to identify their own path to innovation and then gather the tools they need to get where they want to go (Digitaltonto, 2018).

Some companies, such as Uber and Airbnb, found previously undefined solutions for existing technology with well-defined domains. They pushed the limits of the marketplace rather than technology and can disrupt existing firms by doing so. These disruptive innovators tend to win with new business models rather than superior technology (Digitaltonto, 2018).

Innovators work from very different playbooks that are geared to both their internal capabilities and the markets they seek to serve. Some, like Google and IBM, create breakthrough technologies. Others, like Apple, recombine existing technologies to design superior products. Still, others disrupt the marketplace with new business models (Digitaltonto, 2018).

Managers need to leave behind the innovation fairy tales about and deal with innovation as it really happens. Coming up with the "next big thing" is less a matter of epiphany and more a matter of identifying the right set of tools for the right job (Digitaltonto, 2018).

Business Model Innovation

Firms, in general, are aware that making changes to the business model may increase the opportunities for them to appropriate more economic value. Nevertheless, they are often reluctant to abandon their traditional ways of doing business (Innovationmanagement, 2018).

There are several reasons why it is difficult to change the business model. The first is related to institutional memory. When firms grow, and their business models have proven successful, this establishes powerful norms and values within the mindset of the organization (Innovationmanagement, 2018).

Another problem involved in changing the business model is uncertainty. Although the actual decision to change may be easy, the implementation may be far more difficult. Firms may be uncertain about their

customers' reactions to business model changes. Hence, although managers may be aware of the benefits of a new business model, they may be uncertain about the consequences (Innovationmanagement, 2018).

Fostering an Internal Culture of Innovation

Innovative environments can be challenging to maintain and manage and doing so requires the right combination of standard processes and free-form ideation. Like many companies, Cummins Allison utilizes a five-stage “tollgate” process, establishing key milestones and timelines for each part of the process before the team can move on to the next stage. Consistent methodology keeps the focus and creative energy squarely on the problem, not the process. This structure has reduced by 50% the variance between planned and actual deliverables (IndustryWeek, 2019).

A Commitment to Continuous Improvement

With the U.S. dropping out of the Top 10 in the 2018 Bloomberg Innovation Index for the first time, it is now more important than ever for the U.S. government to provide an economic climate that is more conducive to innovation, manufacturing and job creation. Over the next decade, new technologies and products will be key drivers for U.S. economic growth, new jobs and wealth generation. In the quest for breakthrough innovations, companies will invest a significant portion of sales into R&D—and to best support them, local, state and federal governments should promote these advances by working to reduce regulatory barriers and provide an economic climate that encourages American innovation and manufacturing. This will, in turn, create jobs that are critical to the economic future of the communities and nation (IndustryWeek, 2019).

Innovation Strategy Case Studies in Kenya

Huduma Kenya

Huduma card, a Government of Kenya owned pre-paid card, that enables citizens to make payments for both public and private sector has won the 5th edition of the All Africa public service innovation award (AAPSIA) as the most innovative partner in service delivery (CIO, 2018a).

The Huduma card is the first government-owned multipurpose service and payment card that allows customers to make or receive payments. It has a smart chip built into it whereby the cardholder's personal data can be securely stored and can host multiple applications on the embedded chip.

AAPSIA 2018 aimed to promote and encourage innovative practices for public sector services. It is the first African-scale prize program to celebrate innovation in the public sector.

The program recognizes and rewards the success of the workforce and their private and nonprofit sector partners that have successfully developed innovative solutions, in terms of service delivery, combating corruption and governance-related challenges. The prizes recognize successful and effective service delivery initiatives through the application of innovative approaches, methodologies and tools and provide opportunities for knowledge sharing, training, partnerships, and possible replication of successful initiatives across the continent.

The winning categories included; Innovative Service Delivery, Innovative Partnerships, Innovation in the Systems and Processes of Government and The 4th Industrial Revolution.

The theme of the 2018 edition of AAPSIA was informed by the vision of the Agenda 2063 of an integrated, prosperous and peaceful Africa led by its own citizens, which represents a dynamic force in the international arena as well as the AU theme of the year for 2018 mentioned above. The Prize Program contributes specifically to the aim of "Africa of Good Governance", with competent and innovative institutions governed by trans-formative leadership at any level of government.

The Huduma card reflected an innovative idea or concept that has been fully implemented in the public sector in Africa (Kenya). The approach has never been implemented before in a similar context and was considered a “new” concept for Kenya.

Wefarm

Wefarm, which provides more than a million East African smallholders with a digital platform for share farming know-how, launched the monthly Champion Farmer initiative to reward farmers who are individually driving forwards Kenya's agricultural productivity through information sharing (CIO, 2018b).

Farmers are often the best and most relevant source of information and experience for their fellow farmers. It is for this reason that Wefarm invested so heavily in creating a platform to facilitate cross-sharing,

Last year, maize production in Kenya dropped by 32 per cent, from five million bags in 2016 to 3.7 million in 2017, due to crop infestations and diseases. Transforming output across the staple crop with farming know-how is actually a national contribution when our crops are plummeting on agricultural and market challenges

Wefarm awarded farmers the inputs of their choice, which were fertilizer, a solar system, hoes and machetes, as well as a fully paid trip to attend one of Wefarm's weekly radio talk shows to speak on raising maize yields in the face of so many current challenges. Wefarm's goal is to run the initiative every month and drive the country's agricultural output higher.

Cellulant

Cellulant a leading Pan-African payments company on a deliberate mission to build a number one payments business in Africa. The third iteration of its business strategy is anchored on consumer payments, internet payments, and marketplace payments (CIO, 2018c).

The initiative aimed at fixing Africa's payment challenges by connecting 700 million mobile users to payments that power their daily lives. A payment infrastructure is a critical pillar in the transformation of this continent in much the same way railways transformed continents in the 19th century.

The challenges for payments in Africa include; Fragmentation, Regulation, Competition and Settlement whereas the future is Platforms; Open Banking/Open API, Open Engagements and Single API for Africa.

Today, Cellulant's payments platform covers 1 in 10 Africans, with 2.5 million doing monthly transactions while its coverage extends to 50 percent of banks and 17 million unbanked farmers in Africa. It debuted operations in Kenya and Nigeria in 2004 and has grown to operate across 11 African countries, including Zambia, Ghana, Zimbabwe, Tanzania, Uganda, Botswana, Mozambique, Malawi, Rwanda and a combined team of up to 350 people.

Ushahidi

Ushahidi, which translates to "testimony" in Swahili, was developed to map reports of violence in Kenya after the post-election violence in 2008. Since then, thousands have used the crowdsourcing tools to raise their voice. Ushahidi is a technology leader in Africa, headquartered in Nairobi, with a global team. Ushahidi is a social enterprise that provides software and services to numerous sectors and civil society to help improve the bottom-up flow of information.

We believe that if marginalized people can easily communicate to organizations who aim to serve them. Then those organizations and governments can more effectively respond to their communities' immediate needs, while simultaneously bringing global attention to their problems through the aggregation of their voices (Ushahidi, 2018).

Pesapal

Pesapal is a payment gateway that enables customers to make payments using Mobile money, Cards or Mobile Banking. By providing all these methods, a customer has the option to choose which payment method to pay with at the time of making either an online or over the counter payment. It allows customers as an individual to hold money, pay for the bills, utilities, pay school fees, buy event tickets, pay for the online shopping, and buy airtime electronically (Pesapal, 2018).

KopoKopo

Kopo Kopo is a world-class platform that enables small and medium businesses to accept mobile payments and build relationships with their customers. Kopo Kopo was launched in 2012 where they partnered with Safaricom to bring Lipa na M-Pesa Buy Goods service to small and medium businesses throughout Kenya. Kopo Kopo now serves thousands of businesses from salons to restaurants to office supply stores, to schools (Kopokopo, 2018).

We have since partnered with other aggregators and mobile money partners with the goal of helping businesses leverage mobile payments. Kopo Kopo offers market-appropriate solutions to enable and incentivize businesses to go digital. Kopo Kopo partners with financial institutions, mobile operators and major retailers who are interested in marketing new payment services to small and medium enterprises. Kopo Kopo is dedicated to re-focusing the market on SMEs.

Kopo Kopo operates in multiple emerging markets where our partners are growing their networks using our solutions. In East Africa, for example, Kopo Kopo partnered with Kenya's Safaricom to drive merchant acceptance via the "Lipa na M-Pesa" service. Kopo Kopo has designed a robust payment platform that has various functionalities and value additions which have been segmented into products with the aim of positioning them in various market verticals.

Safaricom M-pesa

Business deals have pushed Kenya's mobile money accounts to 45million. The increased adoption of mobile money channels has seen renewed calls for daily transaction limit to be raised. Safaricom requested the

CBK to double the ceiling, citing banks which can transact up to Sh999,999 through their interbank mobile payment channel, PesaLink (Business Daily, 2018).

Mobile money accounts crossed the 45 million milestone for the first time in October 2018 underlining the impact of the 11-year old innovation in driving financial inclusion. Nearly 9.44 million mobile accounts were opened in 12 months through October, taking the total past 45.43 million accounts, according to the Central Bank of Kenya (CBK).

The popularity of mobile money transfer services continues to rise among businesses and persons, with some of the previously unbanked using the platforms as primary accounts for financial transactions. Deals worth Sh3.90 trillion were settled via mobile phones in the period, which was Sh289.42 billion or 8 percent more than the corresponding period a year earlier. The growth is largely supported by increasing adoption of mobile payments by major sectors of the economy such as financial services, retail and wholesale trade, agriculture and health.

Unlike during the formative years when the mobile money platforms were largely used for person-to-person (P2P) cash transfers, they are now increasingly being used to initiate and cut business deals such as the purchase of goods and services as well as processing of instant short-term loans. Mobile payments between January and October hit Sh3.27 trillion, a growth of Sh265.84 billion over the same period in 2017.

IV. Conclusion

Innovation management involves the process of managing an organization's innovation procedure, starting at the initial stage of ideation, to its final stage of successful implementation. It encompasses the decisions, activities and practices of devising and implementing an innovation strategy (TechTarget, 2019b).

According to Gartner, an IT research and consultancy company, innovation management is a business discipline that aims to drive a sustainable innovation process or culture within an organization. Oftentimes, these innovation management initiatives utilize a disruptive method of change to transform business (TechTarget, 2019b).

In the age of digital transformation, organizations are faced with the need to innovate more and innovate quickly. Innovation drives business growth and helps organizations stay ahead of their competitors. Innovation management helps in generating new business models and creates new products, services and technologies designed for the changing market. Proper innovation management also boosts customer satisfaction and employee engagement (TechTarget, 2019b).

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