What It Takes To Change a Light Bulb:
Adaptive Change at Philips

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Case Study
November 17, 2013

Virtual Organizations in a Dynamic Context
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Abstract
This paper studies how the adaptive cycle of change applies to Philips’ historical product strategy. After a phase of stability as a lighting manufacturer, Philips saw an opportunity to expand into consumer electronics. A strategy that due to a competitive crisis shifted back to focus on medical systems and lighting. Philips hence showed three phases of stability and two major adaptive cycles of change, each containing and prescribing to faster and slower cycles of change. The applicability of the cyclic model is further critically reviewed.

Keywords Philips, Adaptive Cycle of Change, Product Strategy

"Standing still is the fastest way of moving backwards in a rapidly changing world. Imagination is the highest kite one can fly" - Lauren Bacall

Introduction
In the past ten years the Dutch multinational TomTom saw itself decline from being a market leader in car navigation systems to a struggling enterprise (Hofman, 2010). Built-in computers and smartphones with GPS navigation had rendered its technology obsolete. And increasingly rapid innovation in the modern-day business world have turned many more such technologies superfluous. For example, think of PDAs, movie rental, CDs and numerous paper-based media (Male, 2009). Truly, the newspaper industry is currently in a state of crisis as many are either becoming digital or going out of business (Bird, 2009). Moreover, globalization has added another influential dimension of complexity to the current state of business (e.g. Bevan & Gitsham, 2009). Which begs the question, how do firms adapt to an increasingly dynamic context?

To study such changes at corporations the adaptive cycle of change has been developed in scientific literature to describe these events (e.g. Holling, 2001). This paper describes a short case study into the adaptive cycle of change at the Dutch Royal Philips N.V., a formidable company that has reinvented itself several times throughout its history. The focal question hence is, how does the adaptive cycle of change apply to Philips’ historical product strategy? The aim and relevance of this paper lies in that it may garner insights into change processes, the applicability of the adaptive cycle and responsive product strategies. The paper commences with
a terse literature review on Philips and the adaptive cycle of change, followed by a short explication of the method applied here, before closing with findings and a critical discussion.

**A Concise History of Philips**

Royal Philips N.V. was founded in 1891 by father and son Frederik and Gerard Philips (Philips, 2013). The global electronics giant currently employs 115,000 people in over 60 countries selling goods in over 100 countries across six continents (Philips, 2012). Last year’s revenues reached nearly $25 billion, of which nearly a quarter billion profits, with a market capitalization falling to $18.2 billion at end-of-year. Philips’ products are currently organized along three divisions, namely Consumer Lifestyle for consumer electronics, Healthcare for medical systems, and Lighting for lighting solutions (Philips, 2013). Recently Philips sold its consumer electronics activities to Funai Electric, but the deal bounced (Van Daalen, 2013). Philips’ primary listing is on the Euronext Amsterdam as part of the AEX index, but has a secondary listing on the NYSE (Philips, 2013).

In the 1890s and 1910s, overcoming near bankruptcy, Philips focused mostly on light bulbs and metal filament lamps (Philips, 2013). In the 1920s the offerings were extended with radio equipment such as vacuum tubes, radios and an international radio station, as well as a medical Röntgen installation. To supplement their consumer electronics, Philips revived the Stirling engine low power portable generator in the 1930s (Hargreaves, 1991). 1939 marked the birth of one of their most successful consumer products; the Philishave electric shaver for men.

The second world war interrupted Philips’ product innovations as the family fled to America and transferred the firm temporarily to the Dutch Antilles (Philips Museum, 2013). Only Frits Philips remained behind and in a scheme much like Schindler’s list managed to save hundreds of Jewish employees (De Graaf, 2005). After the war Philips resumed their stride in consumer electronics by offering television sets, records and audio equipment.

From the 1940s Philips made particular virtue with their cassette solutions that survived into the 1990s (Philips, 2013). In 1972 Philips competed with VHS with their V2000 video cassettes but eventually forfeit. They were more successful with the invention of laser disks together with Sony, with the introduction of CDs in 1982, DVDs in 1997, and Blue-Ray in 2006.

In 1997 Philips finally moved out of their birthplace of Eindhoven to the Rembrandt tower in Amsterdam (Volkskrant, 1997). The firm announced a shift away from consumer
electronics to medical systems in 2005 pointing to intense competition (Appliance Magazine, 2005). $5 billion in investments in medical technology enforced this announcement. In 2006 their semi-conductors department split off and continued as NXP Semiconductors (Philips, 2013). Furthermore, in 2007 and 2008 Philips acquired medical firms Ximis (Philips Newscenter, 2007), Respironics Inc. (Philips Newscenter, 2008) and VISICU Baltimore (Philips Newscenter, 2008). The remaining electronics business units in audio and video were sold to Funai Inc. in 2012, but the deal failed in 2013 (Van Daalen, 2013). To finalize the transformation Philips dropped electronics from its name as it was changed to Royal Philips Inc (Philips, 2013).

**On the Adaptive Cycle**

Before diving into the changes as experienced by Philips, let us divulge on the adaptive cycle of change somewhat further. Innovation, as renewal of technology of any kind, may be divided in incremental innovation, extending existing technology, and radical innovation, asserting entirely new technology (Perez, 2004). Incremental innovation occurs early in the life cycle of a technology, until the larger systems in which they are embedded provide the logic for radical innovation. When radical innovation occurs on a large systemic scale this concerns technological revolutions that restructure the techno-economic and socio-technical systems in which the technology is embedded, for example in the case of the industrial revolution or the steam engine. In related systems theory, new technologies (in the broad sense of the word) remain in niches until forces in the socio-technical landscape entice adoption by larger technical regimes, which in turn may transform the landscapes themselves (Geels, 2002).

To describe how systems, such as societies, corporations or ecologies, change due to or as part of innovation the adaptive cycle has been suggested (e.g. Holling, 2001; Abcouwer & Parson, 2012). The adaptive cycle describes a first loop from exploitation to conservation of incremental innovations and a second loop of creative destruction, experimentation and radical innovation moving from decoupling to reorganization of a system (Holling, 2001). See figure 1, from initial exploitation of an innovation (r, exploitation) the accumulation of resources and transformation leads to a phase of conservation of that innovation (k, conservation), until some crisis occurs that leads to the ‘unfreezing’ of the system (Omega, release) and creation of innovation opportunities until the system reorganizes (Alpha, reorganization). Think for example of a forest fire or a political revolution.
This cycle is mapped onto three dimensions of potential to change, internal controllability (connectedness) and adaptive capacity (resilience) (Holling, 2001). Such cycles are interlinked with other cycles on several faster and slower geo-temporal levels called ‘panarchies’, for example release in a fast cycle may upset a slower cycle (‘revolt’) or conservation in a slow cycle may help reorganize a faster cycle (‘remembrance’). Panarchies may collapse due to maladaptive cycles, for example cycles wherein all potential has been eradicated (the poverty trap) or cycles that are too resilient (the rigidity trap).

![Figure 1 The Adaptive Cycle, from Holling (2001)](image)

Abcouwer and Parson (2012) mapped this lemniscate cycle of adaptive change onto a matrix of ‘can vs. want’, reflecting the certainty of corporate capabilities and strategic direction, to form the adaptive cycle of resilience that describes corporate change, see figure 2. In the first phase there is a balance of clear goals, abilities and efficiency allowing incremental innovation. In the second phase there is a crisis and need of variety outside the current capabilities and dominant coalition. In the third phase the choices are clear to a certain level of confidence. In the final phase a choice has been made and processes are rationalized once again.
In practice change is however challenging, for example the Icarus paradox states that firms may get stuck in trajectories of inertia in sales, R&D, venturing or specialization (Miller, 1992). Corporate capabilities for change are determined by resources, processes and values, and help to resolve the ‘innovator’s dilemma’ of simultaneously exploiting current technologies and exploring new technologies (Christensen & Overdorf, 2000). For example, the fit between capabilities and change implores whether to develop change in heavyweight teams or a spinout organizational configuration. Incremental and radical innovation each entail a linked cycle of corporate learning (Park et al., 2012).

**Case Study**

The underlying paper studies how the adaptive cycle of change as described in the previous section applies to the product strategy of Philips as exemplified in its history. Using a single case study to verify a model is a not uncommon and appropriate research strategy (e.g. Yin, 2009). The focus on product strategy acts to delineate the research field and ensure the feasibility within the constraints of this assignment. The ontology of Philips was reconstructed from a terse literature review. The history of Philips as offered on its corporate website was used as a guideline, with additional reliable sources such as newspapers or trade magazines sought using the Google search engine to fill lacunes and provide a more objective perspective. Subsequently patterns were analyzed in its product history, taking into account the historical context, and compared to the adaptive cycle of change, analogous to conventional qualitative data analysis (e.g. Hoepfl, 1997). Although multiple interpretations are possible the paper strives to be
objective at the reader’s discretion. The author is confident to have provided a sufficiently independent illustration of an application of the adaptive cycle, given the limited time and resources available for this case study.

Findings

In this section results are given on how the adaptive cycle applies to product changes at Philips. Although somewhat imaginative, an overall cycle may be observed as Philips started out as a firm in lighting, then matured as a consumer electronics firm experimenting in all different kinds of technology, and currently is recovering from a crisis by specializing in lighting and medical systems. Note that this pattern covers all four phases of the adaptive cycle, as well as a ‘revolt’ process as competition in individual product groups caused a shift away from consumer electronics in the slower cycle of corporate strategy.

As mentioned this portrayal may not fit the adaptive cycle accurately, but it certainly shows Philips went through at least two major cycles and three phases of stability in its corporate direction. In the first phase roughly until the 1920s they started out as a lighting company with ancillary activities in electronics. New market opportunities and global competition presumably caused Philips to innovate in consumer electronics and pursue a broad market strategy, i.e. establishing a first adaptive cycle. The second phase is marked by experimentation and expansion of their consumer electronics offerings. Stiff competition and the onset of digital technology caused Philips to abandon this strategy and focus on a more narrow strategy in the early 2000s. Which precluded the current phase of specialization in lighting and medical systems, i.e. completing the second adaptive cycle. Each of these phases and cycles captivates many other cycles and are in turn embedded in larger cycles and will therefore be discussed in further detail in the remainder of this section.

The start of Philips was induced by a major technological revolution (Perez, 2004) in a larger cycle, namely the radical innovation in the second half of the nineteenth century of electric lighting over traditional hearths and candlelight. Ever since electric lighting has known incremental innovation in fixtures and lamps, although Neon (or gas-ignited) and LED (or diode-based) lighting could be considered radical innovations that conclude separate cycles in electric lighting.
The first completed cycle at Philips at a strategic level may be a shift away from lighting and an expansion into consumer electronics. This too was provoked by a change in a slower cycle, namely a development in a larger system of electronic technology toward the use of consumer devices to fulfill household tasks (Perez, 2004). The implied market opportunities, together with the rise of global competition, presumably caused Philips to expand their gamma of consumer electronics. This is illustrated by such products as audio equipment, TV, and supporting technologies such as the generator engine or radio broadcasting. Each of these products may be considered the result of adaptive cycles in technological innovation themselves. It is here a link with the product life cycle may be made, which is reminding of the adage “every new medium begins as a container for the old” (McLuhan, 1964).

Philips’ relatively stable strategy of diversification held for decades and is the point of departure for the second major strategic cycle. Citing increased competition (Appliance Magazine, 2005), Philips ended up in a competitive crisis as it was losing the battle against its (mainly Asian) competitors in the field of consumer electronics. Moreover, the onset of digital technology at the end of the 20th century, itself the outcome of a technological revolution in a slower cycle of the socio-technical landscape, may have held some missed opportunities for Philips. In that case Philips may have been a little too resilient to change and fell victim to a rigidity trap (Holling, 2001) or the Icarus paradox (Miller, 1992). These circumstances likely forced Philips to abandon their faithful strategy of diversification and adopt a more specialized approach by focusing on lighting and medical systems, their most promising business units. This phase is currently unfolding and appears to hoist a new phase of stability for the near future.

Discussion
As demonstrated in the above case study, Philips nearly underwent a full adaptive cycle in its corporate product strategy throughout its history encompassing two major cycles between three phases of relative stability. Beginning as a company in lighting at the fin-de-siècle, global opportunities induced a change to expansion into consumer electronics, which was stifled by economic crisis and competition at the beginning of the 21st century, shifting their focus to lighting and medical systems.

Philips shows a refined corporate strategy by overcoming natural inertia in a few bold moves. However their policy is rather reactive, while they managed to maintain profitability and
strategic position in a time of economic crisis and fierce environmental dynamics, they missed the boat on a range of opportunities in digital technology despite their legacy in consumer electronics and media.

Following the resource based view (Barney, 2001) it is suggested different corporate knowledge is required for each cycle, i.e. implying the existence of hypothetical cycles of skills, resources and knowledge that accompany these changes and having due implications for knowledge management. Especially given the importance of information for corporate operations and strategy in today’s knowledge economy (Barney, 2004). Philips’ knowledge of electrical engineering may have been the source of their success in completing the first cycle of change toward consumer electronics, and the bane to their strategic refuge to lighting and medical systems in the second cycle after falling behind on their competitors.

The adaptive cycle of change has proven itself in this paper to be a model apt for analyzing corporate change. Interestingly, events in larger cycles showed to often be important to changes in smaller cycles, e.g. the revolution of household electronics induced Philips’ first strategic change to consumer devices, which confirms a link with systems theory (cf. Geels, 2002). Furthermore, this case study infers the many interlocking cycles of adaptive change blur an overall perspective. Analyzing complex systems may obscure understanding rather than clarify it, hence denoting a limit to such models as the adaptive cycle of change.

Also, the model seems to lack a qualification of unsuccessful cycles (e.g. Philips’ efforts to win the video cassette race), bearing another limitation as situations where change failed may harbor different insights. Similarly, the decision making processes according to the adaptive cycle of change do not allow alternatives (e.g. Philips offers both DVD and Blu-Ray technology, do these technologies constitute independent cycles?), although many different conjectures are possible and may be effectuated at the same time. Which ties into a more profound limitation of the adaptive cycle of change, namely that as a model it is limited in its abstraction of reality. While adaptive change may be understood as a cycle, it rather is a sequence of events forced into a metaphor. On a theoretical level, it would be interesting to further investigate how theories of change management and systemic change are related to and could possibly be incorporated into the model. At different points possible links with these research streams have been noted in the above case study.
While succeeding in its main purpose of illustrating the adaptive cycle of change, this case study is however flawed by several limitations. For example, this research has a very narrow scope, applied to a single case, utilized no triangulation of different methods, and was executed by a single researcher, hence conforming to almost anecdotal evidence. It would be interesting to further study the applicability of the adaptive cycle of change in other cases and using other dimensions than product strategy such as culture or processes.

References


Philips Newscenter (2007, August 16). Philips to acquire healthcare informatics company XIMIS inc. to strengthen presence in the healthcare information technology market. Retrieved from

