

Technology and Operations Strategy–Part 1: Innovation Strategy

3/23: Technology sourcing

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Many technological developments and strategies have been discussed in this semester, however, it is necessary to carry out through the organization. Therefore, it is necessary for companies to have a proper organizational learning. Most of the organizational learning from absorption capacity, as Cohen and Levinthal (1990) defined absorption capacity as a firm's ability to recognize the value of new information, assimilate it, and apply it to commercial ends. The absorptive capacity is cumulative, while the companies invest more in R&D, it's easier to accumulate it in the next one.

Rothaermel and Alexandre (2009) pointed out that due to rapidly changing environments, companies need to create an ambidextrous organization which is a dynamic capability combining internal and external sources of technology. Higher levels of absorptive capacity allow a firm to more fully capture the benefits resulting from ambidexterity in technology sourcing

These articles emphasize the importance of balancing internal and external technology sourcing. However, enterprise resources are limited and often facing difficulties in resource allocation, although many companies are composed of the elites, often ended in failure. The following are examples of Sony and Apple, both of them have excellent absorption and ambidextrous capacity in portable music player market, but why Apple succeeded, Sony failed? This article will explain how the organizational structure impact the technology sourcing strategy.

Sony: the phenomenon of internal competition

Sony take highly specialized division of labor, individual departments to improve earnings, as the concept of ambidextrous competence balancing the sustain and disruptive development. In the short term, Sony reached high effectiveness, and from 1993 to 1997, to profit from 153 billion yen up to 2020 billion yen. However, each department should be self-financing, so they tend to protect their own department, and see the other internal departments as opponents.

As a result, Sony launched seven Walkmans in 1999, which has duplicated functions and overlapped the target customers. They did not have consistent strategy and repeated wasting their resources. The main reason for failing was not the lack of innovation, but the defects of the organization.

Sony only have vertical command system, not the level of synergy mechanism and lack of internal communication, although there are a number of departments to establish the ambidextrous competence, no platform for dialogue with each other, resulting in decline.

Apple: the task-oriented organization

In 2011, while Sony Walkman gradually decline, in contrast, Apple launched iPod with the slogan "1,000 songs in your pocket" and swept the music market. Relative to Sony, Apple has the task-oriented organization, and is not self-financing development, but the entire company calculation

of profit and loss, and it maintains in-depth cooperation and cooperative development.

The task-oriented organization can make people from different backgrounds to communicate with each other. When it comes to digital music, Sony thought about improving the functions of Walkman, but Apple figured out across different product categories of ideas.

This is the main reason why Apple succeeded in disruptive innovation. While some overlap of knowledge across individuals is necessary for internal communication, there are benefits to diversity of knowledge structures across individuals. (Cohen and Levinthal ,1990)

Implication of Sony and Apple

There are obviously different organizations between Apple (see figure1) and Sony (see figure2). Sony has traditional hierarchical organizational structure following the layout of a pyramid. Employees may narrow their field of focus and become experts in specific functions but may become competition and isolation. In contrast, Apple has flat structure which removes excess layers of managements improves the coordination and speed of communication between employees. As Apple's organization is suitable for sustaining and disruptive innovations, however, we have to be aware that because Apple has a strong leadership, but once the leader’s aura not in, or to leave the organization, a huge organization easily fall into chaos.



Figure1: Apple’s organizational structure.

Source: ASYMCO.com

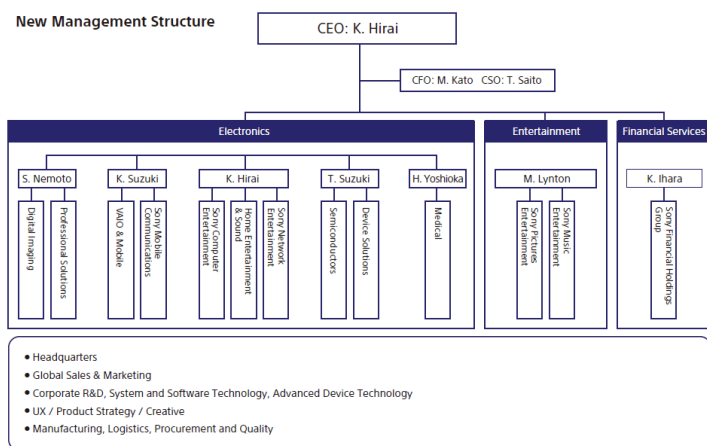


Figure2: Sony’s organizational structure.

Source: Sony Annual report, 2012

Rothaermel and Alexandre (2009) argued that organizational ambidexterity is not simply achieved through organizational structure, but requires a shared vision, a common set of values, and a reward system that enables managers to resolve the paradox of ambidexterity and harness its benefits. This is a very persuasive point of view for me, because there is no eternal successful business model in the world, but the value is an important driving force for the enterprise to move forward together.

As a consequence, companies should focus on keeping the team line flexible, reflecting on the pay and reward system, and paying attention to the flow of information. It is not easy to build an

ambidextrous organization, but the structure itself, combining organizational separation with senior team integration, is easier to come true. Besides, it is worthwhile to research what kind of organization mode is beneficial to the organization absorption and absorptive capacity.

Reference:

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