

A Front-End Loading in New Product Development
"Development from vertical integrated production model
to horizontal international specialization model"

-The creation of a theme-
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An overview of existing business models

Many companies to date have adopted a vertically integrated model, and therefore viewed the process from R&D to mass production as a single process. Therefore, those departments which get involved in the process for R&D to mass production has been separated by each specialty. And those have worked to make use of its peculiarity within a single time frame. As a result, a mechanism that flows from upstream to downstream is formed, and there would be no problem occurs while the flow is smooth, but once a problem that can block the flow, that mechanism will stop.

For example, looking at the current state of digital home appliances, the price has dropped sharply in stores, and the fact that business was supposed to be "High risk and High return" has become "High risk and Low return" before you know it. And You should not overlook it. I might say that One of the root causes of this issue could be the development process. The reason I say that is because, although the vertically integrated production model itself is no longer meeting the demands of the times, still they know the fact, they need to take fate to continue the organization system. The system centered on the vast production system, which has already introduced. However, to see if we could reset the existing software and hardware and take on new developments, that is the nonsense question.

From those points of view, the world doesn't work with the existing business model, and it is easy to understand, from seeing the effect from the new coronavirus, that it won't be the extension line so far. Also, anyone should know that future market demand is that it is essential to meet the needs quickly and to develop and produce at a low cost. To practice these two propositions, each person and department should bring their field of expertise and freely combine their respective strengths to develop products. I should say that the fusion of new business models which improve and apply based on the Vertically integrated production model could respond to the rapid market changes.

Group of people who formalize tacit knowledge that bears new business models

It is easy to state that the customer needs are diversified, but it may be better to say that the customer needs themselves are hard to be formalized. So, it means how quickly we can capture the potential needs of our customers and formalize it.

So, to speak, either you could formalize the tacit knowledge of customers would be one of the critical factors for corporate growth. Traditional Japanese companies have been indeed formalized tacit knowledge with KOTSU(tips) and KAN(intuitions). Also, the system for formalizing tacit knowledge has created the

corporate culture, which passed down from generation to generation within the organization. Thus Formalizing, sharing and inheriting on such tacit knowledge was also a "Strength" of Japanese companies.

Afterall, the business environment has changed drastically due to such mergers, business integration, business transfers, personnel reductions. The workforce has also changed due to changes in employment practices, which are the normalization of dispatched workers, the increase in short-time workers, and the need for immediate force, etc. then those KOTSU and KAN of formalizing such tacit knowledge have been lost. And indeed, in today's situation, the latent and actual customer needs are not that simple as that tacit knowledge can be formalized with tips and intuitions.

In other words, to formalize tacit knowledge, it can only be with "maniac skills" that have developed expertise into a hobby domain, because these matter has been based on the human view such as "KOTSU" and "KAN".

Furthermore, to say, such an unusual existence as it is not just "I love math" or "I love physics", but such "I love making mathematical formulas" and "when I look at things, the molecular structure comes to my mind". That should be the definition for a group with maniac skills.