

Highly Effective Data Utilization

— Discover the Characteristics of Your Company's Business through Hypothesis Testing —



As DMPs (Data Management Platforms) for gathering and analyzing internal and external data and coming up with optimal policies gain prominence, data gathering and tool implementation are proceeding without a clear idea of how to utilize them. Many companies find themselves unable to achieve the benefits they were hoping for. In this article, we consider how data should be utilized for digital marketing, and take a look at relevant institutional problems.

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Data collection alone is not enough

DMPs are platforms for optimizing communication with customers by centrally managing and analyzing customer data that was traditionally managed separately. In addition to attribute information and purchase history of products and services, customer data also includes the customer's behavior history concerning visits to the company's website, the customer's reaction history to measures implemented with respect to the customer, and the like.

DMP-related solutions are also many and varied, and in many cases, companies decide to implement them at the suggestion of a solution provider without sufficient consideration. As a result, costs balloon unnecessarily and companies end up letting their effort and expense go to waste, unable to effectively utilize the DMP that they went to the trouble of implementing.

When I talk to people at companies that are attempting to implement a DMP, they often tell me that they think if they implement a DMP and gather data, then use artificial intelligence (AI) to analyze the data, they will be able to achieve some sort of insights that they hadn't previously realized.

I have even witnessed a company estimating that it would spend several billion yen per year, including hundreds of millions of yen a month just for costs paid for AWS (Amazon Web Services), to gather sensor data from the IoT (Internet of Things; various devices connected to the internet) at their planned scale. Yet such discussions are conducted with no clear idea of how the collected data will be used, and because the effect thereof is of course not well understood, it is not uncommon for companies to suspend their consideration of DMP implementation with no decision having been made.

Regarding data utilization as well, I often hear people say that their company hired an analysis firm to analyze their big data, but the results were nothing that could not have been learned by conventional means. I believe this happens when companies attempt to discover a correlation to earnings by simply gathering data and analyzing it using statistical methods without fully understanding the characteristics of their own business.

Three steps of NRI Digital-style data utilization

Patterns that occur frequently and have a significant impact on the bottom line can usually be understood from experience on the ground, without the need to rely on data analysis. For instance, simple patterns such as “people who buy product A frequently also buy product B” can be derived easily from experience. Patterns that can be derived from analysis using simple statistical methods are the same. The benefits of data analysis are most useful with respect not to such simple patterns, but to patterns that occur less frequently and are therefore difficult to perceive just from experience.

That’s why NRI Digital proposes proceeding with data utilization by using the following three steps in order to leverage data with an understanding of a company’s business characteristics.

- (1) Perform data analysis to verify the effects of a measure based on the hypothesis of a marketer (person implementing the measure).
- (2) By repeating the above step, discover points (data items) deserving focus when thinking about customer purchasing patterns.
- (3) Perform statistical processing including AI utilization with respect to the points deserving focus, thereby detecting more minute patterns that are difficult to perceive through experience.

If one proceeds immediately to the third step without completing the first two and without an understanding of what points deserve focus, one will derive only obvious conclusions that have already been drawn from experience. In such a case, the benefits of data utilization will not be realized, and investment in data analysis will go to waste.

What, then, should be done to increase the benefits of data utilization? Let me delve a little bit into the specifics.

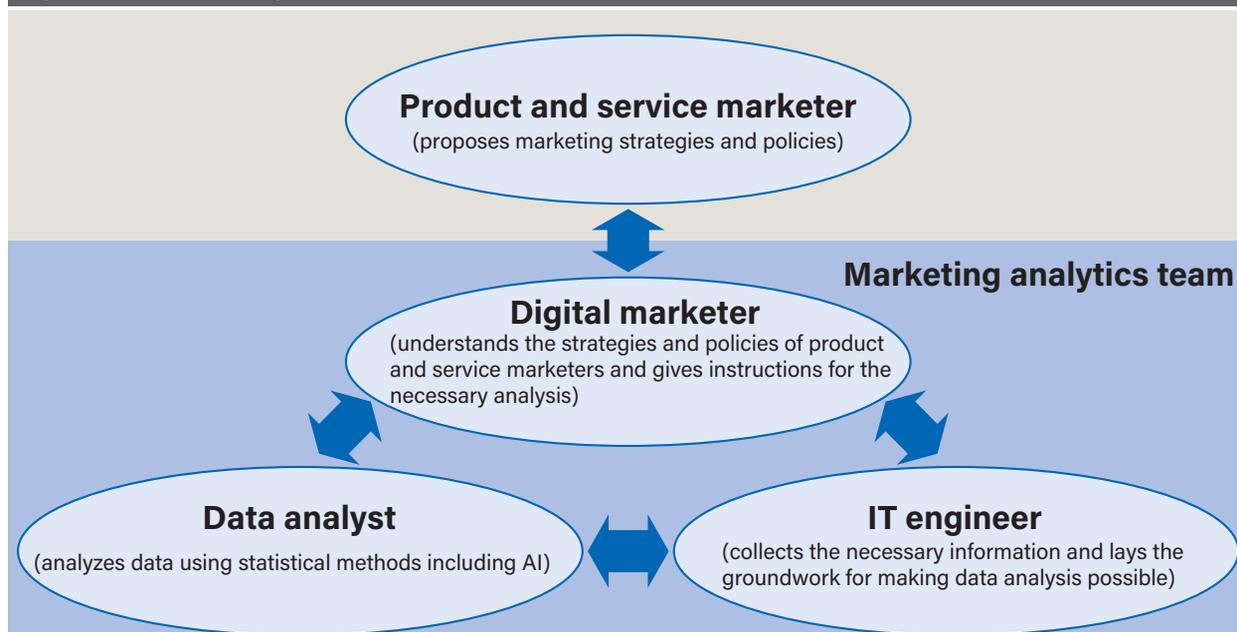
First, let’s imagine that a company planned a measure to capture new loyal users of a product B using the condition of targeting customers who have gone more than 60 days since purchasing a product A in the same category as product B. In this case, step (1) includes the process up to verifying, by detailed analysis, whether the condition of targeting these specific customers is useful as a measure for promoting product B.

If the process stops here, verification will be limited to that regarding measures using this specific condition, and no further valuable insights will be gleaned. What is important here is to use data analysis to clarify the intent of the marketer in setting this condition, thereby detecting the points deserving focus. This is step (2). In this case, the two conditions at play are “experience of purchasing product A” and “passage of 60 days or more since last purchase”. If

we assume that the marketer chose “experience of purchasing product A” as a condition because he or she thought that “product B will address the next concern of the customer that arises after the concern solved by product A,” we arrive at the hypothesis that “the order in which our company’s products are used depends on the circumstances of the customer.” Further, if we assume that the condition “passage of 60 days or more since last purchase” is based on the idea that “because product A is designed to run out after being used in the proper quantity for 60 days, customers who did not repurchase after 60 days or more either had their concern solved or saw no improvement and stopped using the product,” we arrive at the hypothesis that “purchase of our company’s products is affected by the frequency with which a customer visits our store and how many times the customer has visited in the past.

If these hypotheses are proven to be true through data analysis, the points deserving focus as characteristics of the company’s business are: “in what order are products being purchased?”, “how many times has the customer visited the store previously?”, and “how frequently does the customer visit the store?” Thus, points deserving focus are revealed through the verification of multiple hypotheses.

Fig. 1: Functions necessary for effective data utilization

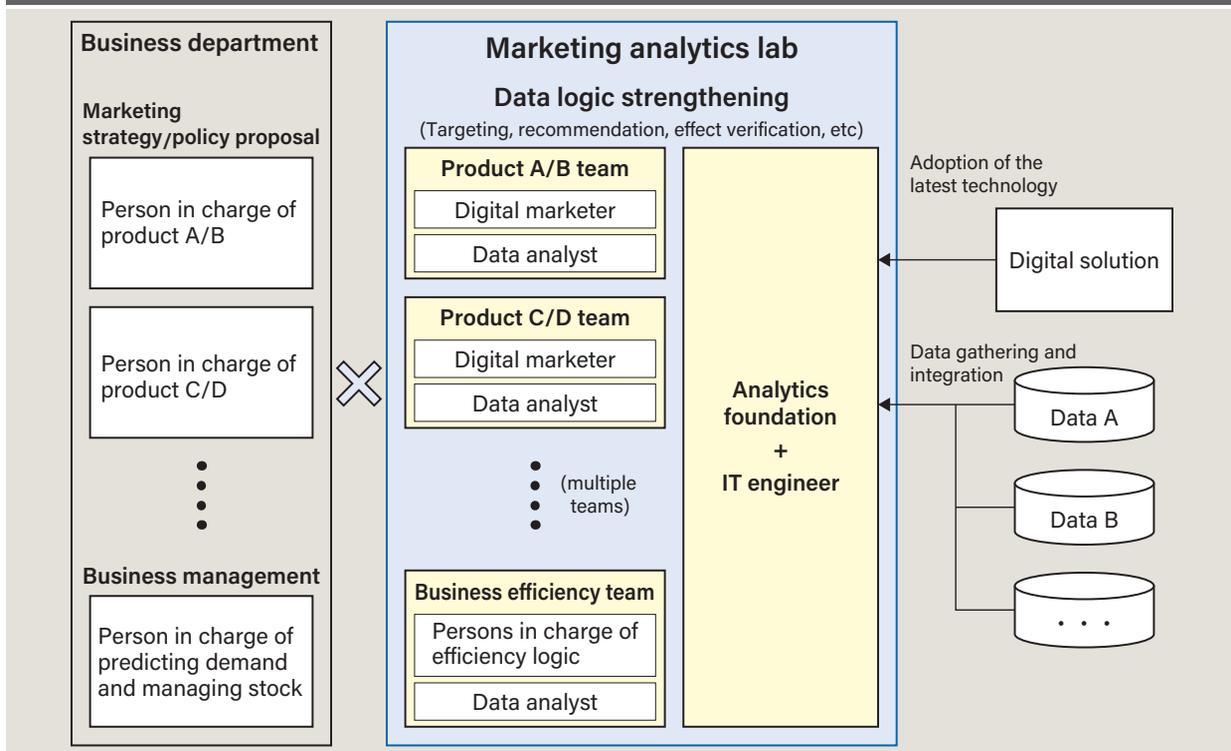


Next comes step (3). We will come up with patterns where there is a high likelihood of purchase by combining the above-mentioned three points deserving focus. If there are hundreds of thousands of such patterns, a marketer cannot derive all of them simply from experience, and statistical analysis becomes necessary. Our experience has taught us that when it comes to matters where the marketer’s experience does not suffice, a difference of several times arises in the likelihood of purchase depending on whether the above steps have been completed.

Further, when the likelihood of purchase is grasped, customers can be divided into groups corresponding to how high said figure is, and measures can be modified for each group in order to maximize the overall ROI. For example, if customers are divided into four segments ABCD corresponding to their likelihood of purchase, from highest to

lowest, different measures can be taken for each group: for A, a personal introduction to the service; for B, free distribution of paid samples; for C, distribution of free samples; and for D, no active solicitation. In past cases, overall ROI has often been highest when customers with the highest likelihood of purchase were expected to buy the product with no solicitation, and measures were carried out to attract customers in the second and third tiers. As a result of placing too much emphasis on experience, marketers have a tendency to concentrate efforts on the tier of customers who are most likely to purchase a product, in fact resulting in a decrease of the overall ROI.

Fig. 2: NRI Digital's proposal for the positioning of a "marketing analytics lab"



An organizational structure for data utilization

In order to effectively utilize data through the above three steps, it is necessary to have digital marketers to connect product and service marketers who understand the business with data analysts.

The role of a digital marketer is to extract points deserving focus through discussion with product and service marketers, and then instruct data analysts to perform the necessary analysis. It is further necessary to have a three-person marketing analytics team, comprising an IT engineer who understands data locations and collection methods in addition to the digital marketer and the data analyst, who work together as a unit (see Fig. 1).

However, companies find it difficult to establish a marketing analytics team on their own for the following reasons.

- (1) Head-hunting for excellent human resources is difficult despite the company's efforts, because the company does not have a reputation as a place where employees can gain cutting-edge experience in the fields of digital marketing and analytics.
- (2) It is hard to justify the cost of hiring people with expertise when the ROI has not yet been fully ascertained. Even if a company manages to put together a team, a common problem is that when the team is placed in a certain organization within the company, it faces structural obstacles and cannot function effectively.

To combat these difficulties, NRI Digital recommends that our customers work with us to create a “marketing analytics lab” (see Fig. 2). NRI Digital engages in digital-focused business with our team of specialists in the field. A “marketing analytics lab” also has the advantage that we can approach marketing analytics as an independent third party without worrying about structural obstacles within the company. In recent years, companies are increasingly establishing mergers with other companies that specialize in digital business. Initiatives to accelerate digitalization together with external companies are expected to become even more common in the coming years.

As described above, assuming that something will come out of simply analyzing data often bears fruitless results. The true value of data analysis can only be realized when a product and service marketer who focuses on marketing strategies and policies unites with a marketing analytics team. When such a team collaborates as one, facts that could not be understood from the product and service marketer's experience alone are brought to light, and this can set the marketing PDCA cycle into action.

Many solutions are available in the field of digital marketing, and companies need to figure out what kind of solution best suits their needs. We are looking to promote rapid digitalization through the effective utilization of external companies.

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