



2018-19

ABeam Consulting Today

ABeam

Public Relations Report 2018-19

CONTENTS

Message from Management

4

We are embarking on the challenge of solving societal problems via Connected Enterprises, which generate newly added values through cross-industry collaborations

Toshinori Iwasawa
President and Chief Executive Officer

6 | ABeam Consulting's Perspectives
Five viewpoints for
managing digital natives

8

ABeam Consulting's Perspectives 1 Management Strategies
Riding the wave of digital transformation and strengthening the earning power of Japanese companies

Masato Miyamaru
Executive Officer, Principal
Head of Strategy Business Unit
Head of Management Planning Group

Hiroyuki Aitani
Executive Officer, Principal
Head of Manufacturing & Consumer Business
Business Unit

12

ABeam Consulting's Perspectives 2 Connected Enterprises
Using issue-driven data to move toward Connected Enterprises

Akira Akaishi
Executive Officer, Principal
Head of P&T Digital Business Unit

14

ABeam Consulting's Perspectives 3 Governance
Considering one's own values and opening new management frontiers through dialogue

16

ABeam Consulting's Perspectives 4 Digital Labor
A future defined by Japan's digital labor, which continues to evolve and spread in a unique manner

Yoshinobu Abe
Executive Officer, Principal
Strategy Business Unit

18

ABeam Consulting's Perspectives 5 CRM
Ideal customer experiences point the way to the future for companies when it's designed from a company-spanning perspective

Miho Mizuno
Executive Officer, Principal
Head of CRM Sector
P&T Digital Business Unit

20 | **Special Feature**
True corporate value and a means of survival in the face of the rapidly changing competitive environment

22

Special Feature 1 Auto
A once in a century transformation
Grasping shifts in competition modalities to change threats into opportunities

Shuntaro Furukawa
Executive Officer, Principal
Head of Automobile Industry Sector
Manufacturing & Consumer Business
Business Unit

Hikari Todoroki
Senior Manager
Automobile Industry Sector
Manufacturing & Consumer Business
Business Unit

26

Special Feature 2 Energy
Coming dramatic changes
What should the energy industry be doing?

Hideo Yamamoto
Energy Director
Infrastructure & Service Sector
Financial & Social Infrastructure Business BusinessUnit

About ABeam Consulting

As a global consulting firm founded and based in Asia, ABeam Consulting provides high value-added consulting services that support clients in their efforts to achieve global expansion. ABeam Consulting proposes best practices for each client based on an understanding of the market needs specific to individual industries and businesses as well as the differences in culture and business practices that mark specific countries and regions. ABeam is backed by a wealth of experience drawn from all across its service domains, ranging from corporate strategy to business innovation, IT development, operations, and maintenance. All told, ABeam Consulting is the ideal real-world partner for customers seeking to realize management-led transformation.

This document reports on the state of ABeam Consulting today.

Message from Management

We are embarking on the challenge of solving societal problems via Connected Enterprises, which generate new added values through cross-industry collaborations

We have now entered the age of VUCA: Volatility, Uncertainty, Complexity, and Ambiguity. In order to survive, many companies are faced with having to engage in digital transformation using advanced technologies. Compared to China and the West, Japan's initiatives are said to lag behind—but what, exactly, is necessary for digital transformation? At ABeam Consulting, our analysis incorporates the concept of “Connected Enterprises”—which we believe to be the future of digital transformation.



Toshinori Iwasawa

ABeam Consulting Ltd.
President and Chief Executive Officer

Executing digital transformation to increase differentiation and enhance competitiveness

Or several years now, corporate management environments have undergone dizzying changes, and have been faced with situations that are almost impossible to predict. Accordingly, the necessity for innovation that takes full advantage of technologies—in other words, for digital transformation—has been championed in many corners.

Through the commitment and initiatives of their management, the majority of Japanese companies have researched the latest precedents and established relevant new departments; in so doing, they aim to review their existing management methods and business processes through a digital lens, and generate new businesses.

Unfortunately, however, they have not set out clear priorities for what needs to be done at their places of work and, instead, they have focused entirely on gathering information. They have not taken the next step, which is to clarify what they

must do to maintain their competitive advantage.

Most companies now use digital technologies to establish customer databases, organize information, and utilize the knowledge gleaned therefrom in their digital marketing activities. As the first stage of digital transformation, this is to be lauded.

Yet, casting our eyes overseas, we see that an increasing number of start-ups are appearing in the West, and these digital disruptors are tearing down existing business frameworks. Indeed, while the ride-sharing firm Uber Technologies and the accommodation service Airbnb are frequently cited as leading examples, new ventures are appearing at such a rate that even these major companies run the risk of becoming obsolete. However, this is not the case in Japan.

In China, the Alibaba Group's *Alipay* and Tencent's *WeChat Pay* mobile payment services are growing in popularity as social infrastructure, and the entire country is in the very process of a digital transformation. As Chinese society becomes increasingly cashless, more and more personal information is being accumulated, and this generates further added value; at the same time, users are sharing their personal information to increase their own value and raise their creditworthiness, resulting in an ever-accelerating cycle.

China is implementing a massive verification test of digital transformation via these cashless services, and in this respect, Japan is significantly different. Since cash dispensers and other analog infrastructure are well established in Japan, people can deposit and withdraw cash wherever they please. The consequent lack of desire for digital infrastructure is undoubtedly a major point of distinction.

For Japanese companies, establishing data infrastructure is an obstacle to realizing digital transformations

For Japanese companies, the biggest obstacle to realizing digital transformation is how the data infrastructure has been established. While the majority of business leaders recognize the importance of data, the fundamental data infrastructure at their companies is weak and they have therefore proven unable to respond to digitization. In some cases, despite having expanded overseas or acquired overseas business sites through mergers and acquisitions, companies lack the structure to manage this global data in a centralized manner. As a result, data is not accumulated, and Japanese headquarters are not able to effect rightful governance. In order to remedy such situations, an increasing number of companies are reforming their existing data infrastructure.

It is crucial that data infrastructure is reformed

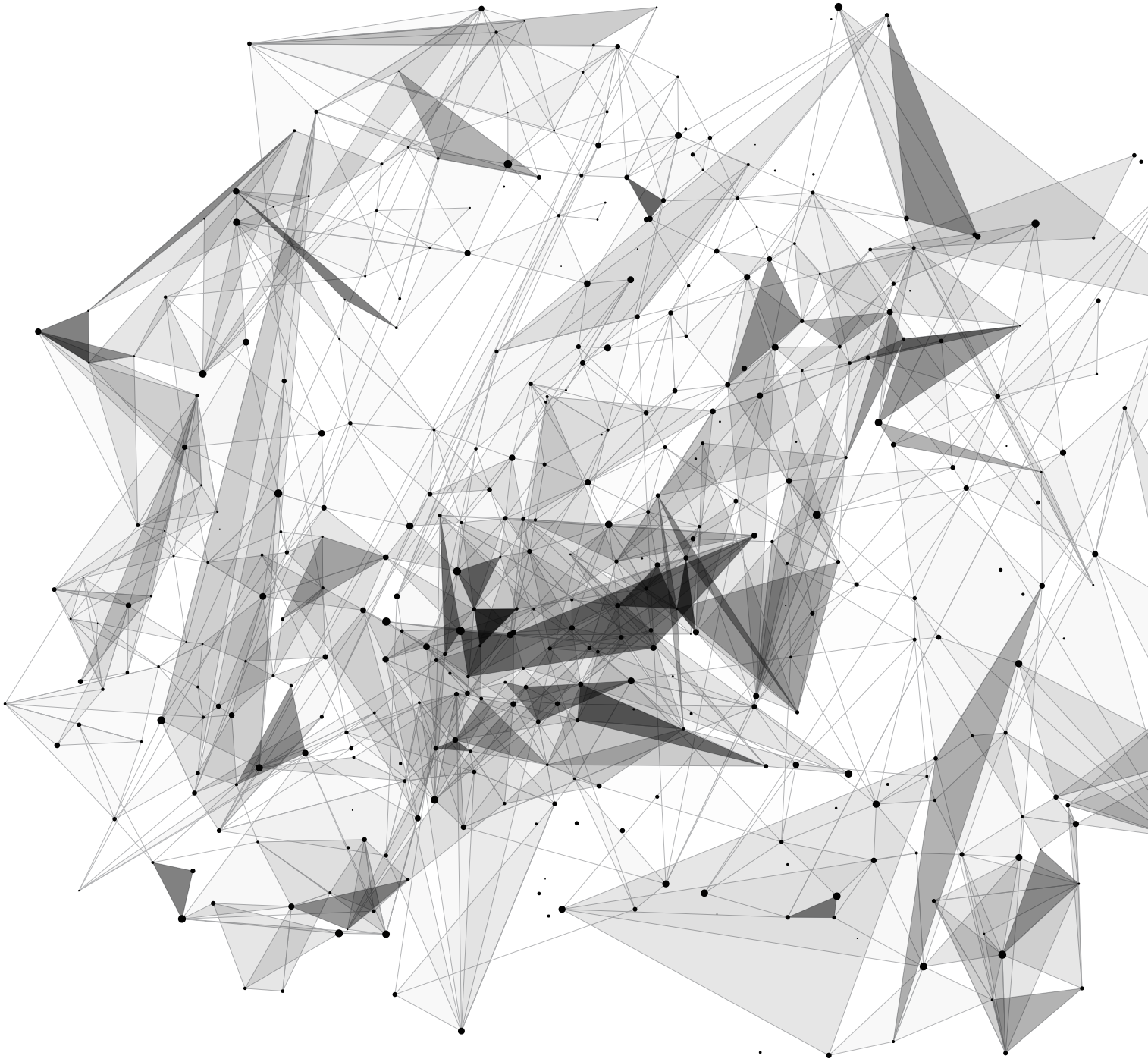
from a globally optimal point of view, as quickly as possible, and with a sense of urgency. It is with such a process in mind that ABeam Consulting developed its business innovation platform, *ABeam Cloud*[®]. Building on the partnerships we have established with a wide variety of IT vendors, *ABeam Cloud*[®] enables tools optimized for customer digital transformation goals to be combined from a large number of different cloud platforms and software suites. In the three years since we launched *ABeam Cloud*[®], we have implemented the platform at more than 200 companies, including global Japanese companies that operate not only in Japan, but also in Southeast Asia, China, Mexico, Thailand, and other countries.

Cutting across company boundaries and taking advantage of data to generate newly added value

In Japan, the IT needs of both industry and society are growing; at the same time, there are concerns over a deficit of IT professionals due to a shrinking population. However, even if global companies lack data infrastructure professionals at some of their business sites around the world, *ABeam Cloud*[®] is able to compensate: Since *ABeam Cloud*[®] is a cloud service, there is no need for companies to maintain hardware; in addition, since we are wholly responsible for network management, companies are able to focus fully on maximizing data use with the aim of increasing their added value.

ABeam Cloud[®] also incorporates Artificial Intelligence (AI) and Robotic Process Automation (RPA), and forms part of an ABeam Ecosystem that accelerates the digital transformations of our customers. The ABeam Ecosystem also makes possible the realization of Connected Enterprises, which encourages connections between companies operating in different industries. Recently, there have been a number of examples of data trading between companies operating in different industries, resulting in the generation of entirely new added value. It is hoped that if all the companies involved in a given supply chain can share and utilize the same data, a variety of societal problems can be resolved.

It is worth noting that digital transformation initiatives do not only lead to improved global competitiveness; they also contribute to raising the quality of society as a whole. For this reason, ABeam Consulting aims to maximize our know-how, technologies, and the strengths of our consulting services. We intend to further improve the ABeam Ecosystem by deepening our relationships with our partners and clients, and so realize Connected Enterprises and the Digital Society that lies beyond.



Management strategies in the age of digital transformation: reassessing the earning power of Japanese companies

Five viewpoints for managing digital natives

- 1 Riding the wave of digital transformation and strengthening the earning power of Japanese companies
- 2 Using issue-driven data to move toward Connected Enterprises
- 3 Considering one's own values and opening new management frontiers through dialogue
- 4 A future defined by Japan's digital labor, which continues to evolve and spread in a unique manner
- 5 Ideal customer experiences point the way to the future for companies when it's designed from a company-spanning perspective

Riding the wave of digital transformation and strengthening the earning power of Japanese companies

Return on Equity (ROE), which is a measure of profitability based on shareholder equity, is gradually improving at Japanese companies; compared to global corporations, however, the standard of ROE remains low. On the other hand, due to the accelerating development of digital technologies, the uncertainty surrounding corporate management is growing. What, then, must Japanese companies do in order to further increase their earning power? We spoke to Masato Miyamaru, leader of ABeam Consulting's Strategy Business Unit, and Hiroyuki Aitani, leader of the Manufacturing & Consumer Business Business Unit, to find out more.

Masato Miyamaru

Executive Officer, Principal
Head of Strategy Business Unit
Head of Management Planning Group

mmyamaru@abeam.com

Masato Miyamaru started out in the finance industry. After working on a large number of structured finance and M&A projects, he was selected to lead the planning and strategy departments at a listed financial institution. Following a spell as CFO of a boutique investment bank, Miyamaru joined ABeam Consulting in 2012. After establishing the new Strategy Business Sector, in 2014 he was appointed head of the Strategy Business Unit. At present, he leads a strategy team with more than 130 members.



Hiroyuki Aitani

Executive Officer, Principal
Head of Manufacturing & Consumer Business
Business Unit

haitani@abeam.com

Hiroyuki Aitani previously worked at a major Japanese logistics company, and joined ABeam Consulting in 2000. He has been engaged in a large number of projects aimed at supporting the establishment of global management foundations, with a particular focus on the manufacturing and logistics industries. Between 2010 and 2015, Aitani was appointed MD of ABeam Consulting's Thai subsidiary, where he provided consulting services to Japanese automotive companies and major Thai corporations.

Advances in digitalization are shortening corporate lifecycles

The *Ito Review* defined a clear ROE goal of eight percent or more and has had a significant influence on “ROE Management,” which focuses on capital efficiency. Perhaps as a consequence of this review, in recent years the ROE of Japanese companies has been improving. In fiscal 2017, ROE exceeded 10 percent for the first time and Japanese companies are now increasingly attractive propositions, even from the perspective of

overseas investors. However, compared to companies in the West, where the median ROE hovers between 12 and 15 percent, improvements in the earning power of Japanese companies are unexceptional.

Indeed, despite achieving record revenues and net income, Japanese companies remain inferior when it comes to basic earning power—why is this so? One possible reason is that cash earnings are not invested into new projects. Although corporate performance has been relatively strong, the profits that remain inside the company—also known as “retained earnings”—have hit

record highs for six years in succession. While more and more companies are increasing shareholder returns via share buybacks or higher dividends, companies typically achieve sustained improvements in earning power by reinvesting the cash they have earned in growth areas.

The negativity of Japanese companies when it comes to investment is also evident from their research and development costs. Companies in advanced countries around the world—in the U.S. and in China in particular—are steadily increasing their investments in research and development; at Japanese companies, however, such investments are stagnating.

Masato Miyamaru, executive officer and principal, and head of the Strategy Business Unit, comments: “There can be no doubt that the advance of digital technologies, increased uncertainty, and other unprecedented changes in business environments have led to a paradigm shift in the competitive environments at Japanese companies. Indeed, waves of creative disruption are causing game-changing upheaval across all industries.”

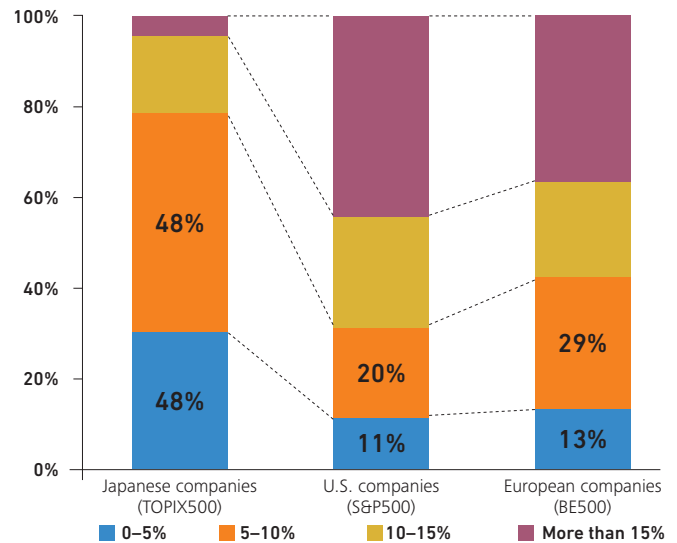
As the waves of digital disruption grow stronger, so corporate lifecycles are growing shorter. In 1960, companies listed on the U.S. S&P500 stock index remained listed for an average of 60 years or so; by 2025, this duration is expected to have decreased to just 15 years as a result of the advance of digitalization and the shortening of product cycles. The competitive advantage enjoyed by Japanese companies also appears to be dwindling. If we define “competitive advantage” as “possessing an operating profit ratio that exceeds the industry average,” the duration for which Japanese companies have been able to maintain a competitive advantage has decreased by a third or so between 2000 and 2015.

According to Miyamaru: “What this shows is that the length of time for which existing businesses can generate sufficient customer value is decreasing, and that an age has arrived which, by necessity, requires the generation of new competitive advantages with shorter lifecycles. Of course, Japanese companies are also attempting to acquire new competitive advantages—through open innovation initiatives, for example, or by accelerating investment into start-ups via corporate venture capital (CVC). Nevertheless, it is still a fact that few successful case studies exist.”

When a company’s intrinsic earning power is presented in the form—“size of creative value” x “length of existence value”—Japanese companies focus on business optimization and business site improvements, and seek to prolong their longevity while maintaining profit levels. In other words, they have a strong tendency to try and safeguard the “length of existence value.”

However, creative disruption is putting pressure on both “creative value” and “length of existence

Comparison of ROE by country (distribution)



Source: Ito Review 2.0 (Bloomberg)
 *ROE for the nine years between 2008 and 2016 was acquired for constituents of the TOPIX500, S&P500, and BE500. The median values for these constituents were classified, and the distribution calculated.

value.” It not only destroys business, but also destroys the very structure of the industry itself and redefines it. We are now entering an age in which disruption is the norm: “In order to maximize the equation ‘size of creative value x length of existence value,’” says Miyamaru, “management must define what sort of company they want their company to be in 10 to 15 years’ time. The core question facing Japanese companies is whether their management can generate new competitive advantages of their own accord in order to maximize their earning power.”

“Imaginative power” reconstructs business models and provides new values

In order to ride the wave of digital transformation and maximize their earning power, what, then, must Japanese companies do?

First, they must develop “imaginative power.” This can be defined as “the ability to formulate visions and stories.” Companies will be required to identify changes in their industries, create customer value from the perspective of customer jobs, construct new business models, and thereby provide unprecedented new value to end customers.

Hiroyuki Aitani, Executive Officer and Principal, and head of the Manufacturing & Consumer Business Business Unit, explains: “We are living in an age in which corporate lifecycles have shortened. Companies wishing to sustain their businesses are now required to continually review and create value from the perspective of their customers’ jobs. At ABeam Consulting, we propose the concept of Connected Enterprises through our ecosystems; we believe that by



fusing both internal and external assets, technologies, and human resources, and by creating new offerings based on market trends, we can provide Connected Enterprises to our clients. In my opinion, this new “imaginative power”—which is not a mere extension of existing policies—will lead to the maximization of the earning power of Japanese companies.”

Akio Toyoda, president of Toyota, said of the automotive industry: “We are undergoing a once-in-a-century period of major change.” It seems that traditional industry boundaries are in the process of being torn down. Previously, the automotive industry comprised complete car manufacturers, parts manufacturers, and dealerships. Now, new ideas such as Connected, Autonomous, Shared & Services, and Electrified are making their presence felt, and electronics companies, high-tech companies, infrastructure companies, insurance companies, IT companies, and a variety of start-ups have entered the automotive industry. This is, as they say, “beyond mobility.”

Aitani explains: “Customer behavior is now shifting from ownership to use, and if companies wish to survive in these highly competitive markets, leaders of companies involved in the automotive industry must not only sell cars but also car-related services. In other words, these companies must envisage how they can provide Mobility as a Service (MaaS) from an end customer-centric point of view.”

The digital disruption that transcends industry boundaries is also occurring in the logistics and retail industries. In Japan, sales have fallen at integrated supermarkets and shopping centers that remain stuck in the past, while even in the U.S. the long-established Sears department store is at risk of collapse; meanwhile, the online retailer Amazon continues to go from strength to strength. Learning from these examples, Japanese retailers are starting to enter the e-commerce business and are engaged in a variety of initiatives aimed at defending against the “Amazon effect.” However, the efforts of the majority of these

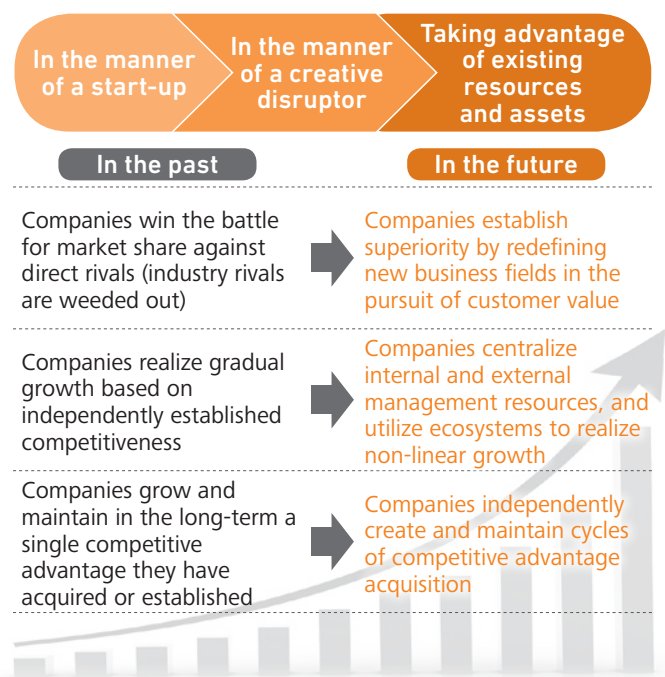
retailers are limited to increased product line-ups and reduced prices—they have no point of differentiation. What, then, should the leaders of Japanese companies that are battling against the threat of Amazon do?

“Let me take one of our clients as an example,” said Aitani. “This company had a clear vision of providing ‘the ultimate, traditional Japanese purchasing experience.’ The idea comprised two facets: first, the realization of the user experience; second, the establishment of a service structure that enabled this user experience to be realized. The company actively invested management resources into both these facets, and is currently realizing strong growth.”

With regard to user experience, the company in question has acquired various licenses to expand its product line-up, which even includes products that are typically difficult for general e-commerce sites to deal in. With regard to service foundations, the company focused carefully on customer convenience for both payments and deliveries, and established a logistics platform which provided delivery services that were both flexible and conscientious.

The company’s logistics center fully utilizes AI and robots, and features systems that enable many product types to be delivered the following day. At the same time, during delivery the company pays attention to the customer’s family environment: for homes with small children, the company takes care to ensure the doorbell is not rung; for those living alone, the company considers appropriate delivery times. Indeed, the company does not rely on the independent judgment of its delivery drivers but, instead, utilizes

Adopting management strategies that focus on the generation of new competitive advantages



customer data to provide fine-tuned services.

Aitani commented: “This case provides suggestions for ways in which Japanese logistics and retail companies can survive. The effective use of data is becoming increasingly important—how companies can utilize this data in uniquely Japanese one-to-one communications will prove to be crucial, not least in their fight against the threat of Amazon.”

The “power to implement” is the means by which ideas are permeated, and is a source of new competitive advantages

Both Miyamaru and Aitani believe that the “power to implement” is also key to maximizing the earning power of Japanese companies. It is essential that companies encourage both internal and external sympathies via the visions and stories formulated by the aforementioned “imaginative power,” and also ensure that capabilities, resources, organizations, and processes are kept pointing in the appropriate direction, with a focus on customer value. Miyamaru points out: “Except for the core elements of a business, it is important that companies effectively utilize external resources and co-create. In addition, how companies make use of AI, VR/AR, robotics, and other digital technologies to generate speed will have a significant impact on their future competitiveness.”

In the end, in this increasingly uncertain digital age, in order to improve their competitiveness Japanese companies ought to create policies based around “imaginative power” and “the power to implement,” and shift toward management approaches that focus on the creation of new competitive advantages.

Miyamaru says: “When Japanese companies establish new businesses, they are often hindered by conflicts with their existing businesses—this is even true of companies that recognize the importance of new business. In addition, when it comes to the development of new business at Japanese companies, there are frequent interruptions between the 0→1 research period, the 1→10 establishment period, and the 10→1,000 acceleration period. In order to realize non-linear growth, management teams must assume responsibility and resolve these conflicts and interruptions.

Miyamaru explains there are three approaches that can be used to increase the likelihood of a new business succeeding. The first is the “carve-out approach.” This is an independent portfolio-type approach in which a new business department is carved out from headquarters and established as an independent business; Google (Alphabet) is a prime example. The “company-wide digital transformation approach” stands in direct contrast. GE is an archetypal example of this approach, in which the entire company engages in generating new competitive advantages for the digital age.

“For Japanese companies,” advises Miyamaru,

“the ‘segregation approach’ is ideal. Here, companies engage in the creation of new competitive advantages in environments removed from existing headquarter business. Adopting a segregated environment encourages co-creation, facilitates increased speed of action, plus, it enables the aforementioned conflicts and interruptions to be resolved.” The new business is left to develop and grow in a segregated environment; if the core business declines, the segregated business can be reincorporated, resources can be shifted, and business integration or restructuring is also possible.

Aitani agrees: “The ‘company-wide digital transformation approach will likely take Japanese manufacturers more than 10 years to achieve, since they are burdened with successful past experiences and legacy assets. The risks are high, and the probability of success, low. The ‘carve-out approach is typically achieved via the strong commitment of charismatic founders such as Masayoshi Son and Shigenobu Nagamori; for this reason, such a pattern does not suit Japanese companies particularly well. Taking the ‘segregation approach’ makes the outcome easier to predict, and makes it easier to proceed to the next stage if it is successful.”

Cut off from headquarters in an environment with different rules, cultures, and processes, management teams must demonstrate vision if they want to generate new competitive advantages via new business; moreover, in each period—namely the 0→1 research period, the 1→10 establishment period, and the 10→1,000 acceleration period—the management teams must claim responsibility and demonstrate a “power to implement.”



Using issue-driven data to move toward Connected Enterprises

Today, a major wave of creative disruption is overwhelming various industries. The question is: how can individual companies connect and share the data they possess to generate new value and services? Companies are hurrying to become Connected Enterprises, which forge links that transcend organizational, corporate, and industry lines; when they do so, however, it is essential that they reform their understanding of data in a root and branch manner. Akira Akaishi, who has worked with a large number of companies, discusses the heart of the matter.



Akira Akaishi

Executive Officer, Principal
Head of P&T Digital Business Unit

aakaishi@abeam.com

Akira Akaishi joined ABeam Consulting in 2000 from an integrated logistics company, and has contributed to a large number of supply chain management and work process improvement projects. Since 2002, he has worked on projects aimed at establishing global management infrastructure, and is responsible for system implementation, maintenance, and operation. After stints as chief of the Production & Distribution Headquarters CPG Sector, and manager of the Outsourcing Business, he was appointed executive officer and principal of the P&T Digital Business Unit—a position he continues to hold today.

Cross-industry data links are advancing overseas—Japanese companies must act now before it is too late

“Data-connected”—which refers to linking data between companies and industries—is progressing, with the aim of realizing digital transformation. However, data-connected is not being implemented quickly in Japan by any means.

Even when it comes to autonomous driving, Waymo, the self-driving technology

company created from Google’s autonomous driving project, is said to clock 25,000 miles of autonomous driving per day—yet this technology is still very much in its infancy in Japan.

In autonomous driving demonstration tests, the actual distance driven correlates directly with improvements in software accuracy and, since the accumulated data has enormous potential to generate new businesses, it is preferable to commence development and testing as early as possible.

Of course, there are also examples in Japan of

data-connected successes. One such initiative is supported by ABeam Consulting: four manufacturers from completely different industries have linked their data and, using consumer behavior information, have been able to provide new services.

Identifying what data is truly essential through issue-driven approaches

With the development of digital transformation, we are approaching an important turning point in how we think about data. When companies attempt to generate new businesses by sharing data with each other, their primary focus ought not to be on the data itself, but on issues and needs, and how to resolve or cater to them.

When phrases such as “Big Data” were in vogue, the majority of companies were of the mindset that “since such a variety of data is being accumulated, isn’t there something we can do with it?” However, unless companies first decide their goals, and only then ask themselves “what data do we need to accomplish this?” they risk being overwhelmed by the data.

As people became more familiar with data and implemented processes of trial and error, they realized that they first had to define their usage goals and establish optimal usage frameworks; otherwise the data was of no benefit. Now, companies are trying to effect the major shift from data-driven approaches to issue-driven approaches.

Let us say, for example, that a company has daily sales report data stretching back several years; it would be difficult to arrive at new realizations from this data alone. Perhaps the daily reports are written in different formats depending on when or where they were created—this would make it impossible to analyze them in their current form. If a company wishes to gather and use data, then it must establish goal-driven frameworks before it starts data collection. If, for example, a company decides that it wants to monitor product sales trends throughout the year, and understand the relationship between best sellers, the weather, events, and customer attributes, then it naturally becomes clear what types of data they should collect.

Using data jackets to establish data markets

Going forward, as issue-driven data leads more and more to the creation of new business, there will be growing demand for platforms that enable large amounts of data from a variety of different fields to be freely seen and used. If we can establish environments that enable data—including existing open data—owned by various companies and organizations to be used according to different attributes and

goals, then data use will rapidly increase.

At present, ABeam Consulting is focused on and deepening its understanding of the “data jacket” approach pioneered by Yukio Ohsawa at the Ohsawa Laboratory, Department of Systems Innovation, School of Engineering, The University of Tokyo.

Data jackets are structures through which data content is itemized in predetermined locations, for example on the cloud, so that it can be viewed by anyone—in much the same way as song data is itemized on record and CD jackets. It is similar to the book search system used in closed-stack libraries.

Data jackets do not only contain data names and content descriptions; rather, they also feature comments from the data owners, such as “this data can be used for this type of analysis,” which provide viewers with hints on how the data can be used. If data jackets are all organized in the same manner, companies can identify and access the data that will help them resolve the problems they face.

Such activities should enable companies to advance innovation depending on the data they use; in addition, using Connected Enterprises, they should be able to establish new businesses that provide entirely new value.

If cross-company and cross-industry data sharing becomes more widespread, there is even the possibility that a market will be created—similar to a stock exchange—in which high-value data is traded at high prices. The establishment of such a market would result in greater fluidity for data that has been stored but is currently unusable, and lead to higher-quality digital transformation.

Infrastructure is a shortcut to full use of data

Of course, it will take time for such an ideal can become reality. What, then, should a typical company do in order to establish a process of gathering, storing, analyzing, and using data? One way is for the company to start from scratch and develop its own tools; yet it is no simple task to continue to align these tools to a rapidly changing environment. Instead, the use of external, on-demand systems that feature pre-optimized data usage processes allows for data to be used in a more flexible and speedy manner; such external systems also enable costs to be reduced.

ABeam Cloud® is one such system. Through system establishment, improvement, and integration projects in a wide range of fields, including ERP, ABeam Consulting has accumulated a wide range of knowledge and know-how when it comes to data. Using this experience to the full, we intend to provide support both for a data-connected society and for the new businesses that are generated therefrom.

A future defined by Japan's digital labor, which continues to evolve and spread in a unique manner

Japanese companies are advancing work style reforms, and their use of Robotic Process Automation (RPA) is also accelerating; indeed, the speed and diversity with which RPA is being implemented are attracting attention from overseas. The question is this: can Japan use digital labor to generate business opportunities as its labor force declines? ABeam Consulting's Yoshinobu Abe explains how RPA attained its prominence, focusing particularly on the environment that surrounds its use, the key points for its effective utilization, and the outlook for the future.



Yoshinobu Abe

Executive Officer, Principal
Strategy Business Unit

yoabe@abeam.com

Yoshinobu Abe has engaged in a wide variety of consulting work in all manner of industries. He has experience in proposing management strategies, reforming systems and business processes, reforming organizations, implementing ERP, and responding to the legislative system. Abe is in overall charge of ABeam Consulting's RPA services, and supports the implementation of RPA at a large number of companies.

Eighty percent of major corporations have implemented RPA tools

The implementation of Robotic Process Automation (RPA), which provides the foundations for digital labor, has accelerated over the last two years. Already 80 percent of major corporations have implemented some form of RPA tools; the latter half of 2017 was a trial period for these corporations, and they have been pressing ahead with full-scale deployment of RPA in 2018.

Such a trend is also being seen with increasing frequency among small- and medium-sized companies. The RPA BANK carried out an RPA usage survey among its members in June 2018: at companies with a workforce of between 300 and 1,000 people, roughly one-third had not implemented RPA at all, one-third had implemented RPA on a trial basis, and one-third had fully implemented RPA; at companies with a workforce of less than 300 people, roughly half had not implemented RPA at all, one-third had implemented RPA on a trial basis, and 20 percent had

fully implemented RPA. Evidently, the implementation of RPA is proportional to the size of the company.

Major corporations are leading the utilization of RPA. However, it takes several years after RPA has been fully deployed in one department before it is implemented across the entire company, and there can be little doubt that the more widespread RPA use is within a company, the greater its effects.

The most commonly implemented—and most simple—RPA process is known as “Stage 1: Basic.” This entails the computer-based automation of routine tasks for which clear rules have been defined. Some companies are now beginning to proceed to “Stage 2: Cognitive,” which combines RPA with paper or image-based recognition technologies.

A select number of advanced companies are now even progressing to “Stage 3: Intelligence,” which aims at the RPA and AI-based automation of non-routine tasks, including responses to exceptional conditions.

As the usage scope of RPA expands, more and more departments and business processes are implementing and making use of RPA. This is leading to the establishment of digital labor platforms that act as one, large business processing foundation, which links all sorts of digital labor within companies.

Surpassing the West with unique developments: the current state of Japan's RPA use

RPA originated in the West and was imported to Japan after a delay of approximately one year. In recent years, however, the Japanese insistence on work style reforms has served to expedite developments in RPA. Compared to the comparatively simple tasks that RPA is used for in the West, in Japan there are examples of RPA possessing decision-making authority; it has evolved to such a degree that it can be used for extremely high-level tasks.

Western companies have focused on using RPA to carry out their office and operational procedures at departmentalized organizations such as shared service centers and call centers, with the aim of reducing costs. It is true that executing such routine tasks is an optimal use of RPA; in Japan, however, where the majority of corporations are composed of distinct business units, office and operational business processes are not clearly divided into distinct routine tasks.

The above, unique characteristics of Japanese corporations, mean that the use of RPA in Japan not only encompasses simple routine tasks in specified departments, but also covers non-routine tasks such as preliminary surveys, budget control, and data analysis. Today, the use of RPA in Japan extends across a greater range of business processes than in any other country in the world. Indeed, Japan can rightly be regarded as an “advanced RPA nation,” and large numbers of inquiries are coming in from overseas.

RPA implementation is also starting to be seen at the overseas subsidiaries of Japanese companies that have expanded into Asia. As a consequence, although RPA implementation is currently limited at companies in the Asian region, uptake is expected to progress in the near future.

As the use of RPA continues to expand, RPA tools are evolving consistently as well. Previously, each tool had its strengths and weaknesses; now, however, RPA is capable of operating a growing number of tools and processing an increasing range of data. By incorporating workflow functions and centralizing approval processes, tool vendors are pursuing developments aimed at removing borders between robots and humans.

However, I personally believe that extending the functionality of the RPA tools themselves is not that important; we ought instead to focus on establishing structures that work easily with the new tools of the future. In addition, since RPA tools are operated by corporate users themselves, it is vital that we establish manuals and training systems that aid their implementation and operation, as well as strengthen support systems for when users encounter difficulties. It is imperative that we work together with tool vendors when providing such support as well.

RPA Installation on Server with top-down leadership is the path to success

The expansion of digital labor is accelerating at an unprecedented pace, but it is important to note that digital labor can broadly be separated into two types: the desktop-type Robotic Desktop Automation (RDA), and the server-type RPA.

As its name suggests, RDA is installed on the desktop computers of individual users. The advantages of RDA are that it enables the swift business site-led implementation of RPA; its primary disadvantage is that it is impossible to know what has been installed, where, and by whom.

In addition, companies frequently comment that, when the time is ripe for the full-scale, company-wide implementation of RPA, they have to reinstall all their tools, and that this effectively amounts to starting over.

The implementation of RPA contains large amounts of shared know-how that can be used in other areas; for this reason, rather than implementing it in a distributed manner on a site-by-site basis, a company-wide, multi-departmental project supported by its management team with top-down leadership would ideally introduce RPA as a part of business process reengineering.

Faced with their worst labor shortage, Japan no longer can afford to guide and train employees today. By using RPA, talented human resources are liberated to divert their labor skills in new business areas, for companies to continue to generate their growth.

Ideal customer experiences point the way to the future for companies when it's designed from a company-spanning perspective

Over the past decade, advances in digital technologies and the spread of mobile technologies have significantly changed the amount and quality of data obtained from customer contact points, as well as its expected value. In the B2C area, marketing measures focused on customer contact points are being implemented for both e-commerce and brick-and-mortar stores, but have companies focused on B2B caught up with the market's changes? ABeam Consulting's Miho Mizuno explains the design of the ideal customer experiences (CX) sought by customers.

Miho Mizuno

Executive Officer, Principal
Head of CRM Sector
P&T Digital Business Unit

mimizuno@abeam.com

After working in a general trading company, Miho Mizuno joined ABeam Consulting Ltd. in 2000. She has provided support to numerous companies in a broad range of industries, such as manufacturing, finance, distribution, IT services, and trading, in everything from strategy formulation to the implementation of reforms, focusing on CRM. She has used her rich consulting experience to develop an extensive track record as a writer, guest lecturer, and instructor.



The evolution of digital technologies and the importance of customer contact points

As mobile devices have become more widespread, transmission speeds and data collection and processing capabilities have also accelerated. The amount and quality of customer contact point data have undergone significant evolution.

At the same time, analysis tools have become more commonplace, and companies have

hired and developed data analysts, creating a foundation for developing customer behavior insights from customer contact point data.

Meanwhile, customers themselves have developed the ability to gather information and share information through social networks and various other communities. Through these processes, they have become less resistant to providing personal data, rather, they would take for granted that the services are tailored to fit better than ever as their preferences are thoroughly understood in advance.

B2C direct sales companies were relatively quick to act on these changes in the business environment. There have also been changes in the behavior of B2B buyers. It is becoming increasingly common for customers to collect information themselves, exchange information with each other, and solidify their purchasing intent before contacting sales companies.

However, sellers' efforts are still lacking. A number of B2B companies in Japan still are not able to realize appropriate offerings and communications attaching sufficient weight to CX.

Customer contact points are companies' headlights

The era in which all it takes to sell is to make high-quality products is over. The ability to provide quality CX has become an even greater source of company competitive power than quality products or services. However, Japanese companies that have experienced success based on their manufacturing place little importance on improving their customer contact points.

In contrast, for American manufacturers, retails, and leading IT service companies, which have long placed importance on marketing functions, CX is a critical investment field that should be discussed at the management level. Start-ups in Asia are also rapidly rolling out attractive CX that leverages digital technologies.

Today, when customers draw in new customers, mutual communication between customers and companies contributes to the capture of latent customers, making it a more important issue than ever.

This is because the varied types of data that can be obtained from customer contact points contain important insights into future environmental changes. Diverse types of information such as web browsing histories, responses to promotional campaigns, and changes in complaints to stores and contact centers can be used as input to read market trends. If one thinks of accounting data as a *backlight* used to verify results and the past, then customer points can be seen as *headlights* that light up the future.

A precision equipment manufacturer to which ABeam Consulting provides support has created an online community of engineers that develop products using its parts and experts from product planning divisions. It uses this online community to actively provide information regarding new technological trends and the like. It also provides a platform for customers to share issues and complaints and provide each other with advice.

This contributes to greater customer satisfaction and the capture of latent overseas customers that it was unable to reach in the past. The tremendous amounts of data the company gathers through this contact point are valuable input regarding product development needs,

and is fed back to the company's R&D divisions.

Integrated CX design consistent with business strategies

Many companies say that while they understand the importance of CX and have invested in it, their investments don't produce results. Making haphazard improvements without a core strategy can result in different departments implementing separate tools, amassing scattered customer data that remains unused.

Let's look at the three keys to success when creating new CX.

The first is consistency with business strategies. Companies need to engage in communications not only through digital customer contact points such as the examples mentioned above, but also in brick-and-mortar stores, through sales personnel and service personnel, via contact centers, and in all other customer contact points. These communications cannot consist of scattershot deployment of different initiatives, but must be consistent and based on customer importance and core products and services. Doing so requires a higher level of consistency with business strategies.

The second key is cooperation between related departments. CX is not just the job of marketing departments; it should be handled by all organizations that deal with customer contact points. Fusing ossified or fragmented customer contact points is no easy matter. In some cases, it may require reorganization or changes to business result management methods. This requires upper-level strategies and leadership.

The third key is providing CX in a more broadly defined sense, including partners and customers themselves. In the future, as the ecosystem concept gains a stronger foothold, cooperation will be essential for, of course, partners such as retailers, agents, and business subcontractors, but also outside stakeholders including customers themselves. Infrastructures—both technological and systems—for sharing data outside of companies, are being prepared.

To provide better CX, companies must design integrated customer contact points based on customer handling strategies redefined at the management level and they must implement them throughout their organizations.

We provide total support for the creation of customer contact points in the form of Customer Experience Integration. This Customer Experience Integration encompasses everything from sales strategy formulation to customer analysis, targeting, operation design across multiple channels and departments, and the implementation of IT platforms that support these activities. We hope that companies will work to provide customers with ideal CX through company-wide projects under the leadership of management level personnel with the potential to direct customer strategies.

Special Feature

True corporate value and a means of survival in the face of the rapidly changing competitive environment

1

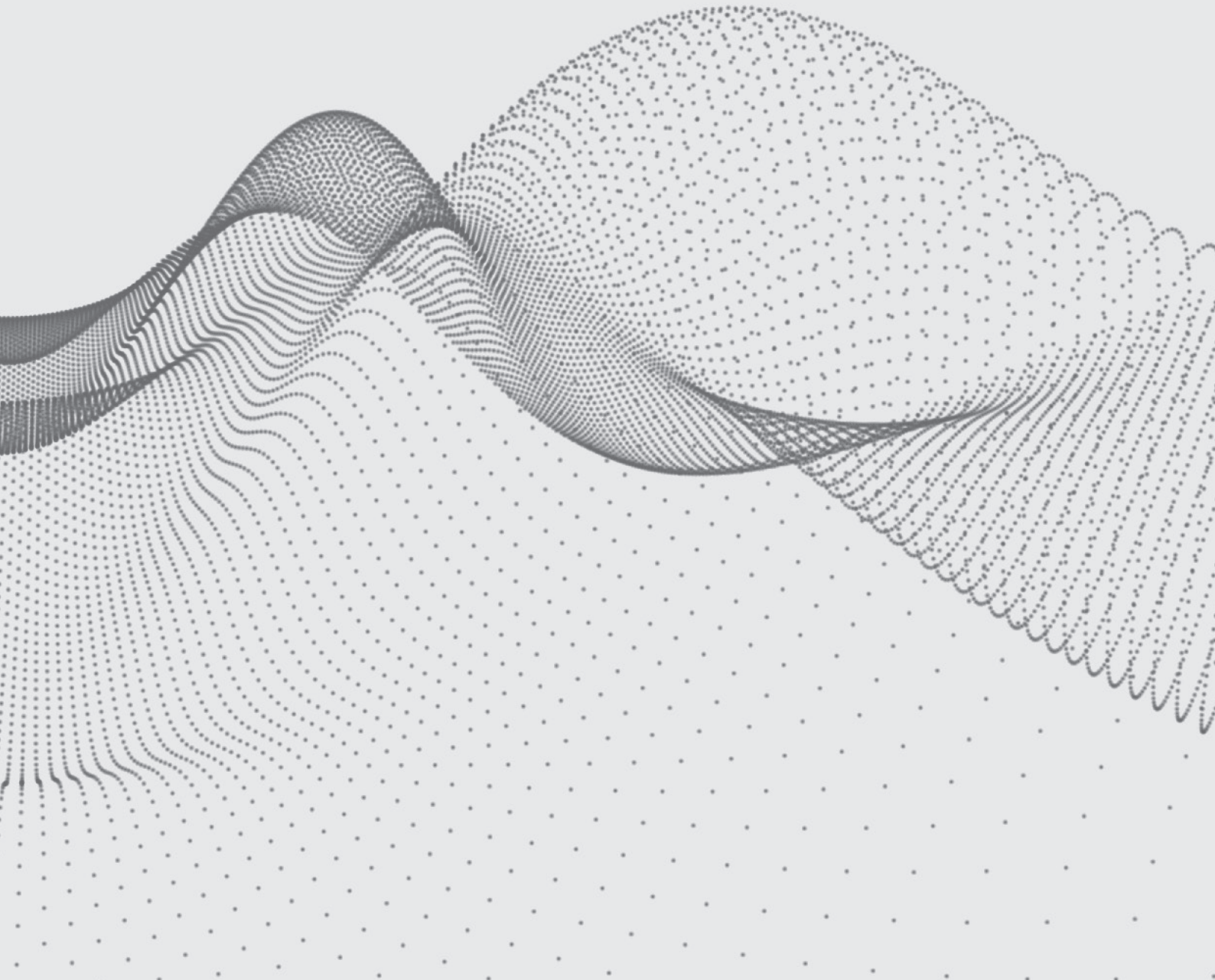
A once in a century transformation Grasping shifts in competition modalities to change threats into opportunities

The automobile industry is in the midst of a once in a century transformation. Changes such as the rising number of EVs, autonomous driving, and sharing have the potential to upset its very business models. What does the future hold for this industry which has been part of the backbone of the Japanese economy? As the traditional mass sales model gives way to the service model, how should its future competition modalities be seen? ABeam Consulting's Shuntaro Furukawa and Hikari Todoroki discuss these topics.

2

Coming dramatic changes What should the energy industry be doing?

In April 2016, city gas retailing was liberalized, following the liberalization of electrical power retailing in April 2016. Major changes have finally begun in Japan's energy market. How will Japan's energy market change in the future? What impact will newcomers have on the market and on existing market players? ABeam Consulting's Hideo Yamamoto, an expert on the domestic and international energy situation, provides his analysis.



A once in a century transformation Grasping shifts in competition modalities to change threats into opportunities

The automobile industry is in the midst of a once in a century transformation. Changes such as the rising number of EVs, autonomous driving, and sharing have the potential to upset its very business models. What does the future hold for this industry which has been part of the backbone of the Japanese economy? As the traditional mass sales model gives way to the service model, how should its future competition modalities be seen? ABeam Consulting's Shuntaro Furukawa and Hikari Todoroki discuss these topics.



The greatest change since the mass production of the Ford Model T The impacts of four changes

There is no debate that the first transformation in the history of the automobile, which extends over 130 years, was the Ford Model T mass production system. This created a business model that popularized automobiles, which previously were only available to a select few,

Shuntaro Furukawa

Executive Officer, Principal
Head of Automobile Industry Sector
Manufacturing & Consumer Business
Business Unit

sfurukawa@abeam.com

Shuntaro Furukawa joined ABeam Consulting Ltd. in 2001, after working at a major system integration company. Since joining the company, he has provided consulting in the global project management field and SCM field, primarily for the manufacturing industry. He now leads automobile-related industry transformation as a sector leader.

widely throughout the mass market, drastically changing society.

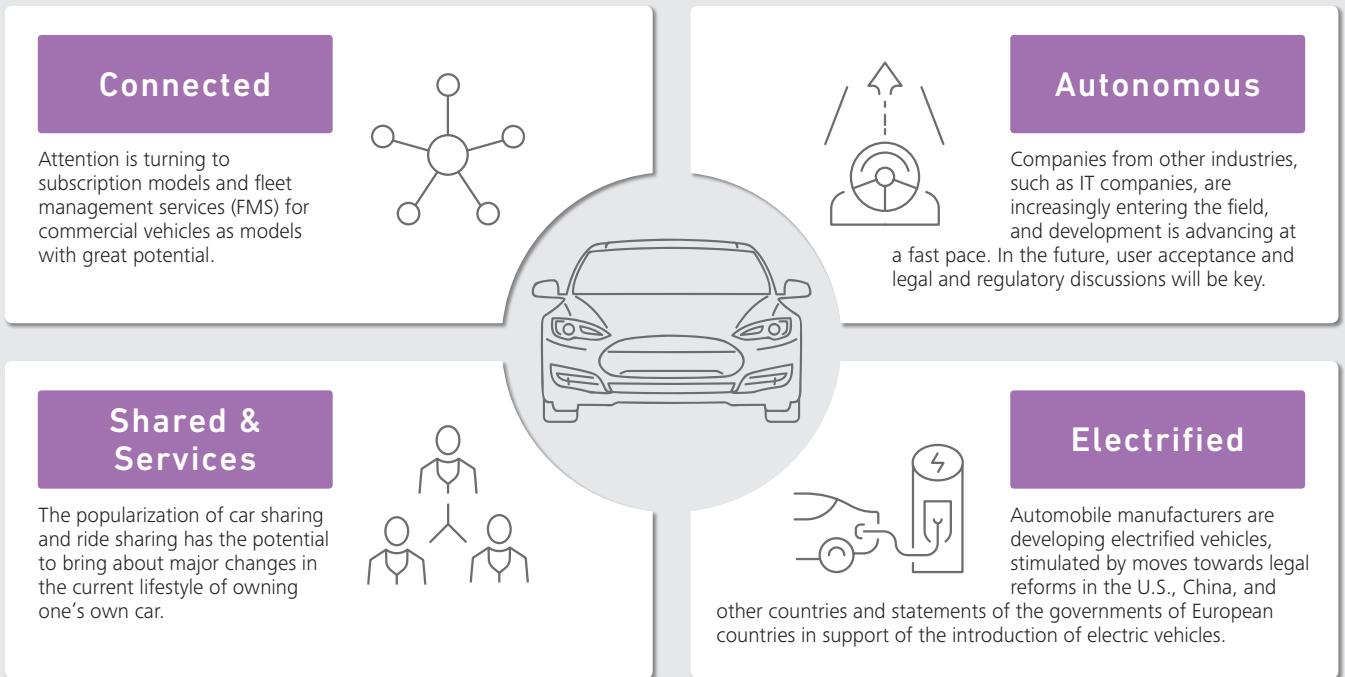
Although the industry has gone through various shifts and transitions, its basic structure has remained unchanged: companies mass-produce and sell automobiles propelled by internal combustion engines, and consumers purchase and use these automobiles.

However, a fundamental transformation is now beginning. This transformation is being driven by four factors, namely the connection of vehicles to communication networks via ICT devices, autonomous driving, sharing and services, and electrification.

Attention is being turned to EVs and autonomous driving Japanese companies need to keep a cool head

Of these four changes, electrification—that is, electric vehicles (EVs)—and autonomous driving have particularly captured the market's attention. Professor Ichiro Kageyama of the Nihon University College of Industrial Technology, an automotive engineering specialist, is highly knowledgeable about the industry's trends. Recognizing the

The four factors driving the competition modality changes of the automobile industry



potential of EVs, he says, “In the 1990s, I took part in a project in China by what is now NEDO (New Energy and Industrial Technology Development Organization), providing support to developing countries. Even at that time, China showed a strong interest in the potential for EVs, which do not produce exhaust emissions, for improving the country’s serious air pollution problems. From an engineering standpoint, as long as there is a stable supply of electricity, a DC motor offers superior qualities in comparison to an internal combustion engine for use in an automobile powertrain.”

Until now, EVs have faced problems with battery capabilities and charging infrastructure, but China, the world’s largest automobile market, has made



Ichiro Kageyama
Professor, Department
of Mechanical
Engineering
College of Industrial
Technology
Nihon University

changes to its energy security and air pollution control policies, giving momentum to the introduction of EVs. In Europe, as well, CO2 emissions standards for automobiles have become strict, leading to higher expectations for EVs.

In the area of autonomous driving, one company after another from outside the automobile industry, such as IT giant Google and Uber Technologies, which has grown rapidly with its ride-sharing matching app, have entered the field.

Universities and research

Hikari Todoroki

Senior Manager
Automobile Industry Sector
Manufacturing & Consumer Business
Business Unit

htodoroki@abeam.com

Hikari Todoroki was involved in vehicle development, engine technology development, and business management planning at automobile manufacturers. While in Germany, he established a rich network of connections with over 2,000 people in Europe’s automobile industry. He joined ABeam Consulting Ltd. in 2017. He engages in consulting activities such as strategy formulation and investigation for Japanese automobile-related industries.





Japanese automobile manufacturers are too focused on the risk of not getting involved with EVs and autonomous driving. They need to identify risks and develop strategies that leverage their strengths.

Shuntaro Furukawa

organizations around the world are also actively developing autonomous driving technologies, and the automobile industry, IT industry, universities, and research organizations are competing in the development of these technologies.

ABeam Consulting Executive Officer, Principal, and Automobile Industry Sector Leader Shuntaro Furukawa says, regarding this situation, “Japanese automobile manufacturers are worried that they will be left behind if they don’t immediately become involved with EVs and autonomous driving. They seem to be too focused on the risk of not getting involved. They should calmly identify risks and develop strategies that leverage their strengths.”

Growing profitability of connected and sharing business

So, of the four changes that determine the new competition modalities of the automobile industry, how should we see the risks created by the trends of electrification and autonomous driving ?

The driving of EVs produces no emissions, but if one takes into consideration the whole process, including thermal power generation, especially the generation of power using coal, the reduction in emissions of greenhouse gasses such as CO₂ becomes smaller. The percentage of renewable energy, such as solar power, must be increased.

For autonomous driving, as well, although technology development is progressing at a rapid rate, there remain many issues, such as user acceptance and the

legal and regulatory systems in individual countries.

On this topic, Professor Kageyama says, “In order to advance fully autonomous driving, technologies will first have to be matured as driving assistance technologies, gradually earning the trust of society.”

ABeam Consulting Automobile Industry Sector Senior Manager Hikari Todoroki says, “Of the four changes, the most important will be connected and sharing.”

Telematics services are services used to transmit information to and from vehicles, such as those used in automobile navigation systems. They have existed for over 20 years, but for a long time no revenue models for these services have been seen as feasible.

However, says Todoroki, “two promising business models have emerged for connected business.” One is the subscription model, like that used in music streaming services. Subscribers’ vehicles are connected via the IoT to service providers, and receive various additional services, such as vehicle inspections or repairs, for a fixed fee. Instead of purchasing vehicles, this business model is closer to leasing.

The other model is the commercial vehicle fleet management service (FMS) model. Transportation companies use the IoT to gather information such as truck speeds, drive distances, and routes. This promotes safe, energy-saving driving by drivers, and enables managers to use the IoT to manage drivers and help prevent them from overworking. “In the West,” Todoroki explains, “regulations have been enacted requiring business operators to manage driving, so this has created demand and steady growth. The percentage of vehicles with installed FMS devices is still low, so there is a great deal of latent demand. This trend is forecast to extend to Asia and throughout the world, so future market growth can also be expected.”

Todoroki sees sharing as the keystone of these four changes. If car sharing and ride sharing continue to grow, the significance of personal car ownership will decline, which runs the risk of destroying the automobile industry’s current “mass production and sales model.” “If there is a rise in the number of people who are fine with car sharing provided that they can use a car as a means of transportation, mass production brands which manufacture and sell vehicles for the

general public, an area in which Japanese companies excel, may be significantly affected,” he fears.

However, premium brands, a strength of European companies, especially German companies, will maintain their value, so sharing is expected to have little impact on them. Todoroki points out that, “in the future, automobile brands will become even more clearly polarized into mass market automobiles and premium brand automobiles. German manufacturers with premium brands will leverage their strengths, while also turning their attention to sharing business, in which mass market brands will be staking their futures.” He urges the Japanese automobile industry to rebuild its strategies to move away from the mass production and sales model.

What comes after the mass production and sales model The future strategy of the automobile industry

Japanese automobile manufacturers feel that they have been slow to react to new competition modalities prompted by these four changes, and show signs of panic. However, Todoroki says, “I want to emphasize to the Japanese automobile industry that being the first to sell a product is not a prerequisite for victory. What’s important is not speed, but maximizing the value provided to customers.” He confidently states that he is not pessimistic about the future of Japanese manufacturers, whose strengths lie in their quality.

So what should the three main players in the automobile industry—completed vehicle manufacturers (OEMs), parts manufacturers (suppliers), and sales companies (dealers)—do? OEMs need to shift toward manufacturing premium models and build a system that produces profits even with a lower number of vehicles sold.

Japanese suppliers, who are highly reliant on Japanese OEMs, need to search for new clients. Todoroki predicts that “Chinese local OEMs will likely be viable candidates.” Japanese sales are roughly five million vehicles per year, but the Chinese market is over 30 million vehicles. Even if the number of vehicles falls due to the adoption of the sharing model, it will, without question, remain a massive market.

What about dealers, which have a great deal of influence as customer contact points? Dealers will need to consider switching from the current sales model to a subscription model. This is because they will become strategically important for capturing customers, not through selling automobiles themselves, but as providers of services that use sold automobiles.

However, switching to a service-based business model and implementing reforms such as changing all sales sites to service sites will require them to make major business management decisions. ABeam Consulting has defined support for the automobile industry, the backbone of the Japanese industry, as a key area. It will provide assistance to the Japanese automobile industry, as it faces a once in a century transformation, through various measures, such as providing business management strategy consulting, helping create internal systems for implementing transitions to new business models, designing service business models with high revenue potential focused on Asia, where Japanese vehicles command a large market share, serving as a go-between to outside technology companies that collaborate in areas such as the connected and sharing areas, and cultivating sales channels for suppliers to Chinese local OEMs.

“We will offer a deeper level of support, ranging from identifying the risks and issues involved in changes, to developing strategies and new businesses, on top of business plans and designs, and scouting up the best partners to work with. I want transformation to be seen not as a threat, but as an opportunity for growth,” emphasizes Furukawa.

The most notable changes to the automobile industry will be in the connected and sharing areas. There are two especially promising business models in the connected area.

Hikari Todoroki



Coming dramatic changes What should the energy industry be doing?

In April 2016, city gas retailing was liberalized, following the liberalization of electrical power retailing in April 2016. Major changes have finally begun in Japan's energy market. How will Japan's energy market change in the future? What impact will newcomers have on the market and on existing market players? ABeam Consulting's Hideo Yamamoto, an expert on the domestic and international energy situation, provides his analysis.



Hideo Yamamoto

Energy Director
Infrastructure & Service Sector
Financial & Social Infrastructure Business Unit

hiyamamoto@abeam.com

After working in the energy solution sales division of a major city gas company, Hideo Yamamoto joined ABeam Consulting in 2001. As a specialist in touch points between energy suppliers and energy consumers, he has extensive experience with providing support for the creation of new innovation business models, new business plans, and sales strategies. He has also participated in numerous energy management improvement consulting projects for energy consumers.

The essential nature of retail liberalization is the transformation that will change the industry from the ground up

What do you think of when you hear “energy retail liberalization”? Is it the end of monopolization by past companies, the rise of new companies, competition, and falling costs? From a consumer perspective, this interpretation is sufficient.

However, from a business perspective, this market transformation is not something that ends with mere sales channel diversification. The true nature of retail liberalization is the fusion of rapidly evolving digital technologies, the creation of new business models, and the “disruptive innovation” with which industries find themselves face-to-face.

What should we do in the face of the competition or partnerships between existing companies and the new industry players that come from different fields and business areas, across industry lines? Let’s explore while looking at examples in the electrical power industry in the West, which has accepted disruptive business models and undergone transformation prompted by energy liberalization two decades ago.

Cost benefits stimulate switching among corporate consumers

How has Japan’s market changed with the coming of liberalization? According to statistical data from July 2017, roughly four million users switched from their existing power companies to new power companies. This is roughly 6.5% of all consumers. Now (July 2018), exactly one year later, the percentage has risen somewhat, but not by a large amount by any means. However, this does not mean that Japan is behind; in the West, as well, it took quite a while to achieve a steady rate of user switchover following liberalization.

Japan’s current situation is as it is because of certain characteristics of electrical pricing. Even with liberalization, switching to a new power provider can only provide households with a discount of roughly 8% at most. For a household with a power bill of 10,000 yen per month, this is just 800 yen, so there is little motivation to actively switch companies.

However, that isn’t to say that switching power providers will not become more widespread in the future. Corporate demand has already grown quite a deal, and this is not limited to demand for switching among large corporate consumers, as it was initially, but medium and small companies are now actively switching to new power providers.

The reason for this is clear. Unlike households, corporate customers can receive discount rates of over 10%, and companies such as manufacturers

that use a great deal of power can expect to enjoy cost benefits. Looking at the most current power provider switchover data, from 2018, nationally, an average of 8% of residential power has been switched to new power providers, but 16%—twice as much—of commercial power has been switched.

The numbers are particularly high for the areas serviced by the Tokyo Electric Power Company and Kansai Electric Power Company. Since before liberalization, both of these companies have had prices above the national average, making switching to new providers more beneficial, which is believed to be behind this high number of switchovers. The Hokuriku Electric Power Company, on the other hand, primarily uses hydroelectric power, and has low electrical power prices. This means there are few benefits for market entry by new companies, so the area it services has fewer switchovers than the national average. Although there are regional disparities, such as this, corporate switchovers are progressing steadily.

The number of new retailers is also growing, and has now reached roughly 500. However, the business environment is still harsh, and only 16 have achieved some degree of business scale. The vast majority have registered as companies but mostly failed to attract customers. Some companies have already been absorbed by other companies, pulled out of the market, or gone out of business.

Unlike power, there is no nationwide network of gas pipelines, so the number of potential gas providers is limited. The barrier to new gas providers is, therefore, higher than it is for electrical power, which is one of the reasons for the slow pace of gas retail liberalization.

Innovation competition through technological and digital advances

Electrical power retail liberalization does not consist merely of expanding size using the exact same business model. Looking at pioneering overseas regions, it is apparent that retail competitive environments evolve through three stages.

*** Stage 1** Price competition: The only difference between competitors is price, making differentiation from other companies difficult, resulting in price competition and reduced profit margins.

*** Stage 2** Service competition: Efforts are made to differentiate in terms of products and services, but there are no deciding added value factors, so differentiation remains difficult.

*** Stage 3** Innovation competition: Aiming for further differentiation, competition arises in the innovation sector. New business models that go beyond conventional industry and business format lines are created, extending outside the

bounds of conventional energy retailing.

This “innovation competition” stage requires companies to create new business models that break out of the confines of conventional energy retailer business formats and business customs. Disruptive business models with innovative concepts and technologies are essential to triumph over competitors.

The sudden rise of these disruptive business models—innovations that disrupt existing value chains—in recent years have been prompted by two main factors.

The first is the advance of energy technologies. For example, technologies such as renewable energy, considered a distributed energy resource, co-generation, and batteries have evolved, improving performance and accelerating technological innovation.

The other factor is the dramatic progress of digital technology. In fields such as the big data and IoT fields, large amounts of data are being collected and analyzed, and overseas power companies have been making forays into providing feedback regarding the results of these analyses to client companies. It is becoming possible to provide client companies with new value by, for example, using data to make discoveries, such as power usage volume and usage trends, that client companies have not discovered on

their own, and proposing ways of reducing costs while promoting more effective business processes. The progress and popularization of these digital technologies are becoming major driving force of innovation.

Energy sharing model The potential of demand response

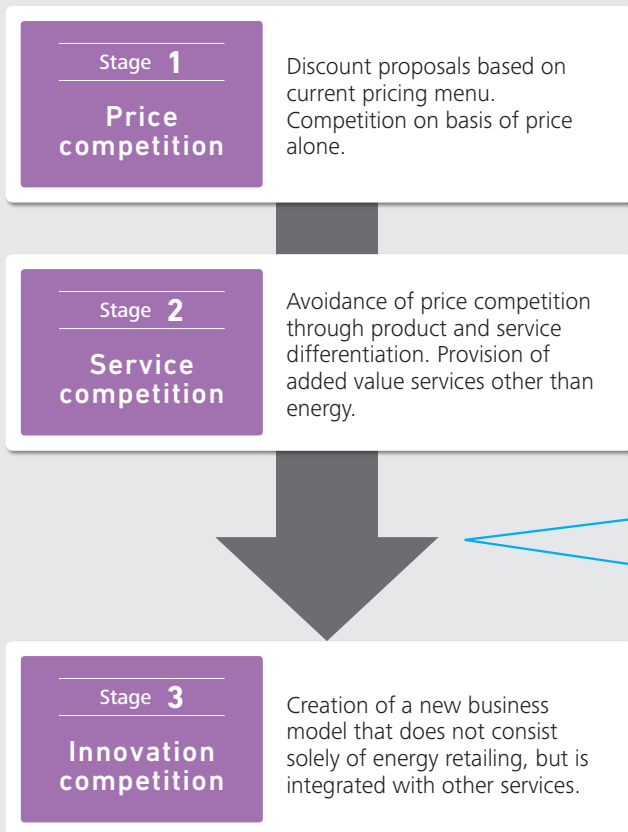
Let’s look at new technologies, and especially innovative business models that use digital technologies, in leading case examples in the West.

The business models being deployed in Europe and America can be broadly divided into six categories (see Column 1). “Demand response” is one of the technologies supporting typical business models.

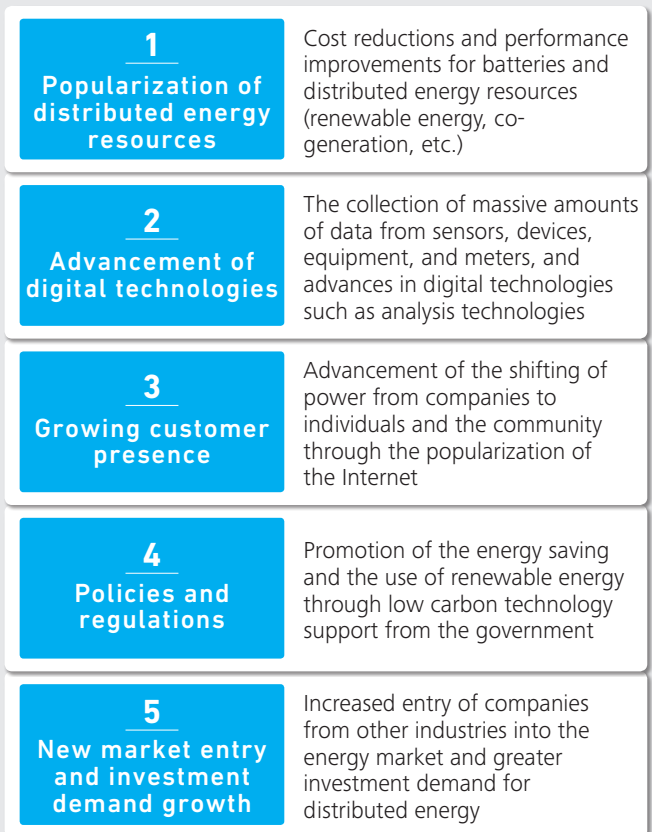
With this technology, a third party, known as an aggregator, actively controls demand from multiple customers to supply new value. In conventional power provision, power transmission companies adjust power plant output based on power use demand (balancing). Power plant facilities must, therefore, be able to provide enough power to meet peak demand. This requires large-scale facility investment. The ultimate cost of investment is then passed along and reflected in power prices.

The demand response concept is a complete

Future changes in the liberalized energy market environment (hypothesis)









Innovative business model transformation drivers



The energy business approaches being used in the West and the six main innovation models

In Western markets, many new energy business models have been created. UK-based Delta Energy & Environment has studied and analyzed over 150 of these business models and divided them into six major innovation business approaches.

Innovation business model categories identified by Delta Energy & Environment

<p>1 TOU optimization model</p>	<p>Creates value from flexibility through demand shifting and the use of batteries and distributed energy resources. * TOU = Time of Use</p> 	<p>4 Marketplace operation model</p>	<p>Instead of supplying products and services, companies using this model operate marketplaces that support transactions between stakeholders.</p> 
<p>2 Lifestyle product model</p>	<p>Focuses on improving customer lifestyle quality and customer experience. Primarily supplies products for home use devices and apps.</p> 	<p>5 Energy consumption efficiency improvement model</p>	<p>Innovative contract schemes based on data analysis are used to implement operational improvements and equipment repairs, helping improve energy efficiency.</p> 
<p>3 Usage-based billing model</p>	<p>Builds ongoing relationships with customers. Instead of products being provided as one-time purchases, product use is provided as an ongoing service.</p> 	<p>6 Bundling model</p>	<p>Energy and other services are combined to provide new added value.</p> 

about-face. It minimizes power generation-side assets and curbs facility investment costs. When power demand exceeds supply capabilities, it temporarily limits user-side power consumption.

At first, this might seem like an inflexible energy-saving effort that inconveniences the customer, but the latest digital technologies have produced demand response systems that place no stress on users. With cutting-edge demand response, when power demand is poised to surpass power supply, power transmission companies issue orders to control power demand. Where advanced demand response systems excel is in their ability to immediately limit customer power demand within 10 seconds or so after receiving one of these orders, maintaining the balance of supply and demand while optimizing the overall power supply system. This is something that could not be accomplished manually. Instead, the system constantly monitors the demand conditions of power customers and automatically limits demand immediately when necessary.

This adjustment is performed based on conditions agreed on in advance between power suppliers and power customers. For example, when power demand must be controlled, suppliers have assenting power customers give their cooperation and limit power

demand by power consuming equipment (production processes, water heating, air conditioning, etc.) based on agreements made in advance (such as turning off power to specific devices, raising air conditioning temperature, etc.). In a broad sense, this can be seen as a sharing economy model. Instead of the conventional approach, in which power companies determine their maximum needs and then build, maintain, and manage equipment that meets them, with demand response, power suppliers have power users share their power demand adjustment margins. Services such as this, which were inconceivable in the past, have become possible thanks to digital technology.

The above is one example of limiting demands, but the demand response concept also includes methods such as demand peak shifting by using batteries to offset power generation equipment used in nighttime hours, or having power users use their own power generation equipment to cut the amount of power that must be supplied from the grid.

Demand response was originally developed in the U.S., but it has since been overtaken by Europe. A great deal of buzz has been generated by companies such as a German startup company that does not have its own large power generation equipment, but instead installs

solar power generation equipment and batteries on customer sites, networks them together, and maximizes the percentage of consumed power that is generated at customer sites while also using demand response.

Improving information gathering efficiency by providing expertise and support

What kinds of innovation competition can we expect in the Japanese energy industry, given the successful examples of the West? We have only just begun liberalization in Japan, and most change is yet to come. We want to provide backup to companies that want to take on the challenge of creating new business in order to survive in the energy world, as well as to companies that want to newly enter this field from other industries.

I see information organization and systematization as one of the keys to raising the initial tempo of business. At present, most information regarding new energy business is still unorganized. There are many cases in which a great deal of time is required for the initial phases of business activity, such as determining where to go to collect the information and expertise constantly being produced overseas. For this new field, as well, companies are uncertain about what information

is valuable, and what cases should be studied.

For roughly two years, we have collaborated with companies engaged in global research of these energy industry trends, collecting and evaluating the latest information and systematizing it. Furthermore, we have recently begun regularly evaluating and predicting future industry trends and needs based on our research results, and supplying our findings to companies.

In the future, energy companies will need to enter this new business environment, whether they want to or not. When they do, they will need to actively leverage the latest systematized information together with energy sector results and know-how to formulate strategies. We are currently beginning the creation of Japanese language versions of best practices from overseas success cases, providing them in the form of various documents and knowledge bases.

Actually launching new businesses requires the coordination and creation of systems of broad-ranging expertise in not only the energy sector but also other areas such as finance, procurement, and law. We believe that we can also provide backup for these efforts.

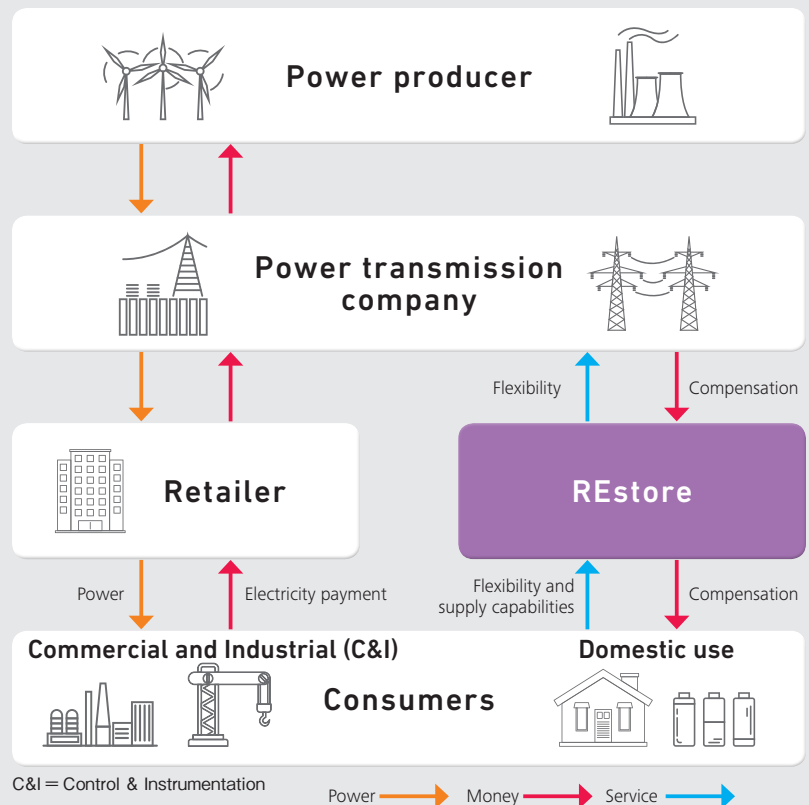
Speedy decision-making People who are unafraid of risk are key

Column 2

A disruptive innovation company from the software development field that has begun power business

The model in which demand response is used to control customer power demand and power transmission companies provide the flexibility necessary to coordinate supply and demand is called the "TOU optimization" model (See Column 1 "Six innovation models"). One success case is that of the Belgian company REstore.

REstore was originally a software development startup, and many of its customers were companies in the manufacturing industry, which consumes a great deal of power. It has built a system for real-time data coordination with all its customers, constantly monitoring their power usage conditions and power market price trends, while directly controlling customer power demand online. It has been acclaimed as an example of disruptive innovation by a company from another industry that has newly entered the power business market.





Lastly, let's look at the key concept that provides an insight into how to succeed in the competitive environment of the future: "accelerating decision-making." The conventional energy business has been a very stable one, even among industrial sector businesses, so the decision-making process is a long one, and it takes a long time to reach an ultimate decision. However, to create new business models which are fused with digital technologies, it is vital that companies use what industries such as the IT industry call an "agile approach," rapidly making decisions, implementing them, performing evaluations, and making revisions. Instead of the past approach of slowly and deliberately considering what to do and then putting decisions into action, this style consists of rapidly acting while thinking, thinking while rapidly acting, and trying one new thing after another. The fastest way for a company to achieve its goals is for it to implement the PDCA cycle for its target business as quickly as possible.

Of course, to do this, it is essential to have organizations and systems capable of drastic transformation. Companies need to have the courage to act outside their existing structures, such as starting up divisions specializing in new business or spinning off new businesses into their own companies.

For foreign companies, as well, there are numerous examples of large companies that have succeeded by establishing new, startup-like companies and investing

them with the decision-making authority to make rapid judgments and use a trial-and-error approach.

What should be avoided, at any cost, is attempting to make advances by extending existing systems. Fearing risk and keeping everything within the company merely results in efforts being slowed down by existing structures and decision-making processes.

Another key is personnel development. People, as well as organizations, need to use new ways of thinking and produce new ideas. This makes systems for developing personnel, distinct from conventional business processes and education, essential.

There are already many success cases in the West, but their markets were liberalized two decades ago. That is to say, they have produced the results they have over the long course of 20 years.

Japan, on the other hand, only began power liberalization in 2016. The renewable energy movement, which has gained steam since the Great East Japan Earthquake of 2011, has been accelerated by the enactment of the revised FIT (Feed-in-Tariff) system in 2017, and the evolution of digital technology is further spurring on change.

In that sense, the Japanese energy industry of the future will experience market structure changes and disruptive innovation at a pace far greater than that of the West. As a specialist myself, I want to work with companies to take on the challenges of transformation.

www.abeam.com

ABeam Consulting
Public Relations Report 2018-19
November 2018

ABeam Consulting Ltd.

Marunouchi Eiraku Building, 1-4-1 Marunouchi, Chiyoda-ku, Tokyo
100-0005, Japan
Tel. +81-3-6700-8800 (main switchboard); fax +81-3-6700-8801

- The purpose of this document is to provide general information. The document is not intended to offer viewpoints or advice based on specific factual information.
- The information provided may not be up to date due to potential changes in laws, systems, and other social or legal issues following the publication of this document.
- ABeam Consulting Ltd. is not liable for and provides no guarantees concerning the accuracy or completeness of the contents of this document.
- The information provided in this document, including company information, section names, and job titles, is current as of November 2018.
- ABeam and the ABeam logo are registered trademarks of ABeam Consulting Ltd. in Japan and other countries.
- The company and product names in this document are trade names, trademarks, or registered trademarks.