

# ACTIVITIES 1

## HR-tech that Boosts Productivity and Makes People Shine

### New Value Creation in HR Achieved through Data Analysis

Use of digital technology is accelerating in a variety of fields, among them finance, education, advertising, and real estate. HR-tech, meanwhile, although seen as an important driving force behind the reform of working practices, is only now starting to be adopted in Japan. Hitachi has been quick to establish its own capabilities for pursuing HR-tech. Recognizing the success of people analytics in recruitment, Hitachi has adopted this technology, having also developed surveys of productivity and of staff placement together with solutions that use AI to combine survey results with big data. In this article, two of the key people with leading roles in HR-tech at Hitachi talk about its future deployment and prospects, including examples of how HR data analysis has been used in the past.



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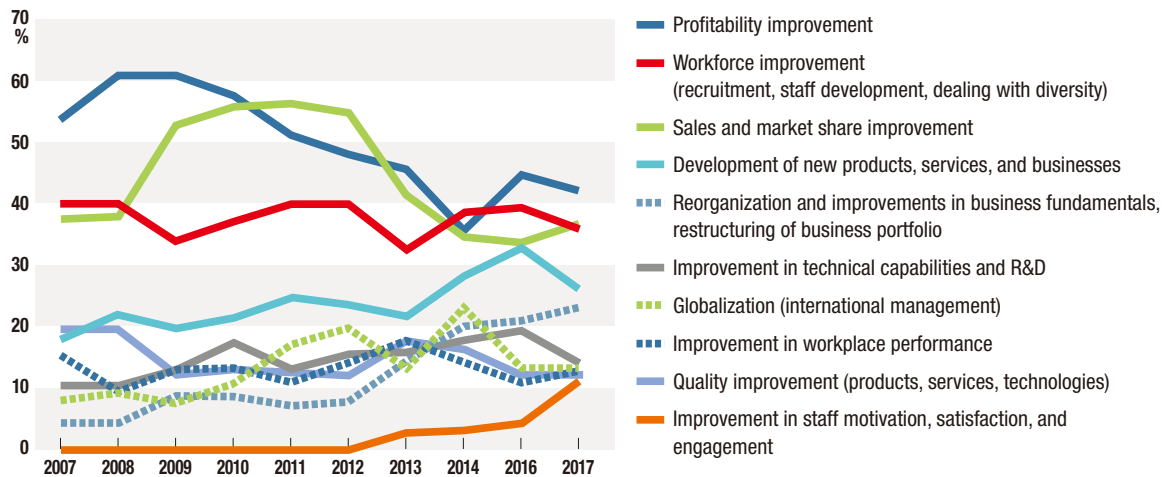
#### New Era in which Data is Used to Reform HR

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Interest in “work style reform” has been growing over the last few years. In addition to the fall in the working-age population as a result of aging and the low birthrate, the needs of workers are becoming more diverse and social issues associated with working practices are making their presence felt against a background of female participation in the economy and the problem of caring for children and dependents. Meanwhile, it has been noted that Japan has the lowest labor productivity among advanced nations, with Japan’s productivity (relative to hours worked) being ranked 20th out of the 35 member countries of the Organisation for Economic Co-operation and Development (OECD) according to a statement by the Japan Productivity Center.

**Figure 1 | 10-year Trend in Management Challenges**

The chart shows the trend in past results for the top 10 responses chosen when 3,460 companies were asked about their management challenges in the 38th Survey on “Corporate Management Challenges 2017” released in FY2017.



R&D: research and development

In response to this situation, the human resources (HR) departments at Japanese companies are taking active steps to introduce HR-tech. HR-tech means the use of advanced technologies such as the cloud, big data, and artificial intelligence (AI) for HR tasks such as recruitment, training, assessment, and placement. Masaki Takamoto (Senior Director, Human Capital & General Affairs Division, Systems & Services Business Division, Hitachi, Ltd.), who oversees HR at the IT divisions of Hitachi, explains why it is that HR-tech is currently so topical.

“There are three factors behind all of the attention being paid to HR-tech. In terms of the technology, the first of these is the progress that has been made on various measurement techniques. These provide a quantitative view of human beings, the “ultimate black box.” The next is the worsening labor shortage caused by changes in the structure of society. For market-related reasons, this is injecting urgency into the task of further improving productivity. The final factor is the emergence of moves to deal with the quality of work, including the problem of long working hours and changes to the work done by people.”

The part that HR plays in corporate growth should also not be overlooked. Personnel management can be described as the most important area of management, with workforce improvement having consistently been one of the top three management challenges over the last 10 years (see Figure 1). As the impact that HR policies have on business continues to grow year by year, we are entering an era in which quantitative data is providing the basis for reforming HR.

### Use of People Analytics in Recent Graduate Recruitment

Hitachi, which thinks of its staff as “human capital,” has followed a variety of different HR policies in the past. Through all this, the Human Capital & General Affairs Division of the Systems & Services Business Division has played a pioneering role. Along with work style innovations such as making changes to the staff cafeteria to promote good health and staging events to lift the level of workplace activity, and mental health initiatives (collaborations) that help sufferers return to work, this has also included leading-edge

initiatives such as the establishment of Biz Terrace satellite offices at 20 urban locations to provide an efficient place to work regardless of location. As a first step toward use of HR-tech, the department has also started making people analytics part of recruitment.

Junko Owada (Evangelist, People Analytics Laboratory, Human Capital Management Center, Human Capital & General Affairs Division, Systems & Services Business Division, Hitachi, Ltd.), put this as follows.

“In contrast to the commonly used applications that underpin HR operations, people analytics can be thought of as an advanced form of what HR is all about. Already adopted by numerous multinationals, it uses the collection and analysis of big data to help with things like recruiting talented staff and improving business performance. Meanwhile, while the nature of Hitachi’s business is shifting from tangibles to intangibles as a way to achieve innovation, the portfolio of people we recruit has remained much the same as in the past. Accordingly, we have chosen to use people analytics as a way to transform our human resource portfolio at a more fundamental level.”

In traditional recruitment processes there has been a bias in the human resource ratio of short-listed candidates. What this meant in practice was that, when candidates are classified into four groups (A to D) based on their scores along two axes, 65% of those selected belonged to group D. In response, Hitachi has designed its preferred human resource portfolio from the quantitative analysis of data on applicants and staff obtained from aptitude testing, with consideration also of qualitative data from sources such as interviews with high performing staff. After first determining the requirements for recruiting talented staff, including the “vanguard personnel” essential to the execution of future business strategies, Hitachi

has also made major changes to its selection procedures, including training for interviewers. In the 2017 round of graduate recruitment, this resulted in a significant shift in the characteristics of short-listed candidates despite the profile of applicants being largely unchanged (see [Figure 2](#)).

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### Encouragement for Individuals’ Insights to Boost Productivity

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To assess the benefits of using data analysis in recruitment, a People Analytics Laboratory was set up in April 2017 as part of the Human Capital Management Center in the Human Capital & General Affairs Division.

In her role as an “Evangelist” for the People Analytics Laboratory, Junko Owada is currently working on tools for the visualization of the various points along the HR value chain that runs from recruitment through to placement, training, and productivity. The People Analytics Laboratory has started by developing surveys for white collar productivity and for how well staff are fitting in with the positions in which they have been placed. Owada explains the reasons for developing productivity surveys as the second stage of HR-tech.

“Japan’s international competitiveness is said to have declined in relative terms over recent years. The key to overcoming this lies in white collar productivity. Unfortunately, it is difficult to get a handle on productivity from figures such as sales per employee. The reality is, how to go about lifting productivity in the corporate workplace is far from clear, especially for white collar staff who work in teams. Accordingly, what we are trying to do is to identify which working practices boost productivity for individual workers, and to use this to increase corporate value.”

A group with a high level of expertise in human resources was asked to identify the characteristics

of high performers (workers with high productivity), and an analysis of these came up with six factors that boost productivity. These are a willingness to take on challenges and consideration for diversity (factors associated with creativity), and the understanding of roles, results orientation, level of organization, and degree to which staff are well-balanced both mentally and physically (factors associated with efficiency). It also became apparent during the analysis that the best way for individuals to improve their productivity is to approach work in terms of efficiency first and then creativity, while staying in good mental and physical health.

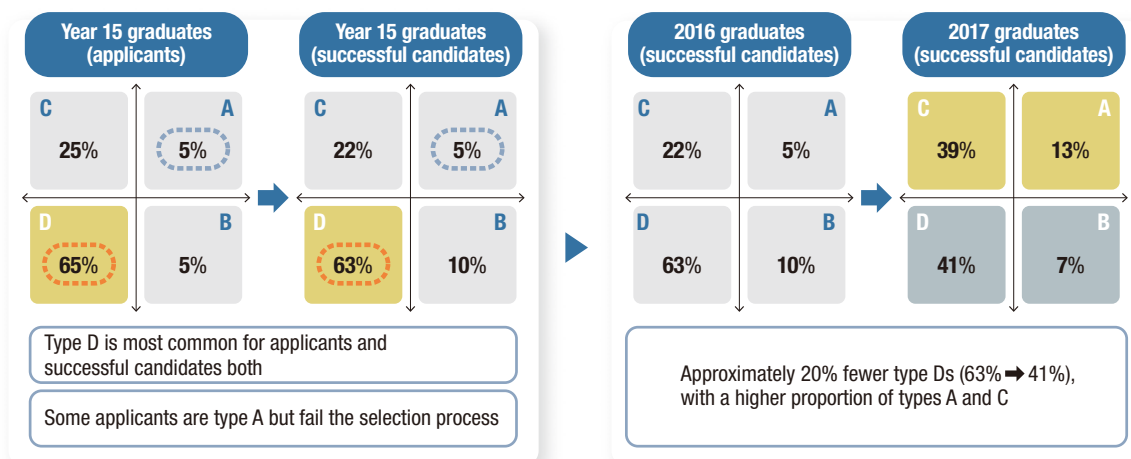
Whereas the productivity survey shows whether people are working with high productivity, the purpose of the survey of staff placement is to determine how well-suited staff feel they are to the positions in which they have been placed. Mismatches between person and job are a drag on both the individual and the organization.

Data was collected from 2,063 people from outside Hitachi during September 2017 and an in-house trial was conducted in November 2017 on 2,335 Hitachi staff. A subsequent survey was also conducted in February 2018 on 252 staff of the HR Department. The development of a survey that provides information about people and organizations was then undertaken based on the findings of these studies and trials of thousands of people from both inside and outside Hitachi. What sets this survey apart from others is that, while it focuses on individuals, it also aims at an organization level both to facilitate shorter working hours and to boost productivity by making staff more valuable.

As Owada explained, “Another way of putting it is that we emphasize the vitality of individuals, by which I mean making individuals shine in their work. For example, along with scoring things like their willingness to take on challenges, we also gave the people taking the survey an opportunity

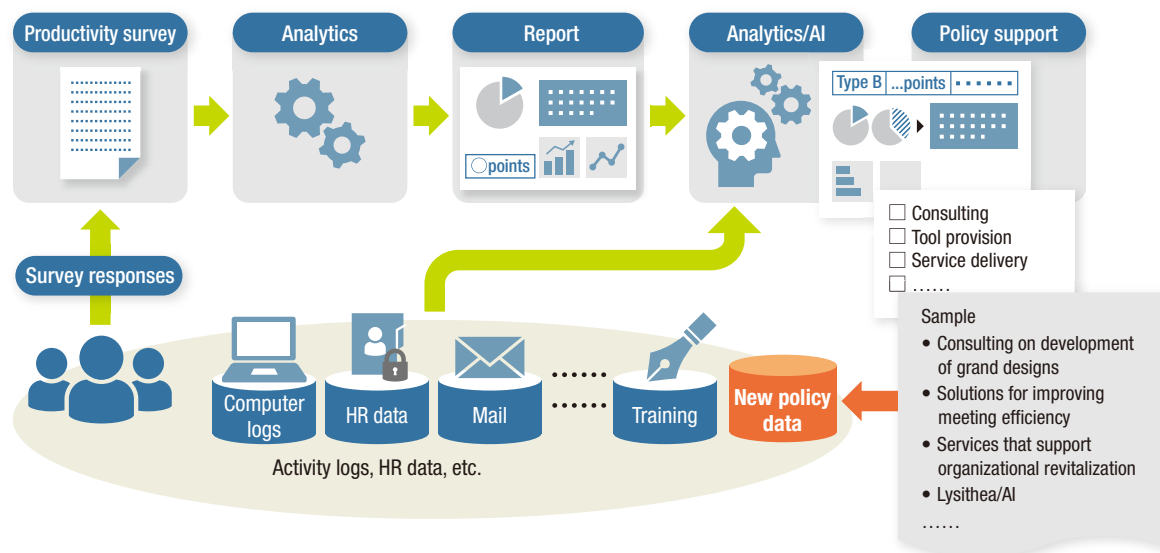
## Figure 2 | Analysis and Utilization of Human Resource Portfolio

Hitachi is seeking to achieve a better understanding of its staff by using people analytics to categorize people (into a portfolio).



**Figure 3 | Development of Solutions for Staff Placement and Productivity Applications**

The productivity survey indicates whether people are able to work with high productivity.



to make comments so as to draw out insights. As this amounts to scoring and evaluating the company as well, it is also a factor in organizational assessment. While providing management reports naturally formed part of the work, the core emphasis was on changing individuals.”

The People Analytics Laboratory is also developing services to support practical HR policy by using Hitachi’s own AI technology to conduct more in-depth analysis of big data such as activity logs and HR data (see Figure 3). However, Hitachi’s strengths go beyond its possession of such leading-edge technology. Pleased with the survey development, Masaki Takamoto made the following point.

“Given we have such a large workforce, a variety of trends can be observed within Hitachi. Likewise, the diversity of our businesses means we employ people in a wide range of different roles. As the quality and quantity of collected data is important to the development of data-driven HR-tech, I see these as being major advantages for us.”

### How to Generate Value that Will Contribute to Future of Work

There has been strong interest in the solutions developed, with inquiries having already been received from more than 40 companies of different types and across a range of industries. Four proof-of-concept (PoC) projects have already been conducted in partnership with non-Hitachi companies. The likely reason for this strong response is that senior management are waking up to the value provided by data. For example, use an AI to analyze the survey results together with various in-house data found that productivity tended to be low among people who did a lot of overtime toward the end of the week (Fridays). The availability of such specific data makes it possible to come up with realistic measures such as changes to management practices rather than issuing vague instructions along the lines of “try to go home on time.”

The plans for the second phase in FY2018 involve pursuing initiatives with a view to future commercialization, including expanding the range of surveys beyond productivity and placement.



Takamoto said, “We are not thinking about launching an HR consulting business. Rather, we see our work as forming part of the value that Hitachi as a whole can deliver to its customers, our aim being to help create a society that is welcoming to individuals and in which everyone can live vibrant and active lives.”

Data on staff has been described as a treasure trove. As it combines different forms of data to provide a view of people, HR-tech should deliver new discoveries that can in turn be utilized to help create an environment in which staff can work energetically. As a leading player in HR in Japan, the People Analytics Laboratory will continue to scout out new pathways toward increasing the value of Hitachi and other Japanese companies, as well as speeding up the work style reform that is now underway.



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