

## Three-way discussion—Creating innovation



**Kazuaki Hasegawa**  
President and  
Representative Director  
West Japan Railway Company

**Toshihide Kasutani**  
Commissioner  
Japan Patent Office  
(As at June 2021)

**Hiro Nishiguchi**  
CEO  
Japan Innovation Network  
(JIN)

## Creating innovation, with every site and every employee as the starting point

Mr. Toshihide Kasutani, Commissioner of the Japan Patent Office (as at June 2021), Mr. Hiro Nishiguchi, CEO of Japan Innovation Network, and Mr. Kazuaki Hasegawa, President and Representative Director of West Japan Railway Company, exchanged views on how innovation can be created in companies and what issues should be addressed.

### Transforming invention into innovation through insight

**Hasegawa** The major impetus for our innovation efforts was the JR-West Group Technology Vision announced in March 2018. In the process of formulating the JR-West Group's Medium-Term Management Plan, which started that year, we discussed various issues within the company and came to the conclusion that in order to respond to changes in society, we must realize organizational and technological innovation and transform the value we provide. Therefore, we drew up an image of our vision for ourselves in 20 years' time.

The first goal we set forth is, needless to say, pursuing further safety and reliability of transportation in the railway business. The second is providing railway/transportation services that play a role in supporting the creation of appealing areas. This is an approach that aims to improve customer experience and value. And the third is building sustainable railway/transportation systems. This is our image of the transportation system that is needed to realize a sustainable society, and it is also linked to the SDGs (Sustainable Development Goals). In order to achieve these goals, we aim to incorporate not only individual elemental technologies, but also underlying approaches and attitudes that are not part of our conventional DNA.

**Kasutani** Drawing an image of what you want to achieve in

the future is exactly what prototyping is all about, and I think it is very important for companies that are aiming for growth. Amid the current difficulties posed by the coronavirus pandemic, it is very encouraging to hear that a Japanese company is actively investing in innovation for the future.

**Hasegawa** If you want to make a big change, it's not a matter of whether or not you can do it. Rather, it's a matter of drawing up a vision and then backcasting from there to clarify what should be done now and what should be done tomorrow. You can't make a concrete mountaineering plan without first deciding when you're actually going to climb this mountain.

**Nishiguchi** With all industries currently facing difficult times in their core businesses, it is very important to innovate. What's happening in the world is not competition in the core business, but innovation competition. The best defense to protect your core business is to keep innovating; that is, to create new intelligence and implement it in your business. If we want to create the future, we have to acquire the ability to create it ourselves.

**Kasutani** Indeed. The Japan Patent Office (JPO) also issued a Design Management Declaration three years ago. Design management is an agile type of management, in which the needs and wants are identified from the customer's perspective, and numerous designs are created through trial and error at a detailed level. Rather than creating what you don't have

### Toshihide Kasutani

Joined the Ministry of International Trade and Industry (now the Ministry of Economy, Trade and Industry) in 1984. After gaining an MBA at Harvard Business School, he was in charge of trade policy and industrial policy. He served as Director-General of the Multilateral Trade System Department, Director-General of the Electricity and Gas Industry Department, Director-General of the Manufacturing Industries Bureau, Director-General of the Economic and Industrial Policy Bureau, and Assistant Deputy Secretary General of Japan Economic Recovery Secretariat at the Prime Minister's Cabinet Office before being appointed Commissioner of the Japan Patent Office in 2020. He retired from this post in July 2021.



### Hiro Nishiguchi

Joined the Long-Term Credit Bank of Japan, Ltd. in 1986. After working for the World Bank Group and Mercer Japan, he was appointed as an Executive Officer of Innovation Network Corporation of Japan in 2009. In 2013, he established Japan Innovation Network (JIN), and in 2019, he was appointed CEO. He is a Specially Appointed Professor at Sophia University.



by yourself, from scratch, you can use open innovation to gain the cooperation of other entities. We have been advocating the necessity of this kind of thing for companies, and we have also started not only advocating it, but also trying to practice it ourselves and learn design thinking. Originally, the main role of the JPO was to establish rights and protect them, but in the future, we would like to create a system to make good use of the rights that have been established.

**Nishiguchi** In a well-known American report called the "Palmisano Report" published in 2004, innovation is defined as "the intersection of invention and insight, leading to the creation of new value." The key point is insight, and in this respect innovation differs from mere invention.

Innovation must be value creation. In other words, insight turns mere inventions into value creation through business models. Innovation occurs when invention and insight are successfully combined. I think this is also related to the question of what intellectual property is. Generally, when we think of intellectual property, we associate it with invention, but I think the part related to insight is actually very important. For example, I believe that there are great hints for innovation in the points of awareness and understanding, the hidden needs of customers and communities along the railway lines, hopes for the future, and areas of dissatisfaction that can only be understood by JR-West itself.

### The ideal form of an innovation-promoting organization

**Nishiguchi** There are two main patterns of innovation promotion in different countries. One is led by startups. The other is led by existing organizations. Basically, a country that can do both of these things is a strong country and has a strong industry. The startup formula is largely the same in every country and shares a common language, as the Silicon Valley style has spread around the world.

On the other hand, existing companies have not had this kind of common language until now, but with the establishment of the ISO 56002 international standard for Innovation Management Systems (IMS) in 2019, existing companies finally have a common language too. I have been involved for

quite a while in drafting this standard as a representative of Japan, and countries around the world are taking it very seriously. In the case of JR-West, what kind of organizational structure does the company have for promoting innovation?

**Hasegawa** The coronavirus pandemic has dealt a heavy blow to our core business over the last year, including our railway business, and this has heightened the sense of crisis that's compelling us to pursue innovation in earnest, focusing on digital technology, and create value for the post-corona era. As a consequence, we launched a new organization, the Digital Solution Headquarters, in November last year to replace the existing Open Innovation Office and Data Solutions Group. We asked the heads of each department in the company to recommend the most suitable people, and we have created an organization that connects the entire company cross-functionally, including the data analytics team and the Business Design Division.

**Kasutani** By creating a broad structure in the form of the Digital Solution Headquarters, I imagine the goal was also to make the entire group aware of the necessity and importance of innovation?

**Hasegawa** Yes, that's right. We anticipated that there might be some conflicts with existing business units if this Headquarters were to fulfill a cross-functional role, so at the moment I, as the president, am concurrently serving as its head. Every two weeks or so, I meet with the leaders of the Headquarters to ask them about the progress of their work and any problems they are having, and if necessary, I try to act as a "bulldozer" to make their work easier.

**Nishiguchi** By having the president himself lead the new organization as the top executive, you have shown not just the organization, but also the entire company that you mean business. When you said "bulldozer" at the end, is that in the sense of breaking down walls?

**Hasegawa** Yes. In many senses, there are "walls" between departments. For example, the Marketing Department and the various technical departments have their own systems to hold data, but they are all standalone. In such cases, I, as the president, call on them to move forward while eliminating any resistance. I will continue to play the role of "bulldozer" in that sense, more and more.

**Nishiguchi** I agree that it's important for top management to take action and show that they are serious.

## Three-way discussion—Creating innovation

# Creating innovation, with every site and every employee as the starting point

### Each employee should have an awareness of playing a leading role

**Hasegawa** As the head of the Digital Solution Headquarters, the message I have been actively communicating is “trial and error.” Inherently, the railway business is based on the principle of safety first and steady implementation, without failure. A wide variety of people with different jobs perform their assigned roles accurately, and then hand them over to the next person to ensure safe train operation according to the timetable. Therefore, each employee is basically expected to properly perform the duties of their respective role as specified.

However, the way services are provided and the approach to ensuring safety also changes with the times, as do the demands of society and the underlying technology. Is it enough to just continue following the rules and regulations as if they were golden rules? That wouldn’t be enough to keep up with the demands of the times. Especially when it comes to this innovation work, I encourage our personnel, telling them that failure is acceptable, that failure is an important experience for success, and that the more failures you have, the more medals you get, and this leads to results in the end.

**Kasutani** I understand this very well. We at the Patent Office also have certain work to do consistently on a daily basis. If we don’t do this steadily and try new things, we won’t be able to evolve in the right direction. I think it’s really difficult to figure out how to balance what needs to be protected and what needs to be changed.

**Hasegawa** In the Digital Solution Headquarters, rather than withdrawing into our shell and doing things by ourselves, we talk to each department about various things and say, “Let’s work together!” I think our role is to lead the way. This message is gradually being conveyed to the existing business units too, and when they realize that if they do this, the value of their own department will also be enhanced, or their work will become easier, they become more actively involved. Also,

our Headquarters has a lot of contacts with external businesses, which is also a great source of inspiration for our members. I feel that open innovation enhances our organizational capability, not only in terms of technological achievements, but also in terms of developing the human resources involved.

**Nishiguchi** Many people think of open innovation as the exchange of technical information, but in fact, really strong open innovation is achieved when the management systems of the respective companies are connected to each other.

**Hasegawa** What’s difficult is that the more you know about your work, the more conservative you tend to be about changing it because you know too much. I think it’s important to draw out from these people the desire to change and the need to change, and to let them exercise their skills and lead the organization in order to promote change within a limited time frame.

**Kasutani** There are many things we also have to do in our work in accordance with the set rules, and we can’t just willfully change those rules. However, if you think about it, there can be a more rational way of doing things, and that can be done by changing the rules. I think it’s about shaking up that situation and creating the realization that we need to improve the way we have been doing things.

**Hasegawa** We often use the term “think-and-act” in our company. It’s about thinking for yourself and acting by yourself. Of course it means fully understanding what the rules are. And why such rules exist. And also whether the rules can be adapted to the current situation. In this way, we encourage all of our employees to think for themselves and act accordingly.

We have a system in place to ensure that if there are any operation-related laws or regulations that the front-line personnel feel should be changed company-wide, their voices will ultimately be heard by the head office. As a result, in recent years we have made various revisions every year based on the opinions of our front-line employees.

**Kasutani** It’s hard for employees to come up with suggestions unless they have a sense of trust in the management and the organization. If you say something to top management and get no response at all, people will stop saying anything. Even if a proposal is not accepted, I think it is very important to properly explain why it cannot be done.

**Hasegawa** That’s exactly right. I also believe that feedback is vital. It’s absolutely necessary to create a system within the organization to change things that can be changed in response to suggestions for improvement, and if they cannot be changed, to properly respond about why they cannot be changed. Whether it is a matter of safety or a service, the starting point is the front line, and in recent years we have been putting considerable effort into taking on board what our front-line personnel have noticed or consider to be a problem, and then giving them proper feedback.

### Achieving sustainable growth in the future

**Kasutani** After the collapse of Lehman Brothers more than a decade ago, R&D spending at companies around the world dropped precipitously. However, while Europe, the US, and China recovered to their original levels around one to three years later, it took Japan about five years to recover. In my opinion, the slump during this period, in other words, the failure to invest in the future, has led to the current decline in Japan’s ability to innovate. As I said at the beginning, I think it is very important to take a management decision, in the way that JR-West has, to look to the future and do what needs to be done, even in these times of economic difficulty resulting from the pandemic.

**Hasegawa** The railway industry is in a tough situation, but I believe that we must do what is necessary, even if it means gritting our teeth, to ensure sustainable growth in the future.

**Nishiguchi** When it comes to sustainability, the SDGs are now the basic global consensus. How do the SDGs relate to the innovation efforts being made by JR-West?

**Hasegawa** There are many aspects to the SDGs, but the most relevant theme for our Group is “coexistence with local communities.” We believe that providing a variety of lifestyle services with a focus on local transportation will lead to the sustainable development of communities and also to the development of our operations.

Another area is “environment.” Railways have always been a means of transportation with low CO<sub>2</sub> emissions, provided they are used a lot, and recently we have been working to achieve our Zero Carbon 2050 target.

**Nishiguchi** What are your future plans for innovation?

**Hasegawa** I believe we need to firmly embed the idea of innovation within the company. The Digital Solution Headquarters is leading the way in this direction, but I believe that this is a theme that will ultimately be addressed by all departments of the Group. We also plan to firmly incorporate the concept of Innovation Management Systems (IMS). When I re-read the guidelines in the IMS, I found that they clearly indicate very important points such as having a clear vision, commitment by top management, and the process of realizing innovation.

**Nishiguchi** Fifty-nine countries spent six years creating the standard, so I am proud to say that it has become something worthwhile. The point of IMS is that it can be applied to both existing business units and innovation-related areas. I hope you can make good use of it.

**Kasutani** What today’s talk reaffirmed for me was the importance of sharing objectives and goals. This allows you to expand your connections not only within your own organization, but also with other organizations. The other point is the role of top management. It was clear to me that we need to review what needs to be reviewed in order to achieve our shared objectives, but that strong support from



top management is important for this.

The Ministry of Economy, Trade and Industry as a whole is moving toward a mission-oriented approach to solving socioeconomic issues in its future industrial policy. In order to create innovation, we should take on challenges quickly and without fear of failure. There are some aspects that are difficult to implement in a public institution, but I am trying to learn as I gain experience.

**Nishiguchi** The term “ambidextrous management” has become popular, but what it really means is that not only the innovation-related departments but also the existing business units should engage in “knowledge exploration” and “knowledge evolution.” In other words, everyone should work together to create new products, new businesses, and new customer experiences. At JIN, we call this “double-decker bus management.” The lower deck is occupied by the president and management team who are in charge of driving and know what needs to be done, while the upper deck is occupied by people who are exploring new things, so that management exploration and execution can be performed simultaneously.

**Hasegawa** We also believe that each and every one of our employees plays a leading role in promoting innovation. The seeds of change can be found in our daily work, on the front lines where we greet our customers with a smile and tighten every single screw. Every piece of data obtained in the field is a valuable seed for innovation that can generate new value. I want to create a corporate culture in which not just those in a specific department, but each and every person on the front line feels that they are playing a leading role. I would like the entire organization to innovate and achieve our vision for the future.

Thank you very much for taking part in today’s discussion.

