Technotalk

Exploring the Best Solutions for Realizing Social Innovation in Our Rapidly Changing World and Business Environment

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As globalization and borderless society advance, Hitachi sees its Social Innovation Business as becoming the centerpiece of its global business, where it can demonstrate the power of "One Hitachi." Gathering its strengths in manufacturing, IT capabilities, broad expertise and extensive knowledge base, and with all its high-quality products and services, Hitachi is striving to create advanced social infrastructure that is powered by IT to meet the changing needs of communities worldwide. We have brought together some key people in Hitachi who are leading the synergistic convergence of IT and infrastructure to discuss current issues, perspectives, and opportunities for the future.

Demand for Using Information to Solve Social Problems and Seize Business Opportunities

Saito: The world has many problems such as the concentration of population in large cities, aging societies, low birth rates, as well as energy and environmental issues. There are many areas where we can utilize information technology (IT) systems for social innovation. For Hitachi, social innovation is a key component of our growth strategy for global business. Along with consulting work, this requires new IT systems that use large amounts of real-world data. In such circumstances, Hitachi Consulting Corporation and Hitachi Data Systems Corporation will become major players in the Social Innovation Business of Hitachi.

Parr: This is clearly a very exciting opportunity for Hitachi and Hitachi Consulting in the marketplace. We are now really moving quickly into this area of social innovation. At the center of this new strategy is Hitachi technology and unique products that focus on solving major societal issues and problems. We are creating unique value proposition for our customers.

Domme: Health and life sciences is a great example right now because there is political interest and need for cost reductions and innovation.

We have a lot of capability to cut costs and make things more efficient in healthcare by systematizing or automating monitoring and analytics. Instead of always going to a doctor, you can determine a lot of things through a blood test for example.

As a first step, we are working to bring all of our

clients' data together. Right now, in any country, a lot of medical data is spread out with different hospitals and different doctors. It might also be spread over many years and might be in many different formats. So if you want to analyze all the data, you have to get that data first.

Sometimes, data is very old. Sometimes the devices that created the data cannot even read it anymore. So we start by getting all that data into a format that can be analyzed for making better decisions and to create better outcomes for patients.

Parr: In the analytics area, one of the business problems our clients have is the volume of structured and unstructured data they are accumulating. They are often not sure what to do with it or how to get useful business information out of it.

Domme: There is so much data in the world now. Our best customers are saying "Help us use that data better. Help us use it with transportation systems. Help us run trains more efficiently. Help us to manage cars and traffic more efficiently." Every customer is looking to Hitachi to create successful business outcomes, to help them have a competitive advantage. It is also about creating a better life for people.

I think that is where Hitachi really stands out. We have the capability to bring so many facets of technology and social innovation together to create innovative solutions, not just for our customers but also for society as a whole, and on a global scale. By combining IT with infrastructure, we can provide the software, services and consulting to develop new technology for social benefit. Saito: In the past, new services and new solutions required considerable capital investment, but now we can

establish them by using data. Using data, we can make better and more timely decisions in the field. Effective data management is essential for understanding the flow of money, the flow of the people, and the flow of things. By analyzing, visualizing, and modeling data, we can make a highly efficient and safe society and create highly efficient business models. Hitachi Data Systems is now in an excellent position as you have substantial experience in the storage business and many corporate customers globally. You are in a position to expand your business, and your experience and input can help Hitachi's Information & Telecommunication Systems Company develop and deliver new solutions.

Domme: In the surveillance area, there are now some great facial and pattern recognition capabilities to discover someone who is not doing good things who is caught on camera. Then we want to find out immediately, using analytics and search combination technologies, where else that person has been. If we can correlate all this data to provide actionable information, we would have a much safer world.

In the next five years, there may be a video chip on almost everything we come in contact with. It is creating so much data. A large supermarket chain would like to know customers' reactions to a display item in a store. An online payment system would like to know customers' reactions to teller machines, where people are accessing their bank information. You can start to see the application of just one stream of data called video, which is going to take over the world in the next five years. Parr: Gartner is predicting that by 2020 there will be 50 billion devices attached to the Internet. That is just six years from now. IT has always been important in business infrastructure, but it is been nothing like we are starting to see today. And the speed is just going to accelerate. We are all going to have to stay in front of it. Domme: Our current competitors are moving fast, and

we will have new competitors as well.

We have just seen an Internet company that is now producing a smart car with all the software and intelligence to drive itself. They have also just bought a company that controls the devices in people's home. An online retailer is planning to create drones to fly products individually to people's doorsteps. They are talking about putting video systems on drones for surveillance or for security systems flying over people's homes. They know how to get to the market fast and invest heavily in those kinds of things. The marketplace is going to change dramatically, and there are going to be some really strong players.

Our biggest challenges and opportunities are to desilo ourselves and look for integrated solutions that are provocative and innovative before customers ask for them.

The Changing Landscape of Consulting and the Role of Information Technology

Saito: Companies from various business backgrounds are utilizing IT to create new services, not only IT vendors.

Our competitors in this new era will be companies that know infrastructure very well and have electrical and mechanical technologies as well as other expertise in that field. Using information technology, they will create solutions that correspond to our Social Innovation Business. Previously, Hitachi Consulting was mainly providing consulting services for corporate IT systems, such as enterprise resource planning (ERP) or IT strategy, but now you are also involved in consulting for the social infrastructure field.

Parr: The focus of the consulting business is shifting. 10 years ago, it was all about offshoring your IT capability to lower delivery costs. It is not just that anymore. It is all consulting services, completely, across the board.



Yutaka Saito

Executive Vice President and Executive Officer, President & CEO of Information & Telecommunication Systems Group and Information & Telecommunication Systems Company, Hitachi, Ltd.

Joined Hitachi, Ltd. in 1979 and was appointed General Manager of Information & Control Systems Division, Information & Telecommunication Systems Group in 2006, Chief Strategy Officer, Chief Technology Officer and General Manager of Strategy Planning & Development Office, Information & Telecommunication Systems Group, President & CEO of Information & Control Systems Company in 2009, Vice President and Executive Officer in 2010, Senior Vice President and Executive Officer, President & CEO of Infrastructure Systems Group and Infrastructure Systems Company in 2012, and Senior Vice President and Executive Officer, President & CEO of Information & Telecommunication Systems Company. Information & Telecommunication Systems Group in 2013. He was appointed to his current position in 2014.

All the business process, the information technology, knowledge processes, industry vertical expertise, all your analytical capabilities are being outsourced now.

Now clients want services that support full sets of business processes, the functionality, the software, and the infrastructure underneath. They are starting to think of business process solutions as a service. I think that we can package client offerings like that to serve demand. **Domme:** It is our expertise in some of those areas that computer companies may not have. They do not build proton beam therapy products. They do not build magnetic resonance imaging (MRI) machines.

Our vertical expertise over the years allows us to create analytics that help extract useful information from all that data, make some decisions, and create some helpful business outcomes from that data. I think that is a major advantage that Hitachi has.

Parr: We are really starting to tailor our consulting services around Hitachi products and services and identifying new opportunities for Social Innovation Business solutions. We have established a global footprint and the capability to support and deliver solutions that are integrated with Hitachi. We have 4,500 people worldwide, and large scale customers in over 50 countries. We are working with other Hitachi Group companies to develop business solutions. There are all kinds of components involved in that. One of the groups that Hitachi has established is called Hitachi Global Center for Innovative Analytics, and Hitachi Data Systems and Hitachi Consulting are working together with others in the center. It is kind of a place to incubate ideas and come up with solutions for our clients that are re-usable.

With the Cloud, the Future Becomes More Borderless and Limitless

Saito: These days, business and social life are

systematized. There are smart devices everywhere, connecting people as well as machines in systems over networks, the Internet, and more. Japanese manufacturing companies have achieved high-quality manufacturing through improvement activities (such as just-in-time manufacturing) in their factories. In our modern era in which people and systems work together, I believe there is a need to develop an extensive knowledge of the workplace and to utilize the know-how of the people who work there so that this knowledge can be utilized to further improve the systems. The just-in-time system is one example of this, and it is the companies that can provide these systems that will grow. There is a demand for such systems from companies and other parts of society, and Hitachi has the practical experience, know-how, expertise, and technology for social infrastructure that can meet this demand. **Domme:** The cloud is changing business environment. In many respects, the ability to reach a lot of customers globally is something that we can take huge advantage of.

The biggest, the fastest growing banks in the world are basically virtual banks. They do everything over the Internet and through a transaction on a computer or mobile device.

In our construction machinery business, it is no longer just a matter of selling the large tractors and backhoes. Now it is about selling the entire solution. Hitachi developed a system for a trucking company where all the equipment information is captured dynamically, automatically. They can just log in and know the efficiency of their trucks, their maintenance schedules, everything. It is all in the cloud.

The cloud will reach every home. Will people in emerging markets ever buy a disk drive or have a computer in their home? Or will every picture they take be stored somewhere in the cloud? That is a big opportunity for us. We can store their information,



Jack Domme

Chief Executive Officer of Hitachi Data Systems Corporation and Chief Operating Officer of Platform Business of Information & Telecommunication Systems Company, Hitachi, Ltd.

Jack Domme was named CEO of Hitachi Data Systems in April 2009 after serving two years as the company's chief operating officer. He was also named a corporate officer of Hitachi, Ltd. in 2013 and COO of Platform Business of Information & Telecommunication Systems Company. Hitachi, Ltd. in 2014.



Philip R. Parr

President and Chief Executive Officer Hitachi Consulting Corporation

Philip Parr joined Hitachi Consulting in July, 2002 and was named CEO of Hitachi Consulting Corporation in April 2009 after serving three years as the company's U.S. Chief Operating Officer.

whether it is in the health and sciences field or it is personal information and so forth. We can now reach many more consumers based on the changing dynamics of the cloud market. Cloud services are going to enable us to deliver even more on a global scale.

Saito: The cloud provides a platform for developing and delivering new services, such as asset management and the operation and maintenance of social infrastructure equipment. This has the potential to further differentiate our company.

Using big data, mobile systems, and cloud computing, customers now want us to provide new systems that are more efficient.

In Japanese, we say to reduce "muri muda mura," the three M's. In English, this means reducing overburdening, waste, and inconsistency. We achieve optimization and rationalization using control technology. Customers are demanding that kind of system, and that fits with Hitachi's mission.

Parr: I think that we are really at the front end for bringing the Hitachi products and services together in integrated solutions. Infrastructure is in every part of our daily lives, whether it is traffic control systems or home energy consumption monitoring.

Learning Locally and Providing Solutions to Customers Globally

Saito: We not only own IT, we also ourselves develop IT products, systems, solutions, and services. That is our strength. Now we are combining IT and social infrastructure to provide comfortable and convenient systems. This is what society and businesses expect. We want to use IT to provide easy-to-use social infrastructure to all people, including both the general public and our customers, end users, and employees. Domme: Hitachi is known for quality products. We are also known for having a culture of respect. People like to deal with Hitachi. There are so many advantages. Our opportunities are so vast and so numerous and potentially one of our dilemmas is "what do we do first?" Parr: Customers are really looking for global support from their partners for their businesses beyond IT. They are looking for specific business solutions, and are becoming increasingly interested in a single service provider for these needs.

As we speak with our clients about consulting services we offer, we are now introducing the rest of Hitachi's global products & capabilities, which is creating market interest and really changing the conversation in a way our major competitors cannot have.

Domme: Customers who have a global presence are

looking for a global partner and a long-term partnership. They are looking for a company that is been here for a long time and is going to be around for a long time, like Hitachi. Our customers tell us, "We love your technology, but we really love your culture. We love your people. We love your ideas. You are a sustainable company. You are a 100-year-old company, and you are reinventing yourselves to make sure you will be here for the next 100 years."

Our customers respect Hitachi, but they do not know how to take advantage of everything that Hitachi has developed to help them become better organizations and gain a better competitive stance in their markets. We have got to find solutions that are really going to change the world. Hitachi has brilliant technology for water treatment. How do we get that into every country? How do we get our trains into every country? That is our advantage and our opportunity.

Saito: That is why when we go into emerging countries, we need to become insiders there. Of course, a global viewpoint is necessary, but we should energize industry in those countries and contribute to their development. We should build manufacturing bases and hire people there. That is our policy. That enables us to have many friends all over the world.

Domme: When we do that, we get different perspectives. Sometimes the emerging countries are more advanced in thinking about new things. They are able to learn lessons from what others have gone through already.

In communications, they went directly to cell phones, skipping over the whole wired communication phase. By working with them, we learned how to develop high bandwidth over wireless.

In transportation as well, local people can actually give us a different set of requirements in the way they want to grow. I think that is very beneficial to Hitachi. Saito: That is "reverse innovation."

Parr: Yes, that is a great term for it. And if we do things right, social innovation has high growth opportunities. As we are moving into the future, we are looking at converging or consulting services with Hitachi and really tailor our solutions around Hitachi's products and services.

Saito: We have people in many areas of specialization, including research and development. We have a wide range of technologies and a wide range of experience and expertise. That is another kind of differentiation from other companies. We need to get these people together to collaborate and work around the same table, looking at real information and real data. We are committed to developing new solutions and new services that fit the needs of society.