**Summary Translation of Question & Answer Session at
Fiscal 2021 R&D Strategy Briefing for Media and Investors (Japan Session)**

Date: October 12, 2021
Location: Live-streamed from Fujitsu Headquarters, Tokyo
Presenter: Vivek Mahajan, SEVP, CTO
Q&A Support: Hirotaka Hara, EVP, Head of Fujitsu Research
    Hideto Okada, Head of Technology Strategy Unit
Participants: 101 Japan-based participants via Zoom (42 reporters, 9 analysts, and 50 investors)

Questioner A

Q1: To strengthen your global R&D organization, you said you would establish new locations in Israel and India, but please tell us the roles and organization (the roles people would play and how many would be employed) in the new locations. In addition, please tell us the reason why you chose those two countries.

A1: For many years, Fujitsu has positioned research as an activity to be conducted globally, not just in Japan. We have research locations in North America, Europe, and China, but as I mentioned earlier regarding our strategy, with the acceleration of digitization, we think software will become even more important than it is now. When we think about where talented software engineers are, we decided to establish locations in India and Israel. We will pursue R&D in close collaboration with local universities there, and those locations will also work together with our research labs in Japan, North America, and Europe, working as one global organization. All locations will be reporting to Hirotaka Hara, EVP, Fujitsu Research. Regarding such issues as the number of people, we are in the midst of considering various options, but we are thinking of about 50-60 people in India and about 10-20 people in Israel. We are thinking of hiring people who can conduct high-caliber research in AI, quantum computing, and security. Looking at the fields of AI, quantum computing, and security, Fujitsu lacks a presence in India and Israel, so I would like Fujitsu's R&D to benefit from the excellent local resources in those countries, and we are forming an organization to strengthen Fujitsu's global R&D.

Q2: Am I correct in understanding that you have not yet established these locations, that you will now create them?

A2: We have already started and we are making preparations. We cannot yet make any big announcements, but we are making steady progress.

Questioner B

Q1: From the perspective of being familiar with IBM, Oracle, and the overall competitive landscape, how are you viewing what is necessary for the transformation Fujitsu is undertaking? Can you compete around the world as Fujitsu is now, or is it necessary to have a major transformation that would change the shape of the company?

A1: You may have heard that, starting today, we are holding Fujitsu ActivateNow, which has a variety of sessions, and we announced Fujitsu Uvance, Fujitsu's new brand that aims for the realization of a sustainable world. In simple terms, Fujitsu Uvance is a portfolio of offerings

through which Fujitsu supports the digital world. Fujitsu is always continuing to advance toward CEO Tokita's vision of a major transformation. Globally, in addition to IBM and Oracle, as well as Amazon, Microsoft, and Google, there are a variety of startup companies in the industry, and technology is changing on a daily basis. In the five technology domains I mentioned, where we have top-class technologies, we are aligned with our DX strategy, and by providing comprehensive solutions to our customers, we can contribute to society as well as to Fujitsu's revenue and profitability.

Questioner C

Q1: Amid talk about how it is difficult to explain causal relationships in AI technology, Fujitsu is providing explainable AI. In easy-to-understand terms, could you explain the challenges of this technology and how you resolved them?

A1 (Hara): Even if the causal relationship is known, it is said that AI is at its weakest when you need to understand the causal relationship between different elements. In the field of genomic medicine, it is said that it is extremely difficult to identify the relationship between gene mutations and disease indications. We used a technology called Deep Tensor, and we were able to efficiently search the massive literature on gene networks at extremely high speeds. Through the course of that, we discovered technology for understanding the causal relationships between gene mutations and diseases indications. We convinced the doctors of the validity of the results, and that alone can open up new possibilities. There is also a technology called Wide Learning. On the relationship between advertising and results, by searching through an extremely massive amount of data, we were able to discover the relationship and causal links between the two. In the end, humans will make the evaluations, but our understanding is that, based on actual use in the field of marketing, it is extremely effective. I talked about just two examples, but there are many more.

Q2: What is your understanding of the current competitive position?

A2 (Hara): Other companies are working on "Explainable AI", and I think there are various examples using images, but for technologies that can explain using graph-structured knowledge bases, we are confident that our technology, given its track record, including cases involving the human genome, is world-class.

Q3: In your five technology domains, over the medium term, to what extent do you think you will grow your business? If you have any specific revenue figures in mind, please let us know.

A3: Fujitsu publicly discloses its figures, and I would like to direct your attention to our financial results announcements. One thing I can say, however, is that there is, without question, growth. For example, in computing, HPCs and supercomputers are often used, but we are thinking that, on a global level, HPCs and supercomputers could be made available to use as a regular computer in the form of a service. If that happens, the narrow fields in which a limited number of people were able to use them will suddenly become much wider. Moreover, using quantum technology, in addition to the Digital Annealer we are working to release the world's top quantum simulator, and with that, along with the digitization field, I think we can set our sights on the global market. The virtualization of Beyond 5G is also accelerating, and here, in addition

to the communication circuits of major telecom carriers, I think we can significantly grow our business in the area of private 5G. Within this, we anticipate that solutions in the AI and security domain will naturally see growth.

Questioner D

Q1: *In the past, I doubt anyone from IBM would ever consider becoming the Head of Fujitsu's technology, but now as Fujitsu's CTO, what are your aspirations, and for what do you have high expectations?*

A1: In the past, Fujitsu sometimes competed with IBM, but the past is the past. It is important to compete, but these days it is often the case that, while competing, you can also form partnerships. From now on, Fujitsu and other companies will compete with a variety of companies, but they can also become partners. Over the past three months I have examined a variety of Fujitsu's technologies, but I think we are competitive in terms of the technologies included in the five domains I mentioned. Fujitsu is conducting research globally, and has long developed top-level technologies, so my major mission is to maximize the usefulness of these technologies in business and in resolving societal issues, and so I want to move forward with a sense of urgency. This is perfectly aligned with the world of digitalization and the transformation of Fujitsu that CEO Tokita is leading. Fujitsu is conducting business globally, and Fujitsu's locations in Europe and Oceania have very solid foundations. As we expand in the future, I think my role has three aspects to it: close the gap between technology and business; globalize our operations; and aim to work with speed.

Questioner E

Q1: *You expressed that Fujitsu's technology has been considered outstanding, so what are your thoughts on what sorts of issues you are facing or where you need to improve in commercializing this technology or its use in your business? As someone coming in from outside the company, could you tell us whether there is room for improvement in the commercialization process for Fujitsu's technology?*

A1: In terms of commercialization, Fujitsu's FX1000 and FX700, for example, use the same processors as the supercomputer Fugaku. Digitalization is a major business opportunity for Fujitsu around the world, so computing power is becoming extremely important in a variety of business areas, such as finance, healthcare, drug discovery, defense, and manufacturing, even in Japan. It's often not realistic for individual companies to introduce supercomputer or HPC, so by offering HPC in the public cloud, we will contribute to business. In addition, we are working company-wide to accelerate digitalization, as announced with Fujitsu Uvance, in areas such as Trusted Society, Healthy Living, Sustainable Manufacturing, and Consumer Experience. All of these are supported by our technology. To give another example from Network Products, 5G systems consist of radio units (RUs), centralized units (CUs), and distributed units (DUs), among others, and Fujitsu already has a proven track record with RUs, which have been well received. We are aiming to improve our network business by virtualizing them as part of a vRAN or O-RAN system, and further incorporating AI and security technologies. Moreover, by building a platform that incorporates technologies into solutions for the Sustainable Manufacturing and Consumer Experience areas I mentioned earlier, we can provide complete, total, end-to-end solutions as services, not just in Japan, but to customers around the world. As a result, I think

that we will be able to contribute significantly to both Fujitsu's revenue and profitability going forward.

Q2: I think we need to consider the current state of Fujitsu's competitive strength and positioning in the field of quantum computing – and not just Fujitsu, but the country as a whole. As we are beginning to see forecasts for the use of high performance computing in the US and China, could you please tell us about the medium-to-long-term roadmap for Fujitsu's high performance computing for the next five to ten years, including your thoughts on topics such as whether Fujitsu should work together with other companies to move forward, instead of by itself.

A2: As you know, quantum computing is an extremely important field, and I believe it is the technology that will build the next era of the computing industry. Fujitsu is working extensively on quantum, and I will explain a number of points. First, there are various types of quantum computing, such as gate-based models, and we are conducting research with RIKEN on gate-based quantum hardware. We think it will still be some time before we achieve gate-based hardware that can be used by ordinary companies on a daily basis. We do not yet know where the technology that will create a breakthrough will come from, but it may come from Fujitsu.

One approach Fujitsu is already using for optimization is the Digital Annealer. Digital Annealer technology is being used in an initiative to address the issue of space debris. Another approach is quantum simulators, which are as close as possible to quantum computers–we are aiming for the world's highest speed with quantum simulators, using similar processors to those in Fugaku and our high performance computers. We plan to launch a 36 bit quantum simulator in the future. With all of these, the Digital Annealer, the quantum simulator, the gate-based quantum hardware, as well as the associated software, hardware, algorithms, optimization, and overall applications, we are working with a variety of partners to move ahead. Fortunately, there are a number of quantum-related startups in Japan as well, and we are working on a variety of projects with those companies as a partner. Thinking about the future of computing, we can view quantum, HPC, and supercomputing under the broad label of computing, and Fujitsu would like to provide them all in the form of computing as a service. From the end-user's perspective, they only want the optimal answer for their problem, so whether the calculation is handled using quantum, or whether HPC is best, does not matter to the end user. We can come and offer to end users services and technologies that make it easy for them to access this technology though an "as a service" model.

Questioner F
Q1: You have said that global expansion is your mission, but what is Fujitsu as it is now missing in terms of global business?

A1: Fujitsu already does a fair amount of business in Oceania, Asia, and Europe, and we are conducting a number of businesses in North America as well, such as Network Products. There are, however, many more business opportunities available around the globe, and we should work to strengthen these further. To achieve that, one approach is to conduct more direct operations around the globe. Then there is providing technology with an awareness of the global context. It is said that Fujitsu is the number one company in Japan, but we think that if more customers

were made aware of Fujitsu's technologies and capabilities at the global level as well, we would be able to create an even better business.

Questioner G
Q1: You spoke about planning to speed up your approach to creating businesses, including for five specific technologies. There are a number of methods available in the world in relation to this, such as DevOps and Agile, but do you have a strategy unique to Fujitsu for planning to speed up the transition from technology to business?

A1: As you know, we cannot make a business with just technology, and while we still have businesses selling hardware and software on our own, we do not think of that as a strategy, so we will be expanding and bolstering our solutions business. I think this is the key point in resolving our customers' operational issues, and we have our technology prepared to address this. Recently, Fujitsu announced its new brand Fujitsu Uvance, so unifying operations and technology is the biggest opportunity right now, and the same is true for the solutions both we and our customers need. Our customers also want to buy solutions that resolve the issues they are facing now, rather than just buying massive amounts of servers and network hardware and thinking about how to use it, so offering things as a service is becoming important. The reason we are intentionally not mentioning the cloud, is because we are confident that "as a service" will become common sense for enterprise companies. In that sense, because the environment within and external to Fujitsu, has become ready for this, we will need to work even harder both inside and outside the company, but I think we are advancing in the right direction.