



From DX to J.A.R.V.I.S.

Tomoyoshi SATO

Executive Vice President

My first encounter with digital technology goes back to my student days when I was using the boundary element method to analyze the fracture mechanism of steel bars. At that time computers ran FORTRAN programs and data were read into the machine using punch cards with perforated holes representing the data. Entering data was an arduous task because it required an enormous number of cards. It was really a nightmare if I happened to drop the cards while carrying them because it was hard to rearrange them back into the correct order.

Nonetheless, one thing that I felt in those days was that computers could do anything and that nothing was impossible if data were converted into information. Today even mobile phones have vastly more computing power than computers did at that time. I feel that an era when anything is possible is approaching.

Nowadays when I envision the future and hear the expression digital transformation (DX), I imagine the Just A Rather Very Intelligent System (J.A.R.V.I.S.) from Iron Man from the well-known Avengers movies. In response to requests from the protagonist, Tony Stark, this software program promptly calls up knowledge from around the world, analyzes it immediately and presents it as his own proposal. It sometimes makes Tony a cup of coffee to get in the mood and is scolded by him on the other hand if it tastes bad. All of our actions are governed by information. Computers are continually evolving with nothing being impossible for them in the world of information. I feel that the J.A.R.V.I.S. world is not so far off. Just as an aside, in the end though J.A.R.V.I.S. will take on a human-like form.

There are three major activities that I want to undertake now in aiming for that type of DX form.

The first one is to link digitization, which is changing the present, to digitalization that will create the future. If the relationships and continuity of data can be seen, it will lead to signs and predictions and the discovery of new wisdom. If digital twins can be achieved through the correlation of 3D data with physical realities, it may enable the discovery of new value. It is vital to continually review conventional wisdom and routine operations, enhance efficiency dramatically and also find new value and new wisdom.

The second one is to create our own technologies. Our very strengths at JATCO lie in the concept of three actualities, i.e., the actual place, the actual object and the actual condition. We are the only ones who can create new wisdom and value based on these three actualities. I believe that is precisely the source of our competitiveness and it leads to value that is also valid outside the company. For example, in the case of robotic process automation (RPA), we already have over 100 robots at work, all of which have been manufactured in-house. All of them are continuing to produce new wisdom and value. I think they are capable of creating even higher value for the very reason that we made them ourselves focusing on our own realities.

The third one is to develop the people and systems for supporting the first two activities. This fiscal year we organized a Promotion Digital Innovation Department. However, its members serve as assistants behind the scenes. The true principal actors are the divisions and departments responsible for the actual workplaces, actual objects and actual conditions. The members of this new department have large roles to play in supporting the DX of every division and department, in making clear the tools to be unified internally, in assisting the implementation of new digital technologies and in planning measures for improving the DX levels of the employees. Although few in number, this team is responsible for leading the entire company as they outline our DX form for the future.

Under the leadership of the Promotion Digital Innovation Department, I want to promote digitalization on our own as much as possible through these three activities and discover new wisdom and value befitting JATCO.

Everyone is well aware that the automotive industry is currently undergoing a profound transformation that occurs once in 100 years. At JATCO, we see this transformation as an excellent opportunity to provide new wisdom and value to our customers. This will involve the challenge of making ourselves more thoroughly familiar not only with mechatronics but also with electronics and pursuing digitalization of our products and services. As I mentioned earlier, by linking reality to information as is done by J.A.R.V.I.S., we will continue to provide our customers with JATCO's newly created value. This is what I want for our products that we put on the market. In the process of envisioning and dreaming of the kind of future described here, I would like to direct JATCO's digital transformation as we move forward.