

**Signed Partnership Agreements with Outstanding Para-athletes for Sports Prostheses**  
**- A Project of Collaboration for People with Walking difficulties -**

Mitsubishi Chemical Holdings Corporation  
 The KAITEKI Institute, Inc.

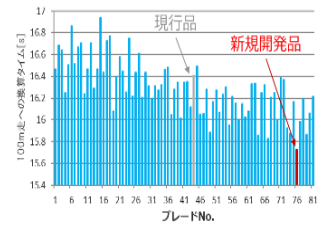
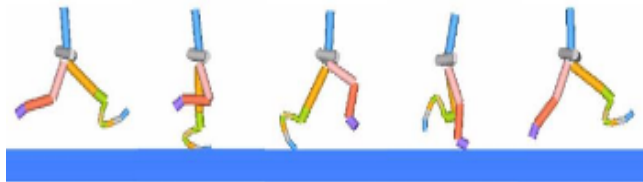
The KAITEKI Institute, Inc. (TKI; Head office: Chiyoda-ku, Tokyo; President: Hideki Murayama), the think tank of the Mitsubishi Chemical Holdings Corporation Group (MCHC; Head office: Chiyoda-ku, Tokyo; President: Jean-Marc Gilson) has signed partnership agreements regarding further development of prostheses and technologies with Atsushi Yamamoto and Kaede Maegawa (both affiliated to Shin Nihon Jusetsu) who, fitted with sport prostheses, has exhibited superb performance in track and field.

Aspired by a belief in “dispelling a notion of disability”, TKI founded Team KAITEKI\*<sup>1</sup> in 2016 and has created the optimization technology\*<sup>2</sup> which enables personalized design for every athlete, working together with, among others, National Institute of Advanced Industrial Science and Technology (AIST) and The University of Tokyo\*<sup>3</sup>. The project has produced satisfactory results in function optimization using digital technologies. With the partnerships with Mr. Yamamoto and Ms. Maegawa, the two exceptional Para-athletes in Japan, we will explore advancement in prostheses and technologies which accommodate “feelings” of a user.

“Well-being of people” (KAITEKI of human beings) is one of the domains of growth in “KAITEKI Vision 30,” the medium to long term basic management strategy of the MCHC group, providing solutions to social issues towards 2030. We desire our technologies and knowledge acquired through collaboration with the world-class Para-athletes will benefit people with walking difficulties from advanced tools and services provided. In a super-aging society, walking is an element of great value to maintain and improve quality of life. Through this project, MCHC and TKI will contribute to a society which brings us healthy and vibrant lives.



A photo of athletes Mr. Yamamoto and Ms. Maegawa



## Optimization for prosthetic blade function using digital technology

\*1: KAITEKI is “the sustainable well-being of people, society and our planet Earth.” KAITEKI is an original concept of the MCHC Group that proposes a way forward in the sustainable development of society and the planet, in addition to serving as a guide for solving environmental and social issues.

\*2: Optimization of a tool involves a careful consideration to movements made by a user unconsciously trying to adjust, depending on the performance of the tool. Especially in terms of sport prostheses, movements of a leg which is not fitted with a prosthesis (a healthy leg) has a great importance. We have created “Digital Athlete,” a model to simulate an athlete and to repeat a virtual run. It enables, without physically tiring nor risking an athlete, optimized calculations which will maximize personal performance.

\*3: [TKI paper: “Personalization of blade prosthesis for sports – what are the legacies created through experience in para sports? –”](#)

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