



# A world of wonder

## "K computer" Development Team

Contributing to industrial  
development with the world's  
most powerful supercomputer

### Episode. 03

## "Enthusiastically taking on the challenge of the unknown"

Fujitsu began developing an unprecedented supercomputer in the mid-2000s, under the leadership of RIKEN, a national research and development agency in Japan. The codename used in Fujitsu's internal review meetings was "Strong Coffee." True to its name, which refers to the first cup of coffee in the morning, the project awakened a passion within the development team who dared to make the impossible possible.

In March 2011, as development reached its peak, Japan was struck by an unprecedented earthquake. The TOP500 ranking, which ranks the performance of the world's supercomputers, was scheduled for June of that year. Despite the tight deadline caused by the earthquake's impact, the president of a major component factory in the disaster-stricken Tohoku region responded with an uncompromising spirit: "If we can become the world's best in this situation, it will be a stepping stone toward recovery."

After overcoming these challenges in June 2011, the K computer was born, achieving the goal of over 8 petaflops and finally securing the top spot in the world. Furthermore, in November of the same year, it achieved its development performance target of exceeding 10 petaflops. The K computer continued to support society in diverse fields, including drug discovery and disaster prevention, until it ceased operations in 2019.

"At the core of Fujitsu lies the DNA of taking on the challenge of the unknown with a sense of excitement." Even now, and into the future, Fujitsu is committed to forging new paths into the unknown.

## The essentials of taking on challenges from the "K computer" Development Team

### Point 1: Questioning the status quo

In developing the innovative CPU of K computer, the team valued the freedom to generate new ideas, unbound by preconceptions. This led to reductions in power consumption and improvements in performance through a completely new approach.

### Point 2: Building Support

To ensure the project's success, the team leveraged all available networks to gradually increase the number of supporters. They invited executives to the factory to see the product firsthand and make their case, and they also visited factories in Japan and abroad and devoted themselves to sharing their vision of becoming the best in the world.

### Point 3: Exceeding limits

At the last minute, the initial target was revised to exceed 8 petaflops, far outpacing the original goal. This was due to rumors that competitors were approaching and likely to surpass the initial target. Even when the team felt they had reached their limits, they did not rest on their laurels, but remained focused on becoming the world's best and advancing to the next level of technology.

## "K computer" Development Team

In 2011, Fujitsu's large-scale project, involving a team of 1,000 people, achieved the world's highest computational performance with the K computer. Overcoming setbacks caused by the earthquake, the project demonstrated Japan's technological prowess to the world. A driving force for the future.

