Healthy Living
Stories from our customers
Institute of Medical Science (IMSUT), The University of Tokyo
50% reduction in review times ...............03

Instituto de Investigación Sanitaria (IdISSC)
85% accuracy in risk diagnosis ..............04

Macquarie University
Detecting brain aneurysms faster ...... 05

PeptiDream
Analyzing trillions of data points in just 12 hours ..................................................06

Polaris
10,000x faster molecule processing ..........................................................07

Tokyo Shinagawa Hospital
Improving analysis and detection of COVID-19 ...........................................08

White Hat House
80% OPEX reduction .................................................09
50% reduction in review times

Challenge
Reduce the time needed to find insight in research documentation across different sources, to help determine specific cancer treatment plans.

Solution
Fujitsu AI technology extracted literature relating to genomic data, highlighting it for easy use. Prognostic information was selected from graphs and linked to relevant text to present a complete view of the available information.

Outcomes
• Halved the time to review each gene variation
• Transformed accuracy of patient-specific cancer plans
• Future-proofed the system against bottlenecks by using whole-genome information

Doctors could more than halve the time to access key research, which can validate treatment plans for blood tumors.

Professor Seiya Imoto, Human Genome Center, Institute of Medical Science (IMSUT), The University of Tokyo

Read the full story
85% accuracy in risk diagnosis

Challenge
Reduce the risk of patients developing mental health issues by improving the accuracy and speed of diagnosis.

Solution
Fujitsu developed HIKARI, a cloud and AI-based solution, which uses algorithms to quickly analyze the mental health risks of thousands of patients to enable early diagnosis and clinical intervention.

Outcomes
- Delivered 85% accuracy in diagnosing risk of mental health issues
- Saved 20 minutes per patient diagnosis
- Enabled real-time identification of potential health risks

We are shaping the future of smart medicine and needed a partner to make mental healthcare diagnosis simpler, smarter, and better.

Dr. Julio Mayol, Chief Medical & Innovation Officer, Instituto de Investigación Sanitaria (IdISSC)

AI transforms mental health diagnostics at IdISSC
Detecting brain aneurysms faster

**Challenge**
Enable faster and more accurate analysis of CT scans to make the treatment of brain aneurysms more successful.

**Solution**
In collaboration with GE Healthcare and Macquarie University, Fujitsu built an AI-enabled diagnostic technology to help doctors track aneurysm growth. The solution uses fluid dynamics to predict the risk of aneurysm rupture.

**Outcomes**
- Reduced time to review each scan
- Strengthened detection and tracking of aneurysms
- Ensured smarter decision-making with 3D structural analysis
- Improved surgical intervention via efficient planning, using fluid dynamics

"This will be an exceptional success that will benefit all the partners and, most importantly, patients."

Dr. Brenton Hamdorf, Director, Academic and Research Partnerships, Macquarie University

Improving the analysis of CT scans at Macquarie University

Read the full story
Analyze trillions of data points in just 12 hours

Challenge
Reduce the time needed for peptide candidate compounds to be produced, streamlining the manufacture of experimental drugs.

Solution
Fujitsu’s Digital Annealer enabled high accuracy prediction of drug discovery indices, while accelerating the search for confirmation of candidate compounds, improving drug development processes.

Outcomes
- Contributed to early development of COVID-19 therapeutics
- Combined research data and simulation technology, creating a practical platform
- Streamlined, transformed, and accelerated the speed of new drug development

Transforming drug discovery at PeptiDream

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We can now revolutionize drug discovery processes, helping develop new drugs for society, including COVID-19 therapeutics, as quickly as possible.

Keiichi Masuya, VP and Director, PeptiDream
Challenge
Accelerate the drug discovery process to help fight diseases and eliminate traditional, 48-month lead times.

Solution
Fujitsu co-created a platform combining Fujitsu’s Digital Annealer with Polarisq’s quantum and molecular mechanics simulations. This expands the library of searchable data and accelerates process of screening viable molecules.

Outcomes
• Expanded the library of searchable chemical space by increasing the screening of candidate molecules to several trillion
• Accelerated molecule processing by a factor of 10,000
• Reduced time needed to identify, synthesize, and test novel molecule drug leads by 84%

Harnessing the power of quantum-inspired computing with Polarisq

“Our expertise in chemistry and machine learning, combined with Fujitsu’s technology and experience, means we can identify viable molecules quickly.”

Shahar Keinan, CEO & Founder, Polarisq
Improving analysis and detection of COVID-19

Challenge
Make knowledge and expertise, related to chest CT image diagnosis, more widely available to help the early diagnosis of COVID-19.

Solution
The hospital used Fujitsu’s new AI technology to support faster and more accurate chest image diagnosis to indicate the likelihood of COVID-19 infection.

Outcomes
• Shortened the time required to visually check hundreds of CT images
• Reduced strain on overworked physicians, improving their wellbeing
• Helped ensure the early isolation and treatment of infected patients
• Enabled non-specialists to perform diagnostic imaging, improving efficiency

Supporting faster and more precise diagnosis at Shinagawa Hospital

“By more widely deploying our accumulated expertise in image diagnosis through Fujitsu’s AI, we can mitigate people’s anxieties, and reduce the burden on healthcare providers.”

Masaharu Shinkai, Vice-Principal, Tokyo Shinagawa Hospital

Read the full story
80% OPEX reduction

Challenge
Ensure round-the-clock protection of residents in a cost-efficient way, while respecting residents’ privacy, and enabling an immediate response in case of emergency.

Solution
FUJITSU IoT Solution UBIQUITOUSWARE Remote Monitoring Station was installed in residents’ rooms to monitor sound. If abnormalities are detected, the resident receives a phone call from a nurse at a 24/7 call center.

Outcomes
• Reduced cost by 80% as acoustic sensors reduce facility overheads
• Protected residents’ privacy as the system only analyzes sounds inside rooms
• Assured safety of residents via an alert system when sensors detect anomalous sounds

Ensuring residents’ safety at White Hat House

“The money we save provides an improved, worry-free environment for senior citizens to live in.”
Yasufumi Shimoyama, Secretary, White Hat House

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