

# Cutting-edge Technology Monitors Daily Health

A system that lets us “visualize” our health status, from urine alone, was developed by TSURUOKA Maria in her 20s. What has inspired this Japanese entrepreneur to make this contribution to the future of an ever-aging humanity?

Without even undergoing an examination in a clinic, but just by urinating in a toilet, it is possible to accurately check one's health condition—this dream system was developed by a female Japanese entrepreneur. Before, urine analysis required expensive equipment, but the new system is characterized by allowing individuals to casually acquire health data as part of their daily life.

The device, which is already available as a service, was developed by SYMAX, Inc., whose mission is

“improving the quality of life with advanced technology.” The CEO, TSURUOKA Maria, says that as a child, she witnessed her hard-working mother's battle against disease. She became aware of a dilemma: the harder a person works, the more he/she leaves their physical health to the back-burner. After graduating from university, her work experiences, such as supporting new ventures, led her to think in terms of “things that should exist for the benefit of society.” Against this background, the problem she

had identified as a child came to mind.

An encounter with biosensing technology inspired Tsuruoka to explore the possibilities. She began studying independently and making prototypes. In order to advance the project further, she started her own company at the age of 24. Through a process of trial and error, the company arrived at the concept of a device for casually analyzing urine in ordinary toilet. “Some people said, ‘Really? Can you actually make this happen?’ That's because

we were trying to make something that does not yet exist in the world. But I never wavered in my belief that this is something that the world really needs. That motivation kept me going.”

The completely automatic urine monitoring system, created in this way, is a system that combines a sensor with sophisticated algorithms. The sensor analyzes the body's condition with very high accuracy from the user's urine excreted into the toilet. Then, algorithms, developed by the machine-learning capabilities of AI, are utilized to interpret the data into physical health information. The urine is instantly analyzed at the time of excretion, and the data is converted into terms that users can easily understand, such as “fatigue

recovery,” “concentration,” and “mental burden.” The status is then rapidly sent to the user's smartphone. A daily health condition check is linked not only to the prevention of disease, but also to better health awareness.

Currently, SYMAX is promoting the system to businesses, and several major corporations have already installed the device in their employee restrooms. The company also hopes to introduce the product overseas. Not only in advanced nations with aging populations, but also in

emerging nations with a shortage of medical services, it is expected that the device will contribute to the maintenance of people's health.

“We tend to rely on intuition for making decisions and habits that affect health maintenance. But if we have accurate information, then we can design a healthy lifestyle that fits our personal situation. If we can design our own health, we have more options in life. Ultimately, I believe that this has the deepest relation to our happiness.” With these thoughts in mind, Tsuruoka continues her efforts, through technology, to change the way we manage our health.

The ardor of this young businesswoman will doubtlessly help a wish shared by people everywhere come true: to live out their days physically healthy. ✿

## TSURUOKA Maria

Born in 1989. After graduating from university, she was employed in venture capital, mainly supporting new business startups. In 2014, she founded SYMAX, Inc. to develop platforms for utilizing healthcare IoT devices.



Existing toilets can use this new technology, simply by installing a sensor and router. Data is sent to a smartphone and displayed with icons, so health condition assessments can be understood at a glance.



Tsuruoka's technology won the pitch competition at the Health 2.0 Asia-Japan 2015 Conference, an event that introduces the latest technologies in the medical and healthcare fields.