## **News Release**



## FOR IMMEDIATE RELEASE

## Hitachi develops smartphone technology measuring happiness

Launching a new concept "Happiness Planet" that aims to raise happiness level at the scale of industrial sector, region and country



Figure 1. "Happiness Planet" concept image

Figure 2. Image of measuring happiness with a smartphone

**Tokyo, October 02, 2017** --- Hitachi, Ltd. (TSE: 6501, Hitachi) today announced the development of technology that utilizes data from the accelerometer embedded in smartphones to measure the collective happiness level of an organization (organizational activation level). This technology will not only greatly expand the number of users who can participate in happiness measurement, but also as greatly extends the scope of influence. Based on this, Hitachi has launched a new concept of "Happiness Planet" whereby the activities of individuals towards raising the organizational happiness level, is shared and utilized on the scale of industrial sectors, regions or countries, and by raising the happiness level of the whole, becomes part of a cycle/framework that feeds back to the individuals. Using this technology, Hitachi will conduct verification field tests, and through further development, will work towards the realization of "Happiness Planet" and its proliferation.

Hitachi focused on the activation level of organizations, the relationship between a sense of happiness and productivity, and developed technology in 2015 to measure and analyze organizational activation level using Hitachi AI Technology/H (hereafter referred to as "H") and a name tag type wearable sensor. While this service has already been provided to over 20 companies, Hitachi has continued further research and verification field tests, such as tests where artificial intelligence (AI) was used to create and deliver advice on work style via smartphones<sup>(1)</sup>.

To realize the new concept "Happiness Planet" and its proliferation, Hitachi used the accelerometer embedded in smartphones to measure happiness from data on physical movement. During development, challenges arose in relation to the difference in specification and performance between the accelerometer embedded in smartphones and the name tag type wearable sensors, as well as the fact that accurate measurement was not possible when the smartphone was used for other purposes such as conversation or messaging. To resolve these issues, measurement was taken with both smartphone and wearable sensor, and the relationship between the two sets of data was analyzed using AI, to compensate for the data obtained from the smartphone. By applying this technology, it then became possible to measure happiness with data from the smartphone alone (Figure 2).

This technology will be used to provide a basic service for many users, to measure the organizational happiness of an organization. For customers who wish for more detailed analysis, or support in raising the organizational activation level of their organization, Hitachi offers the existing service which uses the wearable sensor to visualize face-to-face communication or how time is utilized, as well as deliver work style related advice to raise the organizational activation level.

By conducting verification field tests using this technology, pursuing further development for commercialization and providing both the existing organizational activity level support service, Hitachi will work towards the realization and proliferation of "Happiness Planet" which aims to raise the happiness level on the scale of industrial sector, region and country.

This concept will be on display from 3rd to 6th October in the Hitachi booth at CEATEC Japan 2017 in Makuhari Messe, Japan. Further, applications from within Japan to participate in a verification trial currently being planned from January 2018, will be accepted.

<sup>(1) 26</sup> June 2017 News release: Workstyle advice from AI helping to raise workplace happiness http://www.hitachi.com/New/cnews/month/2017/06/170626.html

## About Hitachi, Ltd.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, delivers innovations that answer society's challenges. The company's consolidated revenues for fiscal 2016 (ended March 31, 2017) totaled 9,162.2 billion yen (\$81.8 billion). The Hitachi Group is a global leader in the Social Innovation Business, and it has approximately 304,000 employees worldwide. Through collaborative creation, Hitachi is providing solutions to customers in a broad range of sectors, including Power / Energy, Industry / Distribution / Water, Urban Development, and Finance / Government & Public / Healthcare. For more information on Hitachi, please visit the company's website at http://www.hitachi.com.

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