



FOR IMMEDIATE RELEASE

## **Sumitomo Rubber, Hitachi and PTC Collaborate to Deploy a High-Quality and High-Efficiency Tire Production Solution, Using Advanced AI and IoT Technologies**

*Full Deployment Targeted for 2025 in all Sumitomo Rubber Factories Around the World*

**Tokyo Oct 3, 2019** – Sumitomo Rubber Industries, Ltd.,(TSE: 5110) Hitachi, Ltd.,(TSE: 6501) and PTC (NASDAQ: PTC) today announced a collaboration to deploy a tire production solution, leveraging an advanced AI/IoT platform, for achieving high-quality, high-efficiency processes across its many factories worldwide.

Industrial companies today are faced with a variety of challenges, including increasing customer needs, intensifying global competition, and serious labor shortages due to an aging population in Japan. To address these issues and to enhance its market competitiveness, Sumitomo Rubber teams, in conjunction with Hitachi and PTC, have developed a highly-efficient, lean production solution that leverages advanced digital technologies and that will be deployed in its tire production factories that produce such globally recognized brands as DUNLOP and FALKEN.

This initiative consists of three world-class companies collaborating and synergistically combining their technologies and expertise to deploy a highly efficient solution:

**Sumitomo Rubber** – with its advanced tire production technology.

**PTC** – with its ThingWorx<sup>(1)</sup> Industrial IoT platform and extensive consulting experience in the industrial space.

**Hitachi** – with its Lumada<sup>(2)</sup> solution, an advanced digital technology that combines their long-nurtured OT<sup>(3)</sup> and IT technologies and that provides analysis technology using 4M<sup>(4)</sup> data from the workplace.

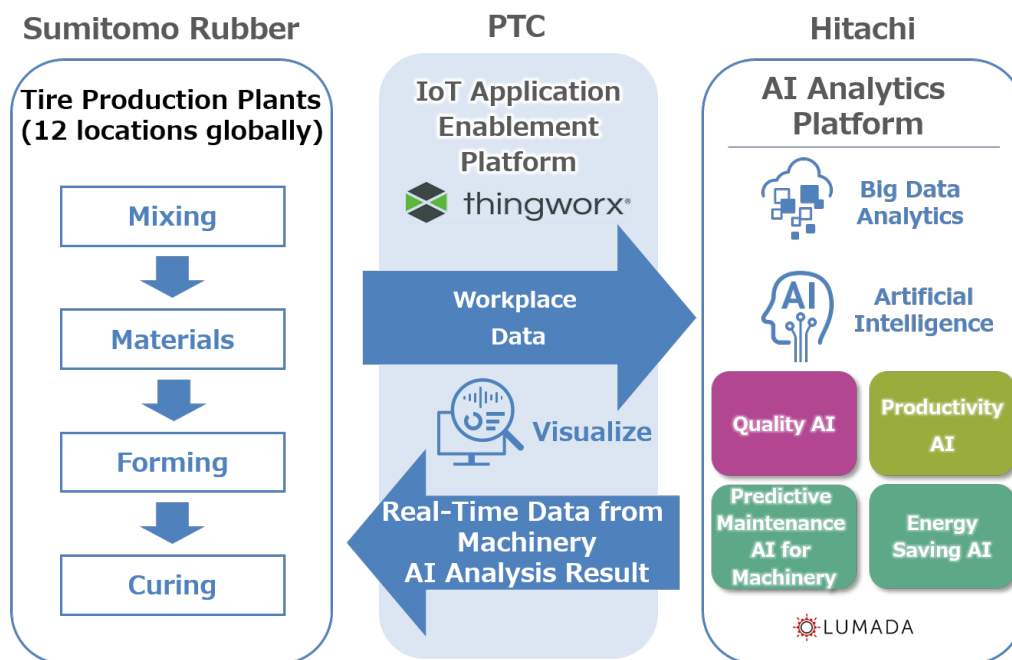
With the new solution, Sumitomo Rubber will monitor real-time production machinery performance data using PTC's ThingWorx Industrial IoT platform. ThingWorx will enable Sumitomo Rubber to integrate data from myriad sources

and standardize a variety of factory automation systems that are used on production lines across its manufacturing locations. This critical business information will then feed into Hitachi's Lumada AI applications, which will comprehensively analyze the data and quickly and accurately search for and extract factors impacting quality, productivity, predictive maintenance of production machinery, and/or energy consumption. This comprehensive solution, consisting of Hitachi and PTC technology, will help accelerate decision making and achieve more efficient production with insightful, AI-driven analysis.

Sumitomo Rubber recently deployed the solution in its Nagoya Factory (located in the city of Toyota, Aichi) in pilot mode, and saw impressive results:

- Data collection and analysis time was cut by 90%
- Loss during production was reduced by 30%

These impressive metrics convinced the team to commence deploying the system worldwide, with an intention to complete the deployment at all 12 tire production factories by 2025.



Overview of AI/IoT platform-based high-quality, high-efficiency production system

(1) ThingWorx

ThingWorx is a platform that enables gathering, organizing and modeling data coming from machinery/devices as well as application development. The platform also seamlessly integrates with surrounding systems, allowing customers to integrate analytics systems and also to develop applications that leverage IoT data.

<https://www.ptc.com/en/products/iiot>

(2) Lumada

Lumada is Hitachi's advanced digital solutions, services, and technologies for turning data into insights to drive digital innovation.

<http://www.hitachi.com/products/it/lumada/global/en/index.html>

(3) OT: Operational Technology

(4) 4M: huMan, Machine, Material, Method

About Sumitomo Rubber Industries, Ltd.

Headquartered in 3-6-9 Wakinohama-cho, Chuo-ku, Kobe, Hyogo

Representative: Satoru Yamamoto, President and CEO

Founded in 1909

Business: Develop and market tires, sporting goods, and industrial products. Their tire business with DUNLOP and FALKEN brands is in operation globally.

About Hitachi, Ltd.

Headquartered in 1-6-6 Marunouchi, Chiyoda-ku, Tokyo

Representative: Toshiaki Higashihara, President & CEO

Founded in 1910

Business: Extensive global "Social Innovation" business combining cutting edge IT technology and long-nurtured social infrastructure technology, with a focus on 5 business areas, Mobility, Smart Life, Industry, Energy and IT, to contribute to the improvement of people's Quality of Life.

About PTC

Headquartered in 121 Seaport Boston MA

Representative: Jim Heppelmann, President and CEO

Business: Primarily support industrial companies by providing CAD, PLM, IoT enablement platform and AR authoring.

**Takanori Aoi, Senior Executive Officer, Sumitomo Rubber Industries, Ltd.**

"With the help of Hitachi and PTC Japan, we have begun our journey to enhance quality and productivity by deploying AI/IoT technologies into the production systems at our 12 tire production factories around the world. We expect we will be able to deliver high quality, highly functional tires that are safe and provide peace of mind more than ever."

**Jun Abe, Senior Vice President and Executive Officer, CEO of Industry & Distribution Business Unit, Hitachi, Ltd.**

"We are pleased to be able to contribute, in collaboration with PTC Japan, to the deployment of an advanced tire production system at Sumitomo Rubber factories around the world. Hitachi provides total seamless solution to address our customers' challenges by connecting cyber and real spaces together through Lumada, and we are committed to helping Sumitomo Rubber enhance their social, environmental as well as economic values."

**Hiroaki Kuwahara, Representative Director, PTC Japan**

"We are excited to hear that Sumitomo Rubber has adopted ThingWorx for operational standardization at their tire production factories around the world. ThingWorx is a platform that enables companies quickly address challenges operation teams tend to face after a merger/acquisition, and immediately provides benefits of operational standardization. Also, ThingWorx has a robust set of system integration capabilities that brings data from standardized factories into other systems, which generates further value for the organization. In collaboration with Hitachi, we are committed to providing best possible support to Sumitomo Rubber to help them address their challenges."

**Exhibition of the service at Hitachi Social Innovation Forum 2019 TOKYO**

Hitachi Digital Solution for Retail/AI Demand Forecast Auto Replenishment Service will be exhibited at Hitachi Social Innovation Forum 2019 TOKYO at Tokyo International Forum from October 17 to October 18, 2019.

**Hitachi Social Innovation Forum 2019 TOKYO Official Website**

<https://hsiftokyo.hitachi/en/index.html>

**About Hitachi, Ltd.**

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, is focusing on Social Innovation Business combining its operational technology, information technology and products. The company's consolidated revenues for fiscal 2018 (ended March 31, 2019) totaled 9,480.6 billion yen (\$85.4 billion), and the company has approximately 296,000 employees worldwide. Hitachi delivers digital solutions utilizing Lumada in five sectors including Mobility, Smart Life, Industry, Energy and IT, to increase our customer's social, environmental and economic value. For more information on Hitachi, please visit the company's website at <https://www.hitachi.com>.

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Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.

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