NEWS RELEASE

SUMITOMO MITSUI CONSTRUCTION CO.,LTD.

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Function enhancement of PCa factory manufacturing management system "PATRAC-PM"

- Greater productivity improvement through cloud computing and sensing technology -

Sumitomo Mitsui Construction Co., Ltd. (2-1-6, Tsukuda, Chuo-ku, Tokyo. President: Shigetoshi Kondo) has expanded the functions of the manufacturing management system "PATRAC-PM"(*1) at the factory(*2) where precast (PCa) elements are produced for high-rise condominiums, etc. by cloud computing and sensing technology.

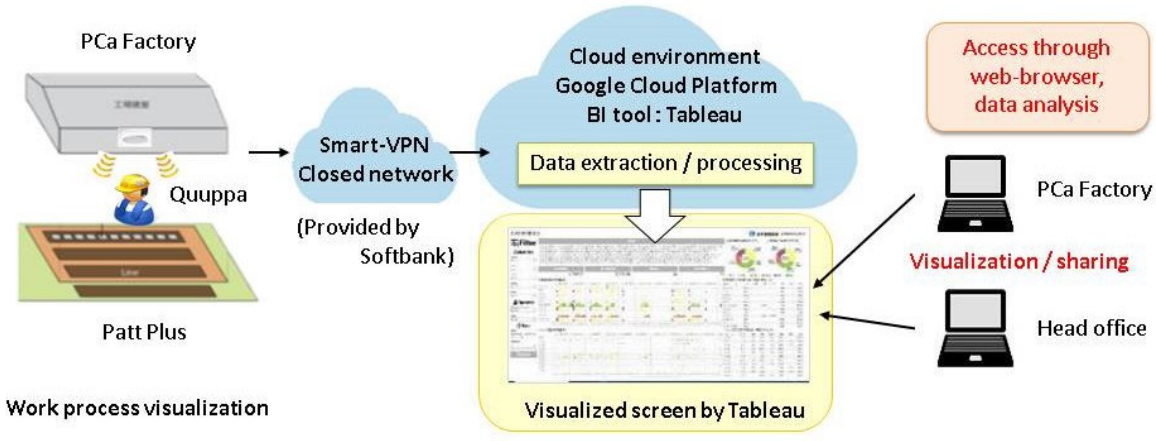
This enhances the positioning accuracy of workers and PCa elements indoors and outdoors, and the expanded range of acquired data. It realizes also a more detailed visualization of production-line operation status and results that results in further productivity improvement.

The company is focused on improving quality and productivity at the PCa factory by developing and implementing the next-generation PCa production management system "PATRAC"(*3) that utilizes IoT (Internet of Things).

(*1) "PATRAC-PM" (Precast Automatic TRACing System-Production Management)
Optimization of manufacturing process at PCa factory by identifying position of workers in real-time (released on May 20, 2019)

(*2)SMC Precast Concrete Co., Ltd. (Group of Companies) Ibaraki Factory

(*3)Start of development of next-generation PCa production management system "PATRAC" utilizing IoT (released on December 18, 2018)



【Illustartion of enahnced "PATRAC-PM"】

■Features of enhanced "PATRAC-PM"

At the PCa factory, works such as moving of materials and tools, producing PCa parts or elements, and product inspections are carried out at various places, and also, many workers and PCa parts are constantly moving. Therefore, there was a limit to determine in detail which PCa member each worker is working on in a place where workers and PCa elements are densely positioned, and the amount of data to be acquired was enormous. Thus, the function of the system was extended as follows.

①The Quuppa Intelligent Locating System(*4) was used as the positioning technology, and the Dynamic Geofence Technology(*5), which is a function of Patt Plus(*6), was used to associate location information with production information. This makes it possible to acquire a large amount of work data that changes with the manufacturing process indoors and outdoors.

②By installing the BLE(*7) tags on the PCa elements that were previously attached to the worker's helmets, the work results for each element now can be accurately obtained from the acquired positioning information even in areas where the PCa elements are densely positioned.

③The cloud computing of the system(*8) and the business intelligence (BI) tool(*9) have made it possible to visualize and analyze the acquired enormous amount of work data on a web browser.

(*3)SMC Precast Concrete Co., Ltd. (Group of Companies) Ibaraki Factory

(*4)Bluetooth-based positioning technology based on the arrival angle of radio waves (AoA (Angle of Arrival) method), manufactured by Quuppa.

(*5)Mechanism for acquiring dynamic data based on virtual geographical boundaries using location information

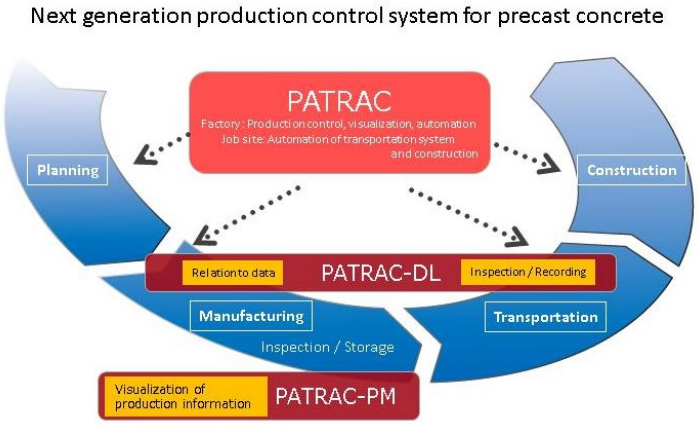
(*6)Kokusai Kogyo Co., Ltd., a tool that visualizes the movement of people and the residence time of objects in factories, etc. in real-time.

(*7)Abbreviation for Bluetooth Low Energy

(*8)Highly secured internet environment "Smart-VPN", cloud environment "Google Cloud Platform".

(*9)Application software that collects and analyzes various data in real-time, manufactured by Tableau Software.

【Production line of a PCa factory, indoor and outdoor】



【Overview of next-generation PCa production control system "PATRAC" 】

■Next deployment

Sumitomo Mitsui Construction Co., Ltd. set a policy, "Reform of construction production process" as one of our basic targets in our "Medium-Term Management Plan 2019-2021" and we are now working to improve the productivity at construction sites. In the future, we will acquire data from our seven PCa element manufacturing factories including our group of companies, and construction sites nationwide to further improve productivity by comparing and analyzing the outcomes.

■Contact

For inquiries regarding this matter, please contact the following.

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