

Mitsui Chemicals starts implementing IBM Watson for New Application Discovery Advancing DX for Sales Domain by Utilizing Big Data and AI

Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) and IBM Japan, Ltd. (Head Office: Chuo-ku, Tokyo, President & CEO Japan: YAMAGUCHI Akio) have been implementing IBM's AI system, IBM[®] Watson, across the Mitsui Chemicals Group since June 2022. Utilizing external big data such as news, SNS, and patent data, IBM[®] Watson enables Mitsui Chemicals to discover new applications of Mitsui Chemicals products. This initiative aims to expand top-line (sales) and market share of Mitsui Chemicals products by advancing digital transformation (DX) in the sales domain.

These days, there is massive amounts of information and data in the world, including news, magazines, websites, consumer opinions from SNS, and specialized information such as patents and academic papers. However, Mitsui Chemicals' sales department has not been able to fully utilize these big data. In addition, the needs and benefits of consumers and product manufacturers are generally different from the functional terminology of materials, and so it was not easy to combine these different terminologies to utilize in sales and marketing domains.

With the cooperation of IBM Japan, IBM Watson's natural language processing and text mining technology enable to search for the diverse big data such as news, SNS, and patent data, and efficiently and comprehensively analyze them.

Specifically, by utilizing IBM Watson, Mitsui Chemicals' sales department can analyze the correlation between functional terminology used for materials and big data such as news, SNS and patents. By connecting the functional terminology of materials to the needs and benefits of consumers and product manufacturers, Mitsui Chemicals is able to brainstorm new applications of materials, and move beyond ideas based on intuition, tips, and experience to promote proposal-based sales activities with evidence in new industries and fields.

Mitsui Chemicals has repeatedly conducted proof-of-concept (PoC) experiments in the four main business sectors and the new business sector. In these experiments, Mitsui Chemicals has advanced the development for new application discovery with agility, such as deep exploration of product functional characteristics, optimization of big data collections, construction of a unique dictionary, and establishment of effective operation methods.

As a result, Mitsui Chemicals have discovered various new applications of materials. For example, it was discovered that material A used in food packaging can be used for electronic components as a new application, material B used in building materials can be used for sanitary purposes, and material C used in semiconductor can be used for cooking equipment.

The next step is to accelerate the process from market development to product development by linking with Materials Informatics (shortly MI). Mitsui Chemicals will continue to take on new challenges for DX by utilizing cutting-edge digital technology.

< Mitsui Chemicals, Managing Executive Officer, CDO, Masao Sambe >

This initiative aims to increase top-line and to expand market share by augmented capabilities of AI. By compiling external information such as patents, news, SNS, etc., we have just built our one and only enterprise dictionary to develop new applications for various materials. Mitsui Chemicals are going to accelerate industry innovation through new materials application discovery, which can be beyond human intuition and our existing knowledge.

About IBM Watson Watson is IBM's AI technology for business that helps organizations better predict and shape future outcomes, automate complex processes, and optimize employee time. Watson has evolved from an IBM Research project to an experiment to an extended set of open products running anywhere. With over 40,000 customer engagements, Watson is used by leading global brands across industries to transform the way people work. For more information, see <https://www.ibm.com/jp-ja/watson>.

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