

Mitsui Chemicals Launches DX-Focused HR Development Program for Production Technology Staff With the Support of IBM Japan

Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) and IBM Japan, Ltd. (Tokyo; President: YAMAGUCHI Akio) today announced that in-house training at Mitsui Chemicals has got underway in earnest this year under a data scientist development program that the two companies have created for production technology staff.

Via the training program, Mitsui Chemicals plans to deploy data scientists with expertise in production technology at all five of the company's main works in Japan by the end of fiscal 2025. These data scientists will have the ability to analyze data relating to the complex phenomena occurring in chemical plants and build models to forecast plant states.

Mitsui Chemicals intends to promote ongoing DX-focused HR development within the company in order to move forward with corporate transformation through DX, which is one of the basic strategies that form part of the VISION 2030 Long-Term Business Plan. Meanwhile, IBM Japan will continue to provide Mitsui Chemicals both with data analysis support and with assistance in acquiring other digital technologies beyond the realm of data analysis.

■ Background

Mitsui Chemicals is undertaking proactive measures to digitalize its works and introduce advanced technologies in pursuit of highly efficient, safe and stable plants. The plant engineers of the future will need to be capable not only of limited analysis based on past experience and theory, but also of multifaceted, in-depth analysis using big data obtained from various instruments and production processes. This kind of data analysis will require engineers to be equipped with both a knowledge of production technology and competence in data analysis.

As each of its five main works produces different products and uses different facilities and equipment, Mitsui Chemicals also sees a need for ongoing efforts to cultivate and deploy data scientists well-acquainted with each plant.

■ Previous initiatives by the two companies

Mitsui Chemicals and IBM Japan began working together in 2015 to develop plant engineers capable of data analysis. As part of these efforts, IBM Japan leveraged its achievements in data analysis for the manufacturing industry – as well as its know-how in developing digital specialists – to provide support for Mitsui Chemicals' in-house training programs. This support included

identifying the skills required for Mitsui Chemicals' operations in the production technology field, examining HR development measures and conducting training courses. IBM Japan subsequently created a mechanism to let Mitsui Chemicals provide ongoing HR development with the aid of in-house training staff and formulated a program to cultivate personnel capable of advanced data analysis.

■ Program features

The program is broadly structured into three steps*, separated by their focus on cultivating basic knowledge, applied knowledge and data scientist skills. It not only assesses whether an individual has specific knowledge and skills, but also defines the individual's level on a further six-rank competence basis and evaluates their degree of contribution to the business.

The training and certification as part of this program will combine on-the-job training (OJT) with off-the-job training to cover areas including algorithms, statistics and their analysis, data ethics and project management.

All production technology engineers (about 250 people) are eligible to participate in the Level 1 program for basic data analysts, with 120 of these engineers having already completed it.

	Basic Data Analyst (Level 1)	Applied Data Analyst (Level 2)	Data Scientist (Level 3 and above)
Competence	Has the minimum-necessary level of basic knowledge for tasks	Can carry out the required tasks under the guidance of a higher level staff member	Can carry out analytical work independently
Training methods	Lectures providing a general outline of data analysis, and hands-on tasks to learn how to use SPSS data analysis software	Practical exercises in both analyzing factors contributing to quality deterioration and creating a quality-forecasting model	OJT focused on solving technical challenges in one's own workplace

*Mitsui Chemicals' system for training production technology staff is broadly classified into three steps, within which the basic Level 1 module and the applied Level 2 module are classified as data analyst development, and Levels 3–6 as data scientist development.

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