

November 18, 2020
NAGASE & CO., LTD.

**NAGASE to Launch SaaS Service
Powered by TABRASA New Material Search Platform:
Value Provided by Data on Systematic Materials Informatics Knowledge Developed
Jointly with IBM Will Accelerate R&D Innovation through Digital Transformation**

- NAGASE, a trading company specializing in materials, has launched a cloud-based SaaS service for materials informatics which developed by jointly with IBM.
- The service will achieve an industry first in incorporating two different approaches: in addition to analytics, which are mainstream in materials informatics, it features a cognitive approach enabling more efficient searching for new materials.
- The NAGASE Group will leverage its customer networks to expand provision of the service widely throughout the industry.

NAGASE & CO., LTD. (Chuo-ku, Tokyo; Representative Director and President: Kenji Asakura) will launch a service utilizing the TABRASA new material search platform developed jointly with International Business Machines Corporation (IBM). NAGASE will commercialize IBM technology as a SaaS service for materials informatics (MI). This cloud-based software service will be provided to a wide range of NAGASE Group customers and suppliers including manufacturers of highly functional materials and biochemicals, and will support problem-solving and innovation through digital transformation (DX) of R&D processes.

MI is a materials development technology that utilizes artificial intelligence (AI) and the latest data processing techniques to efficiently search for new materials. Major materials manufacturers in Japan and abroad have been developing their own MI technology as a way of enabling them to achieve much shorter R&D timelines, but development costs and recruitment of specialist personnel have presented obstacles. TABRASA overcomes such obstacles, since the service is delivered through a SaaS platform that securely manages users' confidential information in IBM's cloud environment and offers a high degree of usability even in the absence of specialist personnel with advanced knowledge and techniques. Users can access a leading-edge MI service without initial investment, simply by paying running costs.

The strengths of TABRASA lie in its ability to search for materials with two different engines driven and possessed by IBM Research: an analytics approach that harnesses AI machine

learning to suggest chemical structures for new materials from substances' molecular structure and physical property data, and a cognitive approach.¹ The cognitive approach accumulates data on users' basic technologies, patented technologies, research results, and documents such as theses and technical materials into a systematic knowledge base. Generally, unstructured information such as theses and business documents cannot be processed or analyzed as data in their existing form. A strength of TABRASA's cognitive approach is precise natural language processing that structures data and accurately understands content. This approach is expected to suggest methods of synthesis and other techniques that are not bound by fixed ideas and preconceptions based on large volumes of accumulated knowledge. Since TABRASA is highly customizable, knowledge can be systematized according to user fields and aims, and increasing data input leads to improvement in the quality of suggestions made. Thus, according to the way it is used, TABRASA can be developed into a solution offering powerful support to researchers.

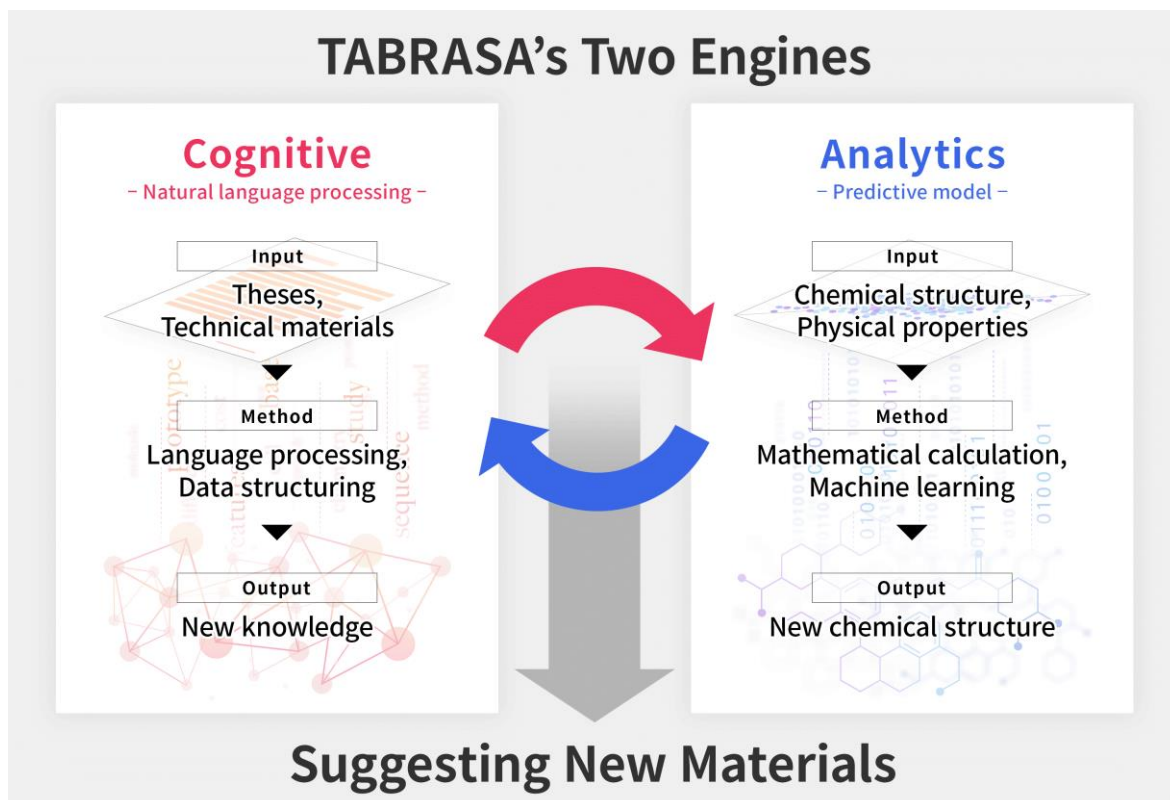
Initially the two engines will be offered separately, but capability to link them will be added in the future to enable more efficient material searching. MI linking these two approaches will be an industry first (based on NAGASE's research).

NAGASE anticipates a wide range of customers for this new service, ranging from major Japanese manufacturers to SMEs and venture companies, and aims to quickly develop the service into a business with earnings of several billion yen and extend it overseas. "We want to fundamentally change the R&D scene and concept in Japan," says Executive Officer Yasumitsu Orii, who is General Manager of the New Value Creation Office and leads the development project. "NAGASE has been able to develop this service because we are a trading company with broad customer networks that handles diverse materials. In addition to offering support for users' DX efforts in R&D and building infrastructure with MI services at their core, we intend to develop a platform for resolving various issues, including provision of a matching forum for trading data and resources that will become sources of value."

"We are excited to continue our collaboration with NAGASE, a worldwide leading material provider, on the "Materials Informatics" project, where we together combine IBM's engines for materials discovery, leveraging AI to substantially accelerate the development cycle of next generation advanced materials," remarks Dr. Alessandro Curioni, IBM Fellow, Vice President Europe and Africa, IBM Research and Director, IBM Research Zurich. "Together, we aim to continue utilizing AI to swiftly accelerate the development cycle for the next generation of cutting-edge materials."

Through our new business model of identifying issues yet to be noticed by our business partners and providing value leading to solutions, NAGASE aims to create a society full of warmth, where people can live in safety, security, and comfort.

1. Features of TABRASA



▪ Inquiries

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Product Inquires

TABRASA website <https://tabrasa.jp/>