Case Study:

Uncovering the winning factors
and identifying new project leaders
Kanazawa University

Executive Summary

Kanazawa University, a pioneering research institution known for establishing the first University Research Administration (URA) Office in Japan, partnered with Elsevier to enhance support of targeted research programs with an aim to acquire competitive large-scale funding.

The mission of the URA office was to expand Kanazawa University's existing research strengths and facilitate interdisciplinary research. Their goal was to help Kanazawa University researchers obtain large-scale grants to support interdisciplinary research projects that could help them expand the institution's core research strengths and distinguish Kanazawa as a leading research university.

The challenge was to establish an effective strategy based on in-depth analysis as well as to find researchers who could provide the best opportunities for success as project leaders. By combining the skill and knowledge of the Kanazawa University URA with Elsevier's analytical expertise and critical data sets from Elsevier's SciVal Experts and Scopus, Kanazawa University developed the necessary knowledge and insight for optimum research planning and management. In particular, the partnership with Elsevier helped the university identify researchers with high potential to become successful project leaders.

Background

Kanazawa University is a national university in Japan with an eminent history in medicine and science, first established more than 150 years ago as the Hikoso Vaccination Center. The university has three colleges, sixteen schools and five graduate schools with 10,000 students; it is primarily based in Kanazawa, Ishikawa prefecture. Kanazawa University is the leading higher education institute in the Hokuriku region and is building its reputation as a renowned institution of research and education in the region and the world.

Kanazawa University is known to be the first in Japan to put in place a university-level support for grant applications, which evolved into the URA office within the Organization of Frontier Science and Innovation (O-FSI). Since the office's inception in 2007, the total value of research grants received by Kanazawa University faculty has increased by 300%. The mission of the URA office is to transform the university into a research strategy powerhouse by creating a knowledgebase of research and grant information and conducting in-depth analyses to establish actionable strategies. The URA office plays an essential role in enhancing broad research-related objectives including grant applications, industry collaborations, IP applications and management, and also in promoting the university's research excellence to the community.

The Challenge:

In 2013, Kanazawa University consolidated its URA and Center for Innovation under the new O-FSI in order to implement a comprehensive support strategy covering both research development and industry collaboration.

One of the O-FSI's key priorities is to expand on the university's existing strengths and promote interdisciplinary research. In order to support the office's mission, Ms. Masako Toriya, Research Administrator and Assistant Professor of the O-FSI URA office, collaborated with SciVal Consultants from Elsevier. Together, they set out to analyze trends in a large-scale grant program provided to support the development of innovative and interdisciplinary research programs, and to identify researchers with potential to lead the projects.

"Under the renovated O-FSI, the URA office can provide a holistic support to further expand the university's existing research strengths and to cultivate interdisciplinary research that leads to true innovation. The URA office combines expertise in grant-seeking with data driven insights to establish strategies to obtain large-scale competitive grants, particularly for research projects that can find solutions for societal challenges."

- Professor Koetsu Yamazaki,
Vice President for Research and Director of O-FSI

Solution:

Using Scopus data, Kanazawa University visualized the research performance of the large-scale grant awardees of peer institutions in the Life Science and Science and Technology. URA then conducted analyses to identify the winning factors that helped the researchers acquire the awards so the office could establish strategies to obtain those large-scale grants. The university then used SciVal Experts data to identify researchers with high potential to serve as project leaders and create research teams.

Kanazawa University URA and Elsevier defined the following steps to analyze the performance of large-scale grant awardees, identify winning factors and create an evidence-based process for designating project leaders:
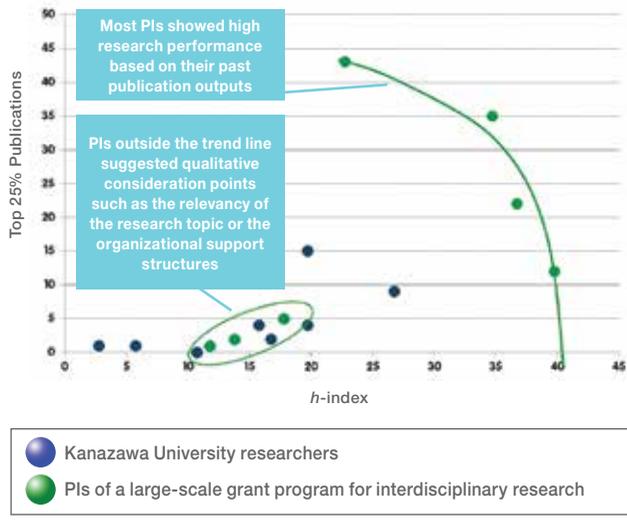

SciVal Expert Research Profiles of Kanazawa University:
www.experts.scival.com/kanazawa

- **Step 1**: Using all the researcher data profiled in Kanazawa University's SciVal Experts application, the top 30 researchers across all fields were selected in terms of publications, citations, awarded grants and other criteria.
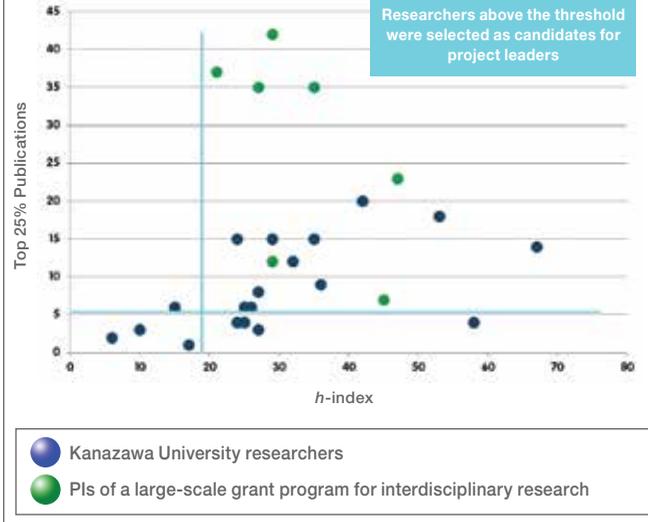

- **Step 2**: Then, the university identified principal investigators (PIs) of a specific large-scale grant program for interdisciplinary research projects, who were used as benchmarks.
- **Step 3**: Combining both data, the university performed a number of analyses using metrics such as publication output, citations and co-author networks, to identify high performers in specific fields and reveal potential success factors. As shown on the following page, a trend was seen in the top percentile analysis, where they identified the researchers which had authored publications that received citation counts in the top 25th percentile for their field, and also compared these data against each researcher's h-index.
- **Step 4**: Each researcher's h-index and top 25% publications were visualized to identify researchers with high potential to serve as project leaders.

Trend and Benchmark Analysis
Science & Technology

Most PIs showed high research performance based on their past publication outputs

PIs outside the trend line suggested qualitative consideration points such as the relevancy of the research topic or the organizational support structures

- Kanazawa University researchers
- PIs of a large-scale grant program for interdisciplinary research

Step 3: The university compared each researcher's top 25% publication count with their *h*-index to better understand the winning factors of the PIs. Shown here is the analysis for PIs and Kanazawa University researchers in Science and Technology.

Trend and Benchmark Analysis
Life Science

Researchers above the threshold were selected as candidates for project leaders

- Kanazawa University researchers
- PIs of a large-scale grant program for interdisciplinary research

Step 4: The university identified researchers with high potential to serve as project leaders. Shown here is the analysis for PIs and Kanazawa University researchers in the Life Sciences.

Conclusion:

The analysis helped Kanazawa University select project leaders who could lead research teams in specific research areas, thereby improving the university's ability to secure research funding in targeted fields and develop leadership status in regional, national and international research initiatives.

The analytical outputs from SciVal Experts and Scopus produced visualizations of winning factors of grant awardees. The visualizations also revealed the university's research strengths and weaknesses, which the university will take into account for project planning.

"One of the major accomplishments was having a new method in place to identify prominent researchers to approach for URA support. Prior to this project, researchers were identified based on human knowledge and subjective processes. This new method brought to our attention some young, high-performing researchers who were not on our radar. The trend analysis visualizations helped us get a much deeper understanding of the university's research characteristics and provided valuable new insights. We now have in-depth knowledge of the capacities of our researchers, which we can use to improve our strategies to acquire large-scale grant awards and conduct successful research that addresses societal challenges."

- Ms. Masako Toriya, Research Administrator and Assistant Professor of the O-FSI URA office

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