IP Landscape Initiatives

1. Introduction

IP landscape is becoming widely recognized as an offensive intellectual property strategy. The main entity in this initiative is the intellectual property division within the company, but close coordination with the management, R&D division and business division is essential. As the degree of recognition of IP landscape rises, services that provide external consultation and analysis software to support companies are seizing this business opportunity and starting to increase.

Looking back on intellectual property strategies at the national level, first of all, the declaration by the Cabinet of Junichi Koizumi on Japan as a "Nation Built on Intellectual Property" in 2002 to increase the creation, protection and exploitation of intellectual property (IP) such as patents and contents that have traditionally been strong areas for Japan, to compete against the US who have increased their competitiveness by using IT (information technology) such as the Internet as a weapon, and the rapid growth of Korea and China regarding manufacturing can be mentioned1). At that time, the Intellectual Property Promotion Plan was established as a national strategy, and the founding of the IP High Court, and revision of the patent law related to inventions by employees were promoted at the national level.

In June 2018, the government further announced "Aiming for a "value design society", Intellectual Property Strategy Vision"²⁾. This summarized a vision to direct the long-term developments and measures for thirty years onwards from 2025 that utilize technology such as AI and blockchain against the backdrop of a transition from paying for physical goods to paying for

experiences. In these times when the societal image of the future is drastically changing, it is important to continuously consider and disseminate new values and have these values felt by the people throughout the world, and it was anticipated that intellectual property such as "service", "solution" and "information data" would drive the future.

In June 2021, the Financial Services Agency and Tokyo Stock Exchange revised the Corporate Governance Code to include the description, "In view of the importance of investment into human resources and IP, effective directions should be taken to help sustainable growth of companies by distribution of these and other management resources and strategic implementation of business portfolios"³⁾. With this, Intellectual Property Strategy Headquarters at the Prime Minister's Office and METI collaboratively established a "Study group on effective disclosure and governance of IP investment and utilization strategy" from August 2021. At this study group, it was recognized that in a time where the management environment of companies is significantly changing with the recent advances in digitalization and going green, IP and intangible assets that are indispensable for a company's management are considered to be also drastically changing. Therefore, it is further required to accurately recognize how IP and intangible assets can be utilized for sustainable management of a company's future" and "validate their business model based on the importance of IP and intangible assets for management and it is unavoidable to construct a strategy to maintain and strengthen IP and intangible assets that support competitiveness and investigate a sustainable business model that utilizes the IP and intangible assets that are a strength upon firmly

understanding and analyzing why IP and intangible assets are necessary for the company's management and what IP and intangible assets are the source of competitiveness and differentiation as a strength of the company and how this leads to value creation and the creation of cash flow". This is the current situation where companies are even more expected to understand their own company and other companies' strengths and weaknesses from the prospective of IP and investigate sustainable business models.

2. What is IP landscape?

Among these formulation and promotion of IP strategies at the national level, there is a growing movement to directly utilize IP analysis in management and business. Although many companies are now considering IP landscape, since the target of IP landscape in each company is analysis handling confidential items such as business strategy and R&D strategy of each company, no company completely discloses its analysis process and results, and many companies only disclose a summary.

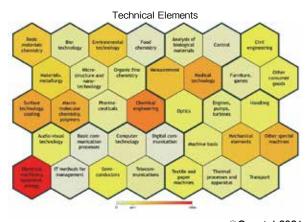
The definition of IP landscape differs widely and the content of each company's measures is varied because there is no set definition. Some major companies have established a specialist team to actively handle this in an organized manner, and there are some examples of public announcements regarding the results, but it is extremely rare for a company to disclose detailed content such as introducing development cases of specific products and services.

In this report, we define IP landscape as "analysis of IP information within the global market, observing customer needs, technological trends and the situation of players in a multifaceted way to utilize it for searching new markets and uses for products and developing new businesses and products". At Valqua, we are already utilizing IP landscape for searching new uses and opening up new businesses and products, and promoting the development of value-added products and services to resolve unknown issues in discussion with the Development Division and Business Division.

3. Investigation tool

In this report, an example of an analysis method for IP landscape targeting PTFE is introduced.

Mapping was conducted to allow a visual understanding of which technical areas have the most PTFE-related patent applications (Figure1). This technical classification was prepared based on the international patent classification designated by a global IP association and the number of patent applications for PTFE is displayed by the shade of the color. Red is the technical area with the most patent applications and grey is the technical area with the least patent applications.



©Questel 2021 Figure1 Patent application technical classification for PTFE

By using such figures, it is possible to visually and macroscopically understand the technical areas regarding PTFE that are being focused upon and those that are not. In addition, by focusing the analysis target on specific companies, it is also possible to understand the PTFE-related fields that each company are focusing upon. Figure2 indicates the technological concepts that





Figure2 Technological concept mapping of PTFE

No.42

have patent applications and the target for PTFE related patent groups.

This concept map groups the PTFE-related patent applications by concept and each group's area is correlated with the number of patent applications. Utilizing such concept maps, it is possible to understand the details of individual patent contents such as the concepts that are receiving high attention or low attention and unexpected concepts, and it is thought that this may lead to clues for searching new uses and developments.

Figure2 is a visualization of PTFE technology in general and by focusing on specific companies, it could also be helpful in understanding the strengths and weaknesses of those companies.

Figure3 shows a different analysis of PTFE patent applications. This is color-coded by technology clusters and the number of patent applications is indicated by contour lines. The larger the number of patent applications, the higher the contour lines. This figure also allows a macroscopic visualization of areas that have many patent applications. By preparing this type of mapping for each year, it is also possible to understand technical trends by time by seeing the sections that recently increased in height.

Landscape by technology cluster



©Questel 2021 Figure3 Landscape of PTFE

4. Activities

4-1) CX

Valqua has positioned 2021 as the starting year for corporate transformation (CX), and promoted various initiatives. Not limiting ourselves to providing hardware, but placing the evolution into a H&S company that delivers value-added service to customers as our basic principle, we are promoting development activities for our service technology products, that incorporate digital solutions, to be a trigger for innovative digital transformation for our customers' total business.

4-2) IP activities

We are placing an emphasis on IP landscape as part of corporate transformation from the IP aspect. Patent application activities are conducted in new areas as a result of searching for new value-added services and new product candidates through active utilization of the IP landscape.

IP landscape study tools have many features and the analysis tools are evolving daily. While enhancing the training of staff to enable analysis according to their aim, we work towards actively implementing the most recent tools. Winter 2022

In May 2019, as part of open innovation, we announced the establishment of the Cooperative Research Laboratory for Advanced Functional Materials with National Institute of Advanced Industrial Science and Technology (AIST)⁴⁾. Valqua is conducting advanced functional material development with AIST and we are currently applying for patent applications regarding the technical results. Valqua is implementing IP landscape for searching for uses of such materials and also promoting ways to search for uses that would be a target. Such initiatives will continue to be used actively as a method to search for uses of seeds.

In addition, regarding the development of services that consider digital transformation (DX), conducting IP landscape should allow us to strengthen and promote our main activities in the future by providing high valueadded services that combine the areas that are Valqua's strength together with IT technology.

5. Conclusions

In this article, we introduced Valqua's activities related to IP landscape, but the content is limited because of the need for confidentiality. Valqua intends to work on solutions that can provide ways to solve our customer's issues by implementing value creation from a new viewpoint, IP, in addition to technical development based on our customer needs and on seeds that we have always provided.

6. References

 The Prime Minister's Office, Main points of the "Intellectual Property Strategy Outline" http://www.kantei.go.jp/jp/singi/titeki/kettei/ 020703gaiyou.html

- The Prime Minister's Office, Intellectual Property Strategy Vision https://www.kantei.go.jp/jp/singi/titeki2/kettei/ chizai_vision.pdf
- Intellectual Property Strategy Headquarters at the Prime Minister's Office, Study group on effective disclosure and governance of IP investment and utilization strategy, reference

https://www.kantei.go.jp/jp/singi/titeki2/tyousakai/ tousi_kentokai/pdf/corporate_governance.pdf

 Valqua website https://www.valqua.co.jp/wpcontent/uploads/pdf/ press/pr190516.pdf



Usui Nobuta INTELLECTUAL PROPERTY DIVISION

No.42

Winter 2022