

IPAS

Intellectual Property Acceleration program for Startups

14 Challenges that Startups Face and How to Deal with Them:

Lessons from Experiences in Intellectual Property
Strategy Support

IPAS2018-2019
Collection of cases

Objectives in Publishing “14 Challenges that Startups Face and How to Deal with Them: Lessons from Experiences in Intellectual Property Strategy Support”

For startups, new technologies and ideas are the core of their business, and it is important that these intellectual property (IP) are strategically protected and leveraged.

However, the challenge in their early years is that core technologies and ideas are not properly protected because the startup does not have the expertise to protect them or fail to acquire IP rights due to focusing too much on launching the business. Proceeding with product development, release, and collaboration with other companies without a strategy to protect and to leverage IP will result in the leakage of technologies and ideas, the release of counterfeit products, and a failure to generate profit initially expected from the business. In such a situation, valuable IP would not lead to the growth of the startup.

Given these circumstances, Japan Patent Office has been implementing a program called IPAS (Intellectual Property Acceleration Program for Startups), an acceleration program specializing in intellectual property, since FY2018. IPAS has allocated mentoring teams consisting of business and IP experts to work with 25 startups to develop IP strategies in accordance with their business in 2 years.

This booklet presents case studies describing the challenges found and the solutions considered during the 2 years of mentoring the startups in the IPAS program. The case studies are based on actual examples of IPAS support, but are modified in a way such that it's easier for readers to understand. Although this report does not cover all the challenges and solutions, we hope that it will help startups, business experts, and IP experts establish their future IP strategies.

April 2020

Japan Patent Office

Comments from startups who participated in IPAS 2018

Sonas, Inc.

The mentor highly appreciated our technology and its social significance and provided us with proactive support. He also gave us advice based on his extensive experience in the positioning of IP in our business strategy, filing strategy, negotiation strategy, etc.

Caulis Inc.

In terms of strategy, their advice on funding and HR policies helped us a lot. In addition, regarding IP, they advised us on prior art research and global judicial precedent.

MDR Co., Ltd.

We are very satisfied. We wish the support would last a little longer so that we could use their advice for our plans to take shape.

DeepFlow Co., Ltd.

We are very grateful to IPAS for choosing us for this project. It was very helpful for us to hear the opinions of the experts as we plan to develop our IP strategy and develop our business.

Axelspace Corporation

The mentor had a very deep knowledge and experience in IP, and we truly appreciate not only their support on IP strategy but also that we understood how to proceed with IP in practice.

Nanolux Co. Ltd.

Rather than providing formal and superficial advice, we received effective advice from the perspective of experts and experienced professionals on pitfalls that we actually face in terms of intellectual property and were able to compile them into actions and management guidelines to be implemented in our practical business activities.

Kyulux, Inc.

They offered us in-depth discussions and appropriate advice on priority issues with an understanding of our company's business structure. They also gave us advice on how we can improve by analyzing our patent filing standards, the patent portfolio our company and competitors, and our filing strategy.

aceRNA Technologies Co.,Ltd.

We really appreciate all your support provided to us in a limited amount of time.

Jiksak Bioengineering Co., Ltd.

We are very satisfied with this IPAS program. It helped us get our IP strategy off the ground. The IP strategy was supported by a patent attorney who was very strong in drug development and was very helpful.

In terms of business strategy, we received specific guidance on how to proceed with our business.

Metcela Inc.

Our mentor gave us specific strategies after the overall review. It was meaningful to have discussions while relating it to our industry-specific business.

Comments from startups who participated in IPAS 2019 (1st term)

LeapMind Inc.

We were able to realize the necessity of a company strategy for both IP and business. It was a great achievement to implement those strategies in the company.

AlSing Ltd.

We received a wide range of support for specific issues and advice on negotiations with other companies, including major corporations. Overall, we are very satisfied with the service.

A Star Quantum Inc.

We really appreciate the mentors for their support in preparing for the meetings every time in advance and explaining the significance and role of patents. We would also like to thank them for their support in gathering information on IP. We would like to express our sincere gratitude.

Photo Electron Soul Inc.

Supported from the experts, we were able to investigate and discuss the challenges in IP protection which we had not been able to spend sufficient resources on. We obtained very meaningful results.

PI-Crystal Inc.

The experts pointed out IP issues we didn't notice and gave us sound advice and a wide range of IP strategies and solutions to our existing IP-related issues. They contributed to the improvement of our company's IP status. We received practical advice on the business side as well. We would like to express our gratitude.

Space Link Co., Ltd.

We could improve our company's IP policy and the mindset of our technicians towards patents through the explanations based on our own patents and related patents. In terms of business, we discussed our company's current internal and external environment and use them as an indicator for planning our business strategies.

MediGear International Corporation

Through the mentoring, we noticed issues that we were not aware of before. Thank you for this valuable opportunity.

Braizon Therapeutics, Inc.

We received useful advice with specific examples. The president of our company also participated in mentoring, and we realized the importance of intellectual property in a startup company. Thank you for this valuable opportunity.

Metabologenomics, Inc.

With an understanding of our company's business direction and management approach, they offered support for our IP and business strategies. We were glad that the support was not just textbook knowledge and theories but was tailored to our company's corporate culture. We are very grateful for the very useful advice every time.

Setsuro Tech Inc.

The detailed support regarding business operations was very helpful. When you're on your own, you tend to postpone issues, but we could examine some extremely important issues. We would be very grateful if we could consult with the experts from time to time in the future.

Comments from startups who participated in IPAS 2019 (2nd term)

Tsubota Laboratory, Inc.

The mentor worked with empathy, looking at the issues from our perspective. Thank you very much.

Alivas Inc.

The mentor was very kind and enthusiastic, and we were able to review and evaluate our IP as a whole and were very satisfied with the result of IPAS.

QunaSys Inc.

We are currently in a phase of accelerated product development and business operation, and it was very helpful to gain a fresh view of our IP strategy.

BionicM Inc.

We received advice on the challenges of existing IP and actions needed to be taken. We were able to deepen our understanding through case studies on other companies. We are very grateful for the opportunity to understand the importance of IP strategies and thinking IP.

UBIENCE Inc.

The mentor helped us sort out the issues and identified challenges from the perspective of differentiation from our competitors. In biotechnology, IP accounts for a high percentage of our strategy, and the lessons gave us a big boost. The mentoring was beyond our expectations. Thank you very much.

Column 1

Intellectual Property Rights

The main IP rights include patent rights, design rights, trademark rights, and copyrights. The following is a brief introduction to the characteristics of these rights.

1. Patent Rights

A patent right is a right granted for "technology". Technology includes products, simple methods, and methods of production. Obtaining a patent allows exclusive use.

However, in order to obtain a patent, the content of the technology must be disclosed. Therefore, depending on the content of the technology, it is important to carefully consider whether you should obtain a patent or keep it secret as know-how.

2. Design Rights

A design right is a right concerning the "design" of an object. For example, even if there are no technically new features, if the design is new, you may protect your product by obtaining a design right.

3. Trademark Rights

A trademark right is a right to use a name and symbol for products and services. A symbol is very important and represents a company's product or service. In recent years, it has become more common for third parties to obtain trademark rights in foreign countries for trademarks that are famous in Japan. For this reason, it is important to consider the acquisition of trademarks in Japan and abroad based on your company's business development.

4. Copyrights

A copyright is a right granted automatically by creating a "work". For example, the source code of a program is also a copyrighted work. It should be noted that open source code, which has been attracting a lot of attention in recent years, is generally not copyright-free.

Table of Contents

1	What is IPAS?	6
1	Formulation of IP strategy in accordance with the business environment	6
2	Mentoring team system	6
2	Challenges found in the program and their solutions	7
	Introduction: Startup challenges found during the program	7
	Challenge 1: Narrowing down and prioritizing tasks	9
	Challenge 2: Clarifying the customer value of products and services	11
	Challenge 3: Creating effective licensing businesses	13
	Challenge 4: Using IP to raise funds	15
	Challenge 5: Determining between patent and know-how protection	17
	Challenge 6: Dealing with rights ownership based on university or joint research results	19
	Challenge 7: Utilizing IP such as algorithms in software	21
	Challenge 8: Strategic planning to prolong patent exclusivity	22
	Challenge 9: Dealing with core technology not sufficiently protected by patents	24
	Challenge 10: Understanding the patent landscape around your technology and taking necessary actions	26
	Challenge 11: Thoroughly considering agreements and terms of service	28
	Challenge 12: Clarifying your questions to experts	30
	Challenge 13: Sharing IP information within your company	32
	Challenge 14: Teaching the necessity of IP strategy in your Company	34
3	Conclusion	35

Columns

Column 1 : Intellectual Property Rights	4
Column 2 : Procedures and Timeframe for Obtaining IP Rights	23
Column 3 : What to do when disclosing your invention prior to filing	30

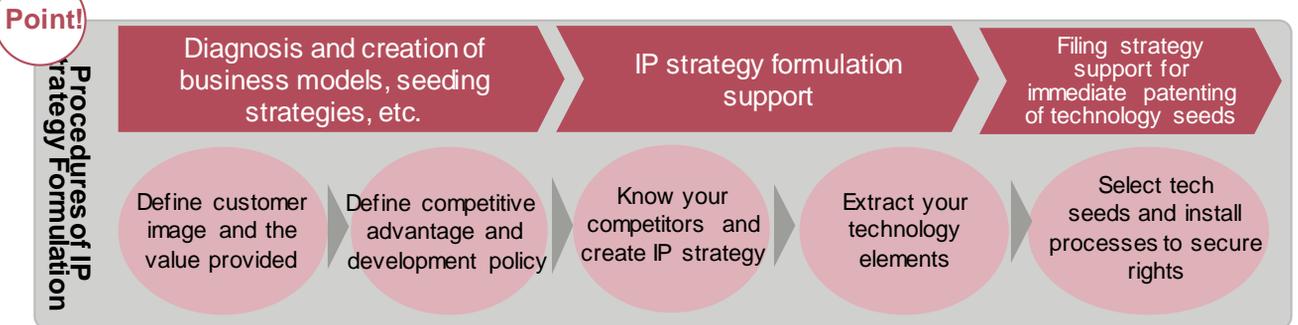
1 What is IPAS?

1 Developing IP strategy in line with business

In a startup founded on innovative technologies and ideas, the technologies and ideas themselves are important assets. Thus, it is important to formulate an "intellectual property strategy" that includes policies and systems for acquiring rights, accumulating know-how, and obtaining licenses, etc.

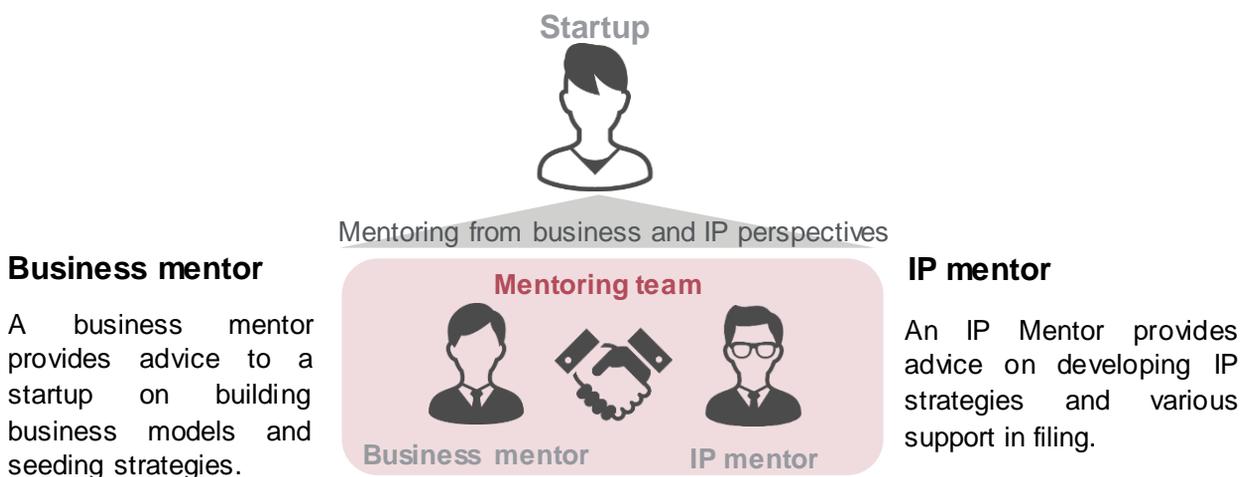
However, there is an issue that in the early phase, startups are often too focused on launching the business, causing a shortage in resources to protect know-how and securing rights, resulting in inadequate protection of technologies and ideas.

Thus, in the IPAS program a mentoring team comprising business and IP experts was created to help diagnose appropriate business models and seeding strategies for startup businesses and to develop IP strategies.



2 Mentoring Team System

IPAS mentoring team consists of a business expert and an IP expert. In many cases, startups in their early stages need to refine their business and brush up on their business model. They can formulate an IP strategy that will help the startup company grow with mentoring provided by both business and IP experts.



2 Challenges found in the program and their solutions

Introduction: Startup challenges found during the program

In the IPAS program, we found the following 14 challenges that startups often face.

The following pages will provide details of the challenges and case studies of mentoring to find solutions.

If you find an issue that your company faces, visit the corresponding page.

	Issue	Case	Page
Diagnosis and creation of business models, seeding strategies, etc.	Challenge 1: Narrowing down and prioritizing tasks	<ul style="list-style-type: none"> Deciding on the top priority field to enter based on technological strong points and the concerns of prospective customers Determining the core business by clarifying the relationship between technical developments and business to be created across multiple projects 	 p 9
	Challenge 2: Clarifying the customer value of products and services	<ul style="list-style-type: none"> Reaching out directly to prospective customers to have a good grasp of their concerns Considering the whole value chain to know where to position your company 	 p11
	Challenge 3: Creating effective licensing businesses	<ul style="list-style-type: none"> Considering licensees based on the structure of the industry and the licensee's sales capabilities Preparing multiple schemes such as licensing businesses in collaboration with other companies 	 p13
	Challenge 4: Using IP to raise funds	<ul style="list-style-type: none"> Explaining to investors your issues in IP and how you will address them Paying attention to how you illustrate the market when explaining a customer acquisition scenario 	 p15
IP Strategy Formulation Support	Challenge 5: Determining between patent and know-how protection	<ul style="list-style-type: none"> Using the help of experts and determining whether to keep technology confidential or to acquire rights Paying maximum attention to what parts to be kept secret in manufacturing contracts with foreign companies 	 p17
	Challenge 6: Dealing with rights ownership based on university or joint research results	<ul style="list-style-type: none"> Taking measures to exclusively use the rights acquired for a previous employer Clarifying the IP rights of your company in a contract when conducting joint research 	 p19
	Challenge 7: Utilizing IP such as algorithms in software	<ul style="list-style-type: none"> Filing patent applications that embodies applications in relation to specific inputs and outputs 	 p21
	Challenge 8: Strategic planning to prolong patent exclusivity	<ul style="list-style-type: none"> Prolonging the period of exclusivity by acquiring rights in phases 	 p22

2 Challenges found in the program and their solutions

Introduction: Startup challenges found during the program

	Issue	Case	Page
Filing Strategy Support	Challenge 9: Dealing with core technology not sufficiently protected by patents	<ul style="list-style-type: none"> Strengthen the protection of your core technology by filing patents on peripheral technologies Filing a divisional application to strengthen protection for your technology in order to protect current MVP(*)s 	 p24
Others	Challenge 10: Understanding the patent landscape around your technology and taking necessary actions	<ul style="list-style-type: none"> Responding calmly to a competitor's patent filing by accurately understanding the application status and reasons for rejection Deciding on a course of action based on your relationship with right holders of any existing patent 	 p26
	Challenge 11: Thoroughly considering agreements and terms of service	<ul style="list-style-type: none"> Being aware of the theory of contract negotiation before negotiating with large companies Consulting with experts and preparing terms and conditions that fit your services 	 p28
	Challenge 12: Clarifying your questions to experts	<ul style="list-style-type: none"> Having an expert review technology to see if patent requirements are met Utilizing experts to obtain a patent with a wide scope of rights 	 p30
	Challenge 13: Sharing IP information within your company	<ul style="list-style-type: none"> Effectively managing the large number of patents you own Creating a methodology to pick up and find technologies of which rights can be acquired 	 p32
	Challenge 14: Teaching the necessity of IP strategy in your Company	<ul style="list-style-type: none"> Creating an internal environment to help others understand the necessity of an IP strategy 	 p34

(*) Minimum Viable Product: The simplest product with minimal features

Challenge 1: Narrowing down and prioritizing tasks (1/2)

The technology can be applied to any field, but how can we know which field to focus on? Would narrowing down the options be better in considering entry in more than one business field?

Points

- Consider the marketability and maturity of the business based on whether there is “**a good match**” between the **strength** of your technology and the prospective customers’ **concerns**, in order to make it easier to narrow down the business field to enter.
- Rank the importance of multiple businesses you wish to enter **by preparing a diagram of the relationship between technology development and business plans**.

Case Study①

Deciding on the top priority field to enter based on technological strong points and the concerns of prospective customers

1. Challenges of the Startup

The startup’s technology was AI-related based on superior algorithms. For this reason, this startup’s technology could be used in a variety of areas, and various customers entrusted the company to undertake contract development projects.

In this situation, this startup decided to aim for further growth and not to rely only on the contract development business. That’s when they decided to focus on the licensing business by utilizing their own technology.

However, they were unable to formulate a concrete plan for the licensing business because they hadn’t yet narrowed down the areas to enter, and they couldn’t have an image of prospective customers and value chain.

2. Support from IPAS

In response to the above challenges, the mentoring team decided to do brainstorming with the startup to produce ideas for the business.

Next, the team decided to narrow down the ideas that came up from a certain perspective.

In this case, they started by “matching” the strengths of the startup’s technology with the concerns of the prospective customer and then further narrowed down the list from the perspective of marketability and business maturity.

- **Match the strengths of technology with the concerns of prospective customers, taking into consideration the environment where the technology becomes effective.**



3. Key factors in this case

Customer value should be the starting point

In order to narrow down to the right business for your company, it’s important to consider not only the strengths of your technology, but also whether those strengths will solve your prospective customers’ problems.

Narrow down the business by adding other perspectives

Once businesses are found that match the strengths of the company’s technology and the concerns of the potential customers, it is important to narrow down the list by considering marketability and the maturity of the technology.

Challenge 1: Narrowing down and prioritizing tasks (2/2)

The technology can be applied to any field, but how can we know which field to focus on? Would narrowing down the options be better in considering entry in more than one business field?

Case study②

Determining the core business by clarifying the relationship between technical developments and business to be created across multiple projects

1. Challenges of the Startup

The startup was looking to diversify its business with their own technological capability.

With the start-up's technological capabilities, it looked like various businesses can expand, but given the limited human and financial resources, there were concerns that starting businesses concurrently would result in delays in development and launching the business due to a lack of resources, as well as the depletion of working capital due to concurrent development.

However, the startup couldn't decide which businesses to prioritize and focus on.

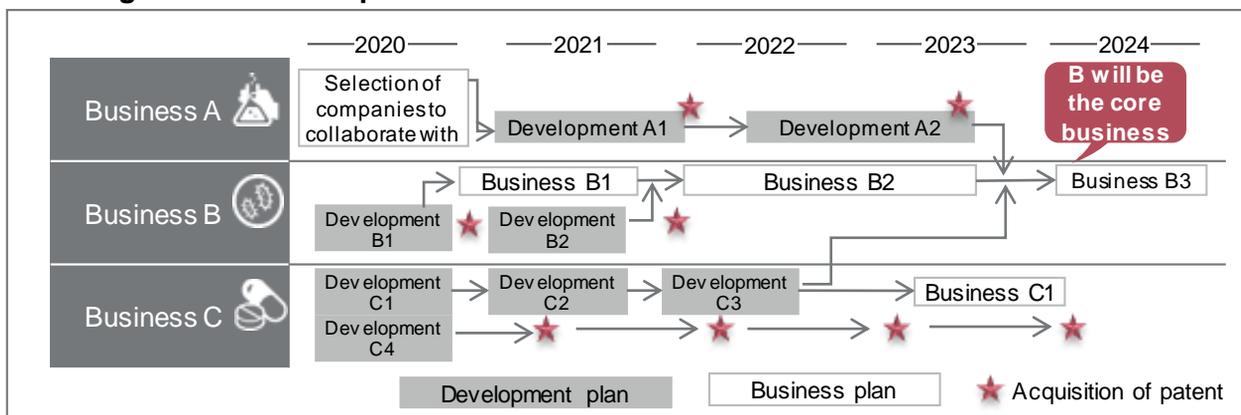
2. Support from IPAS

In response to the above challenge, the mentoring team organized the startup's roadmap for the next 5 years to "visualize" the priorities of the projects.

The mentoring team asked the startup to draw plans for future development of technology, IP rights, and business for each business. Next, the team organized each plan in chronological order by asking questions and prepared a roadmap with arrows showing how each is related to one another.

This showed the business that the arrows converge on is the core business for the startup.

● Image of the roadmap



In addition to narrowing down the core businesses mentioned above, a perspective from working capital is also important when determining business priorities. For example, it is also important to prioritize business that can generate stable income early in the launch period, and use the funds obtained from those businesses to start other businesses that will take a longer time to develop.

3. Key factors in this case

Draw a roadmap

By drawing a roadmap, you can organize which business to focus on the most and will be able to visualize priorities among multiple projects.

First, focus on business that will generate a steady income

In order to promote projects that require time and capital for development, such as drug discovery, starting with businesses that can generate stable sales is an effective approach.

Challenge 2: Clarifying the customer value of products and services (1/2)

How can we have a good grasp of the characteristics of expected products/services (value chain, etc.), customer needs, and the value of our products/services to the customers?

Points

- In addition to developing your products/services, understand **your customers, their needs, and the value your products/services offer**.
- Identify **your company's strengths** within your business.

Case Study^③

Reaching out directly to prospective customers to have a good grasp of their concerns

1. Challenges of the Startup

The startup had great technology but was so focused on developing the technology that they didn't have enough opportunity to think about who their customers were and what value their customers would find in their products.

For that reason, the startup was unable to identify which technical elements they should protect, and from who they should protect it from. Thus, they could not take effective actions regarding IP.

2. Support from IPAS

The mentoring team realized from discussions with the startup that they were unclear about the needs of potential customers and helped develop material for interviews to potential customers to investigate their needs. In addition, the team introduced potential clients to the startup.

In preparing the interview material, the mentoring team kept in mind: "to clarify the differences between our technology and that of other companies" and "to explain clearly what we can do now and what we need to be able to do in the future."

● Adapting your technology to the market



Have technological seeds, but customers are unclear.



Preparation of interview material and introduction of potential clients



Identification of prospective customers

3. Key factors in this case

Talk to a business expert

To make your technology valuable to your business, it is important not only to focus on developing the technology but also to provide opportunities for VCs, consultants, and other business experts to take a good look at your technology.

Reach out to prospective clients

To understand the concerns of prospective customers, it's important to interview them with sales materials and not just sit in front of the desk and think about it.

Challenge 2: Clarifying the customer value of products and services (2/2)

How can we have a good grasp of the characteristics of expected products/services (value chain, etc.), customer needs, and the value of our products/services to the customers?

Case study④

Considering the whole value chain to know where to position your company

1. Challenges of the Startup

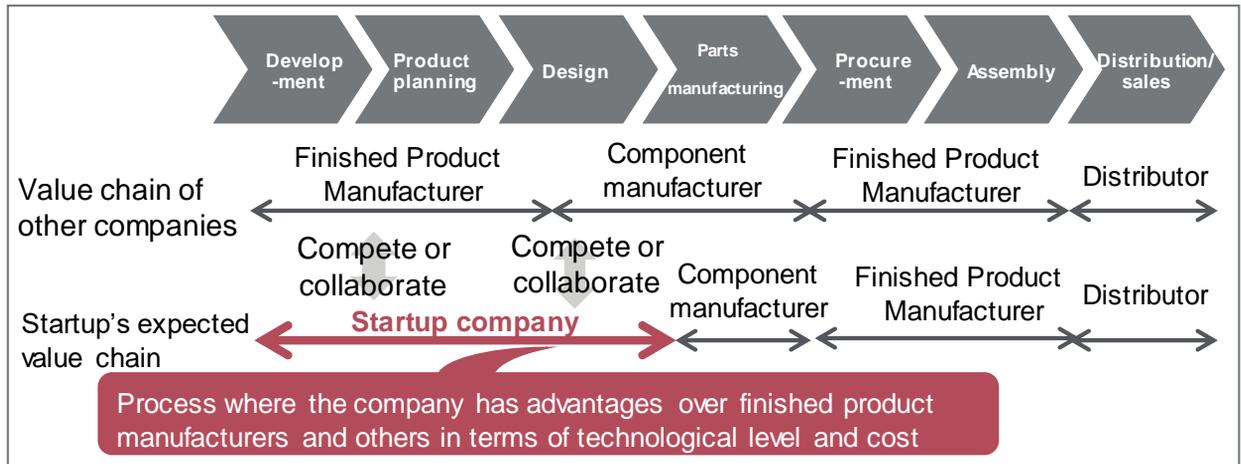
The startup had technology to do business, but they didn't have a clear idea of where their strengths lay in terms of business strategy. Also, they didn't have a clear understanding of where the core business patent was positioned in their business and what value they had and to which players in the field the strengths had value against.

2. Support from IPAS

The mentoring team believed that the cause of the above challenges was that the company had not sorted out which part of the value chain (flow in a business from development to sales) the company should take part in. Therefore, they prepared a diagram of the value chain for the business that the startup was working on. Next, the team identified which players were operating in each step in this flow, and in which of those steps the startup's technology would have a competitive advantage.

Lastly, they considered whether the players in the process where the technology had a competitive advantage could be viewed as collaborators or customers, or as competitors.

- **Specific image of the company's positioning in the value chain**



3. Key factors in this case

Draw a value chain

By drawing a value chain diagram of the industry structure of the business you are thinking of entering, you can identify the steps and prospective customers where your technology has an advantage.

Prepare an alliance strategy with other companies

If your technology has a competitive advantage in a certain process, think carefully about whether you want to collaborate or compete with other companies operating in the process.

Challenge 3: Creating effective licensing businesses (1/2)

How can we know whom to license to, what licensed business model patterns are available, and how to compare multiple business model patterns?

Points

- After **understanding the industry structure** and identifying potential licensees, decide on a licensee based on a **comprehensive view**, including factors such as each candidate's sales capabilities.
- Consider multiple schemes, such as the **licensing business in collaboration with other companies** and develop the most advantageous business scheme for your company.

Case study^⑤

Considering licensees based on the structure of the industry and the licensee's sales capabilities

1. Challenges of the Startup

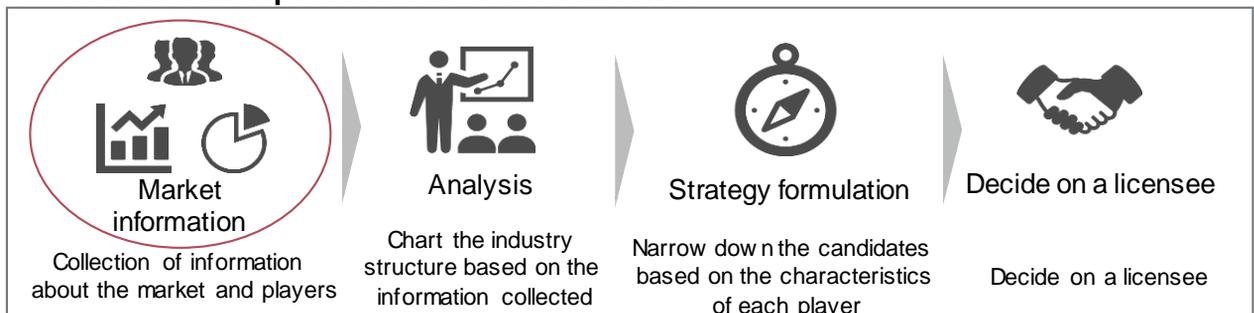
The startup had a patent on a reagent kit, but they didn't have a plan to sell its own product and thought that licensing the patent would provide a steady stream of income. However, because they had no practical experience in the licensing business, they didn't know effective ways to license a patent or to whom they should license it. For this reason, the startup envisioned licensing only to manufacturing plants they had a relationship with.

2. Support from IPAS

The mentoring team interviewed the startup and laid out the structure of the industry and players in a diagram. As a result, it became clear that besides the manufacturing plants, distributors of this reagent kit could be their candidate licensees.

The mentoring team then proposed that it would be better to license it to distributors. This was because they assumed that the market for the product needed to be expanded in the future, and distributors would have a network of laboratories and university laboratories that were the main potential customers.

● Consideration process to decide on a licensee



3. Key factors in this case

Organize the industry structure in diagrams

When considering who to license, it would be helpful to prepare a diagram of how the target industry is structured and what kind of players are there.

Narrow down candidates from a comprehensive perspective

When narrowing down candidate licensees, it is important to consider their network of potential customers, expected sales, etc. from a comprehensive perspective.

Challenge 3: Creating effective licensing businesses (2/2)

How can we know whom to license to, what licensed business model patterns are available, and how to compare multiple business model patterns?

Case study⑥

Preparing multiple schemes such as licensing businesses in collaboration with other companies

1. Challenges of the Startup

The startup was a company with advanced AI technology and was looking to enter the licensing business with that technology.

However, because their main work had been undertaking contract development business, they were not able to create a clear scheme for the licensing business. Thus, they were not able to make progress in their efforts to realize the licensing business.

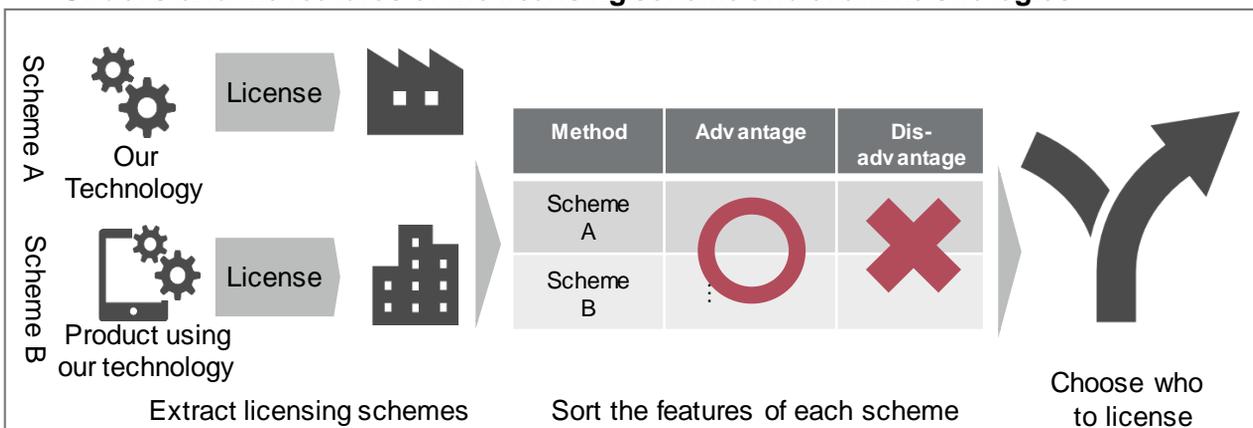
2. Support from IPAS

The mentoring team advised it was possible for the startup to prepare multiple licensing business schemes.

To be specific, there were two types of schemes. One was to license to a manufacturer of components using the company's technology, and the other was to license to the manufacturer of finished products that use the components using the company's technology. The features of each scheme were presented.

In the latter case, product sales were higher than in the former one, and license fees were higher, but it was necessary to work together with component manufacturers to improve the value of the components furnished to the finished product manufacturer, so a more strategic approach was required.

● Understand the features of the licensing scheme and examine strategies



3. Key factors in this case

Prepare multiple schemes

There are more than one scheme of "licensing businesses". It is important to choose the most appropriate scheme, considering the company's technological superiority, sales of potential customers (licensees), and resources available to the company to operate the business.

Consider licensing business collaborating with other companies

Although there are hurdles to clear, it may be useful to license to completed product manufacturers a product combined with another company's product to achieve greater sales.

Challenge 4: Using IP to raise funds (1/2)

How can we effectively appeal our company's intellectual property to investors to raise funds?

Points

- Clearly explain to investors your **issues in IP and how you will address them**.
- Identify the value of your technology and prepare a business plan that will increase your market share **in line with that value**.

Case study⑦

Explaining to investors your issues in IP and how you will address them

1. Challenges of the Startup

The startup was looking to raise Series A funding soon but was unable to prepare a spot-on presentation because they didn't know how to explain to investors about IP, what investors were looking for, etc. As a result, it seemed likely that the amount of investment might not reach the target amount.

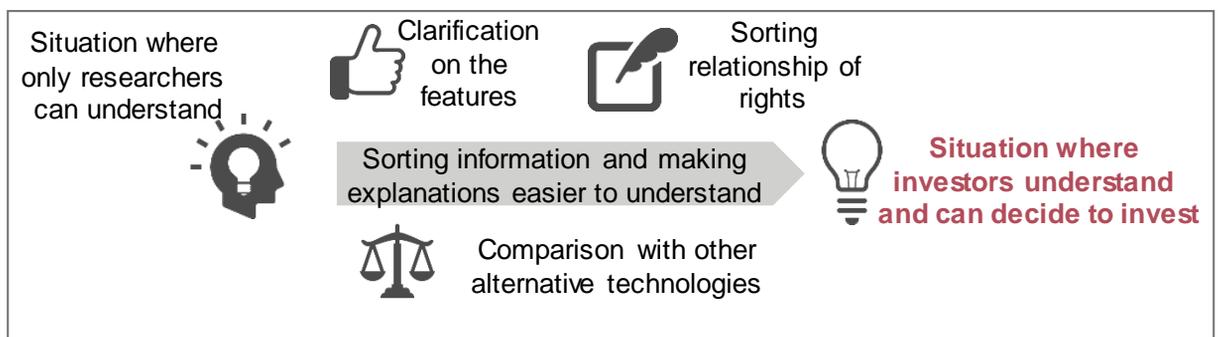
2. Support from IPAS

The mentoring team, having a business expert as a core member, advised on the investor's perspective and response.

The startup had received an exclusive license for a patent from the university, but they realized through mentoring that the patent alone was not sufficient to protect the startup's current core technology.

In the above situation, the mentoring team advised the startup to explain "they had received an exclusive license from the university" and that "they were aware of the IP issues and have prepared specific measures to address those issues".

- **Sort out the situation so that investors can decide to invest**



3. Key factors in this case

- **Clearly explain the issues and how to address them**

It is effective to explain to investors that you are aware of your issues and that you have a clear plan to deal with them.

- **Licenses are better with exclusive rights**

When receiving a license such as patent from another company, if possible, it is important to have an exclusive license because investors may look to see if there are any other licensees.

Challenge 4: Using IP to raise funds (2/2)

How can we effectively appeal our company's intellectual property to investors to raise funds?

Case study⁸

Paying attention to how you illustrate the market when explaining a customer acquisition scenario

1. Challenges of the Startup

The startup was looking to explain their customer acquisition scenario to investors using a market share segmented by using common factors.

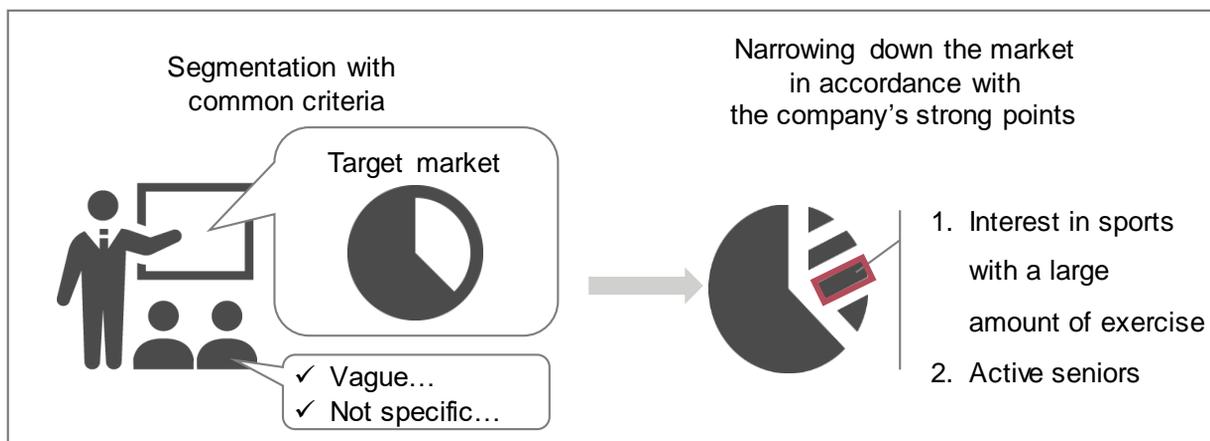
To be specific, they explained "we will capture 5% of active seniors in three years and 8% of all seniors in five years". However, the investors were concerned that the acquired market share might not be as large as they thought, considering the innovative technology the startup had.

2. Support from IPAS

The mentoring team advised the startup that the criteria for segmentation should be more in line with the value that the company offered.

The startup was producing machines that could powerfully assist people over a long period of time. Therefore, the team advised it to narrow down the target market to "active seniors who want to be active in sports with a large amount of exercise" and to explain that it would acquire a 50% share in that specific market.

● Narrowing down the market in accordance with the company's strong points



3. Key factors in this case

Target the market based on the value of your technology

By targeting a market based on the value of your technology, you will be able to express the characteristics of your technology to investors in a straightforward manner.

Aim for a high market share by narrowing down the target segment

It's important to identify a customer profile that matches the features of your technology and to explain to investors your strategy to increase your share in that market.

Challenge 5: Determining between patent and know-how protection (1/2)

How can we decide whether to keep technology confidential as know-how or to acquire rights when outsource processes such as manufacturing?

Points

- When deciding whether to keep the company's technology confidential or to acquire rights, it is necessary to **consider the nature of the company's technology and the manufacturing process of its products.**
- **Even in the case that you prefer to keep information confidential,** discuss it with a professional to prevent leakage of the technology.

Case study⁹

Using the help of experts and determining whether to keep technology confidential or to acquire rights

1. Challenges of the Startup

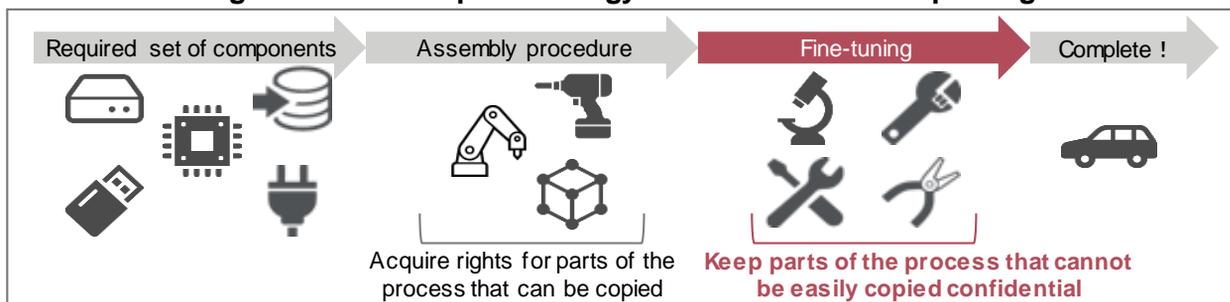
The startup was preparing to outsource mass production of the product to a domestic manufacturing contractor.

The startup was aware of the risks of reverse engineering by the outsourced contractor and knew that protecting the technology by keeping it confidential and acquiring rights was effective, but didn't know how to identify the know-how to be kept confidential and what rights to acquire, and thus, they could not proceed with the outsourcing agreement.

2. Support from IPAS

The mentoring team reviewed the list of manufacturing processes prepared by the startup and decided to keep those parts of the process that could not be easily copied by other companies confidential, such as processes that were fine-tuned by employees based on their intuition.

● Determining whether to keep technology confidential or to acquire rights



In addition to the above, they advised that it is general practice to acquire rights of technology that can easily be revealed, and to keep technology that can only be performed by specific engineers confidential as know-how. They also advised that all three requirements, "secrecy management", "usefulness" and "non-public domain" must be met to protect the technology as a trade secret under the Unfair Competition Prevention Act if they want to keep the technology confidential.

3. Key factors in this case

Discuss with an expert

When considering measures for confidentiality and rights acquisition and countermeasures against technology leaks, it is important to consult with an expert because specialized knowledge is useful.

In principle, acquire rights of technology that can easily be copied

Particularly in manufacturing, it is fundamental to acquire patent rights where technological contents can be easily copied.

Challenge 5: Determining between patent and know-how protection (2/2)

How can we decide whether to keep technology confidential as know-how or to acquire rights when we outsource processes such as manufacturing?

Case study¹⁰

Paying maximum attention to what parts to be kept secret in manufacturing contracts with foreign companies

1. Challenges of the Startup

The startup had a plan to outsource manufacturing to an overseas factory.

The initial plan was to have the contractor procure and manufacture all necessary components. However, in foreign countries, we should expect an environment where perfect prevention measures for reverse engineering do not exist. The concern was that the startup's technology would easily leak out with this type of outsourcing.

2. Support from IPAS

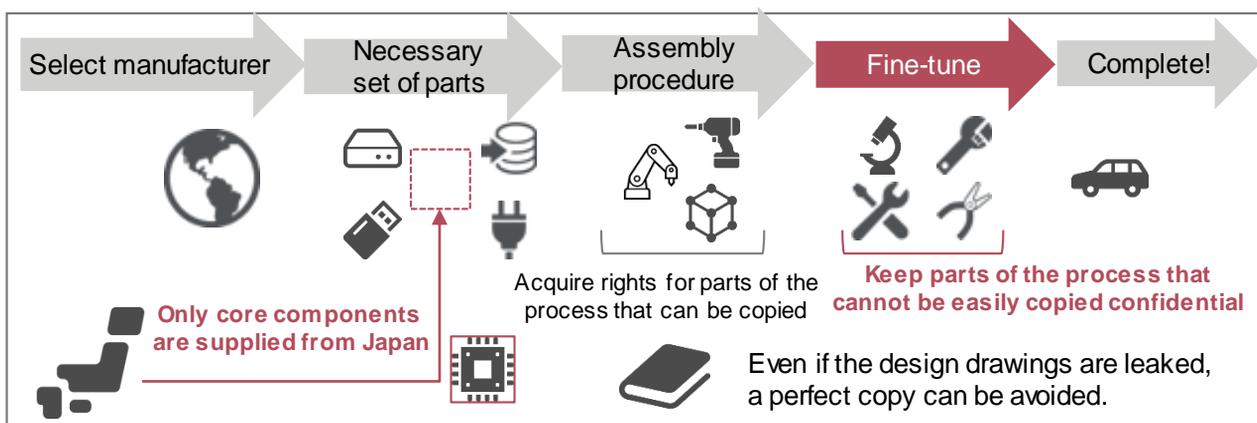
The mentoring team considered the situation and proposed that we review the outsourcing scheme.

Specifically, the mentoring team proposed to procure the components related to the core technology of the startup's product in Japan and supply it to the contractor.

In addition, the team proposed that the placement and spacing of the key components of the product would be kept confidential as their know-how. Such measures are expected to reduce the quality of counterfeit products because even if the design drawings are leaked, since imitators would not understand the reasons for such placement and spacing, and thus may not be able to accurately copy the product.

The team also advised that even when procuring in Japan, the name of the supplier should not be revealed locally, and that measures should be taken to prevent the leaking of drawings submitted to government agencies for approval to local competitors.

● Countermeasures to reverse engineering in overseas manufacturing



3. Key factors of this case

Leave room for domestic procurement

Even if you outsource manufacturing to a foreign company, parts relating to the core technology should be manufactured or procured domestically, which will deter reverse engineering.

Do not explain the internal structure of the product or why it is structured that way

Particularly in foreign countries, design drawings can easily be leaked, so to prepare for the leakage, it is important not to explain the inner workings of the product or the reasons, or to make it a black box.

Challenge 6: Dealing with rights ownership based on university or joint research results (1/2)

How can we avoid disputes in ownership and licensing of rights based on university or joint research results?

Points

- Pay particular attention in the ownership of **rights based on university and joint research results**.
- In the case of joint research, understand the key points of the **scope of rights that you must be aware of**.

Case study¹¹

Taking measures to exclusively use the rights acquired for a previous employer

1. Challenges of the Startup

The CEO of the startup had patented technology he had invented in a university before he started his business, which was registered in the name of the university.

The CEO started a business that uses this technology and needed to negotiate with the university to assign the patent or have it licensed but was unable to enter negotiation because he did not know where to set the goal of the negotiation and how to negotiate.

2. Support from IPAS

The mentoring team listed options to obtain the patent or have it licensed and laid out the advantages and disadvantages. Next, the team established an ideal goal and a minimum set of conditions to be adhered to. Ideally, the goal was to acquire the rights, but since no other company was expected to be able to use this technology, the startup decided that at minimum it would be acceptable to obtain a license from the university.

● Options to use other company's patented technology and its characteristics

What is possible	All rights obtained	Partial acquisition of rights	Exclusive license	Exclusive license with sublicense	Exclusive license	Non-exclusive license
Use the technology	Yes	Yes	Yes	Yes	Yes	Yes
Monopoly on technology	Yes	Other right-holders can also use*	Yes	Basically right-owner can also use*	Basically right-owner can also use*	No
Licensing	Yes	Requires consent of other right-owners*	Yes	Yes	No	No
Injunction	Yes	Yes	Yes	Basically not possible*	Basically not possible*	No
Remarks	Highest cost of all options	Sharing rights creates restrictions	Registration at the Patent Office required. Right-owner cannot use	Contract production and license business possible	Contract production and license business not possible	Lowest cost of all options

*Note: This describes a general case, and specialist consultation is recommended depending on the situation.

3. Key factors in this case

Keep investors in mind when setting goals for negotiations

Receiving only a non-exclusive license from the university may result in a lower valuation from investors. If possible, try to purchase the rights or obtain an exclusive license or an exclusive license with a sublicense. It is advisable to obtain at least an exclusive license.

Obtain exclusive rights if possible

In the case of a non-exclusive license, the university can license the technology to other companies. The license will not allow the startup to monopolize the technology. On the other hand, acquiring patents or obtaining an exclusive license, will enable monopolizing the technology.

Challenge 6: Dealing with rights ownership based on university or joint research results (2/2)

How can we avoid disputes in ownership and licensing of rights based on university or joint research results?

Case study¹²

Clarifying the IP rights of your company in a contract when conducting joint research

1. Challenges of the Startup

The startup had many engineers and was fully aware of the importance of IP, however, there was a lack of human resources who sufficiently understood the importance of clarifying rights and obligations of each other in the contract. As a result, they started the research without clarifying who will own the rights of research results or that the result will be jointly owned. Thus, when there was a development that could be patented, it was not clear if the startup can own the IP rights or not.

2. Support from IPAS

The mentoring team provided the following four pieces of advice when entering a contract with joint research.

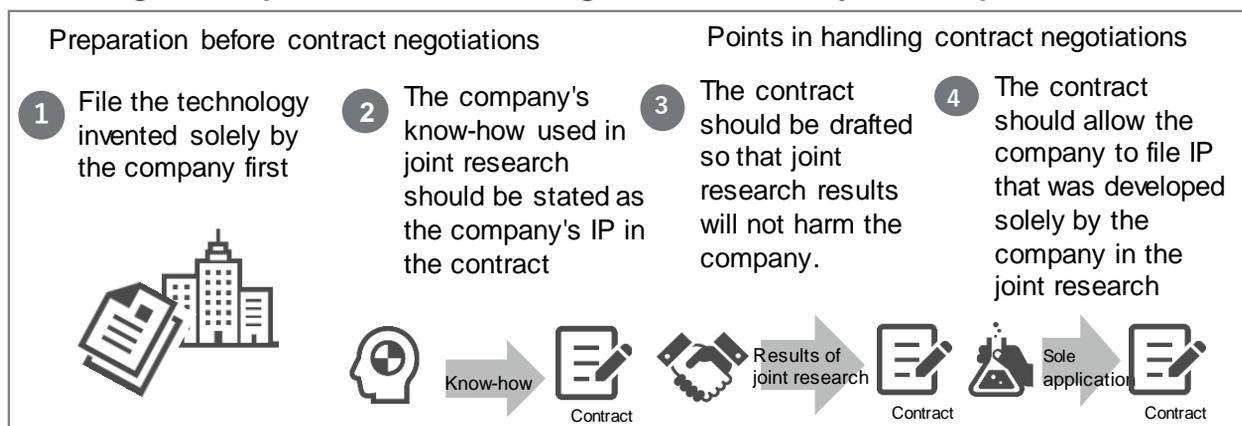
First, an application should be filed for any content invented solely by the company before the joint research.

Second, the company should confirm its know-how before the joint research, divide it into know-how to be used and not to be used in the joint research, disclose only the know-how to be used as the company's know-how, and make sure to state in the contract that it is the company's IP.

Third, the contract should be made in a way such that the results of the joint research will not be detrimental to the company. (Example of disadvantages in a contract: the other party acquires all the rights and the company will not be able to use it in the future, etc.).

Fourth, the contract should at least allow the company to file the parts of IP on its own that was developed solely by the company in the collaborative research.

● Things to keep in mind when entering a contract with a joint R&D partner



3. Key factors in this case

Close a contract with others in the case of joint research and development

In joint research, you and your co-researchers may argue about the ownership of IP rights to the research results. Therefore, it is important to agree on the rules in the joint research and development contract before the research starts.

Own the rights for the results that benefit your company

The scope of rights to secure in joint research and development is very important. Make every effort to secure your own rights to research results that are beneficial to your company with the help of experts and others.

Challenge 7: Utilizing IP such as algorithms in software

How can we utilize IP in technology fields that are difficult to prove infringement such as software?

Points

- Make the process of the algorithm abstract and file with an application that **embodies applications in relation to specific inputs and outputs.**

Case study¹³

Filing patent applications that embodies applications in relation to specific inputs and outputs

1. Challenges of the Startup

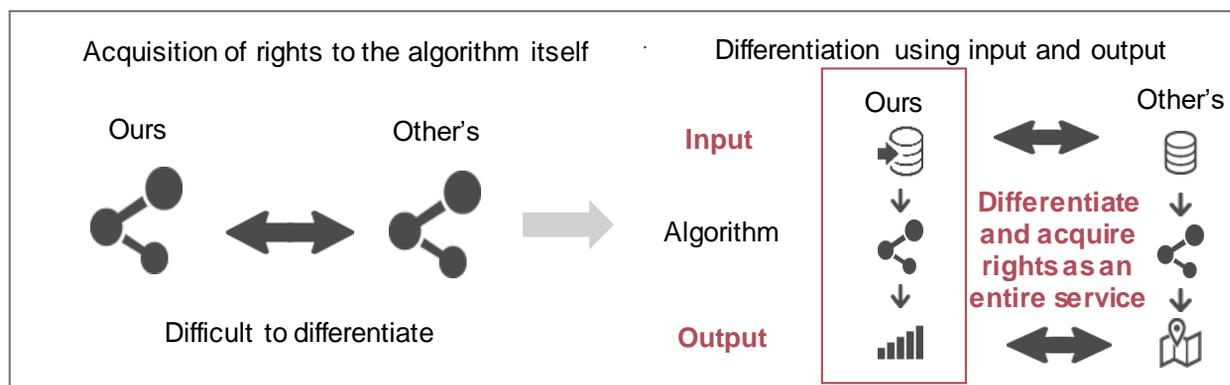
The startup wanted to work on a service that uses AI to analyze large amounts of personal data. However, even if the algorithm was patented, the algorithm cannot be seen from outside, and it is difficult to know if other companies are using the technology without permission when disclosing the algorithm through patent applications, so they did not know how to protect their technology or idea.

2. Support from IPAS

The mentoring team proposed to claim a patent as an application using the algorithm, not as the algorithm itself.

Specifically, they proposed to file a patent for an application that defined the input, the abstract process of its algorithmic processing, and the output.

● Acquisition of rights in the entire service including the algorithm



3. Key factor in this case

Focus on input and output

Even if the algorithm itself is patented, you cannot tell whether other companies are using the rights. Therefore, it is important to abstract the algorithm processing and to consider obtaining rights focusing on the input data and the output that comes out from the algorithm processing.

Challenge 8: Strategic planning to prolong patent exclusivity

How can we sufficiently implement a strategy to maximize the substantial period of exclusivity of patent portfolios in fields such as pharmaceuticals and biotechnology requiring a long R&D period?

Point

- In fields where patent validity is very high, such as pharmaceuticals and biotechnology, it is important to have a filing strategy to secure a long substantial **exclusivity period**.

Case study¹⁴

Prolonging the period of exclusivity by acquiring rights in phases

1. Challenges of the Startup

The startup was satisfied with a single patent because they didn't know that they could extend the substantial exclusivity period of their products by phasing patent application process, and they missed the opportunity to extend the substantial exclusivity period of their products.

2. Support from IPAS

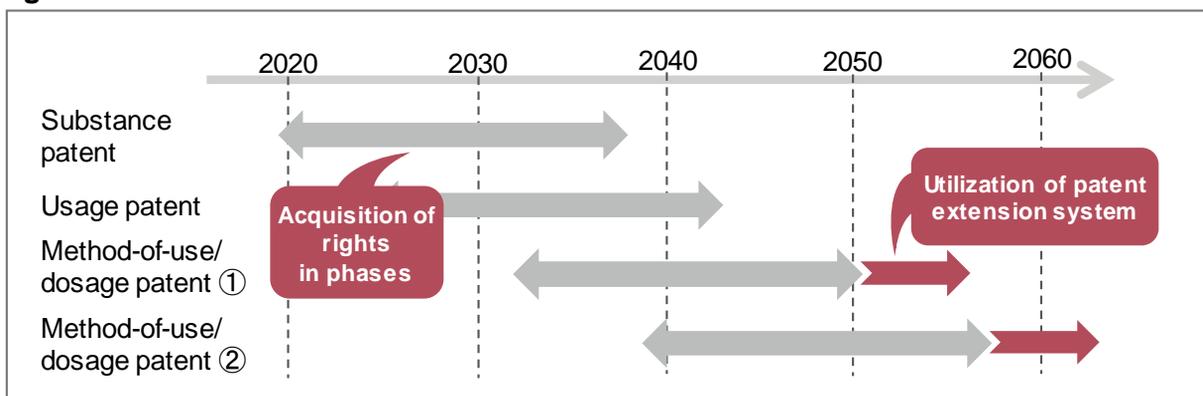
The mentoring team received an explanation of the status of the product and IP acquisition from the startup and prepared a current IP portfolio.

In doing so, they identified areas that could still be strengthened and realized that phased patenting of these could substantially extend the exclusivity period of the product.

In addition, they advised that, in the case of pharmaceutical patent, there is a system to extend the duration of a patent by up to 5 years for the period of time it took from the patent registration or the start of clinical trials to pharmaceutical approval (the period during which the patented invention could not be conducted to obtain pharmaceutical approval).

They also established a strategy for future IP rights by organizing the order in which patent applications should be filed.

● Prolonging the exclusivity period through a phased approach to the acquisition of rights



3. Key factors in this case

Prolong exclusivity period

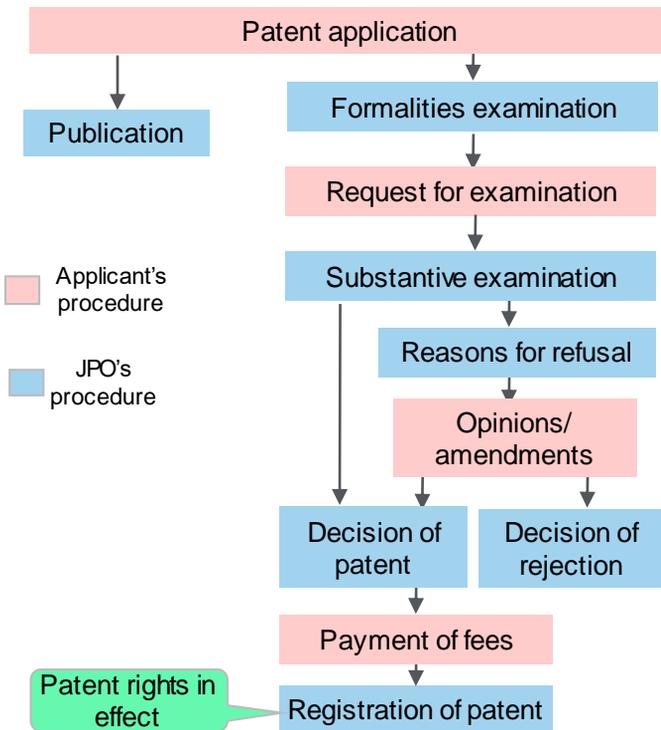
The drug discovery business in particular requires a large amount of time and funding for research and development, so we need to secure as long an exclusive sales period as possible to increase our return on investment.

Consider phased approach for acquisition of rights

Various companies have implemented phased filing and patenting methods, so refer to prior application examples of similar products and consider your company's filing strategy.

In the field of intellectual property, we will introduce procedures and timeframe for patent rights, both domestic and foreign.

Flow of processing patent filings



(Source) Japan Patent Office website
Must read if filing for the first time: How to File a Patent Application

1. Procedure of patent application process in Japan

When the JPO receives a patent application, a "formality examination" is done to check for any formality deficiencies.

Next, a request for examination can be made within 3 years from the filing date, and "substantive examination" begins (failure to file a request for examination within 3 years from the filing date will cause the patent application to be deemed withdrawn).

During the "substantive examination", the examiner examines the prior literature and examines whether there are reasons for rejection. If there are reasons for rejection, the examiner issues a "notice of reasons for rejection".

In response to the notice of reasons for rejection, the applicant can submit an "opinion in writing" stating that the reasons for rejection are unfounded and an "amendment" to amend the scope of the claims.

If the reasons for rejection are successfully resolved with the claim, the examiner will issue a "decision of patent", and a patent will be obtained by paying the patent fee. If the reasons for rejection are not resolved, the examiner will issue a "decision of rejection".

The average time between the request for examination and the granting of a patent is normally about 14 months.

However, in the "Super Accelerated Examination", available to certain companies such as startup companies, it is possible to obtain a patent in about 2.5 months on average from the time you request for examination.

Scan the QR code or visit our website for Super Accelerated Examination
<https://www.jpo.go.jp/system/laws/rule/>

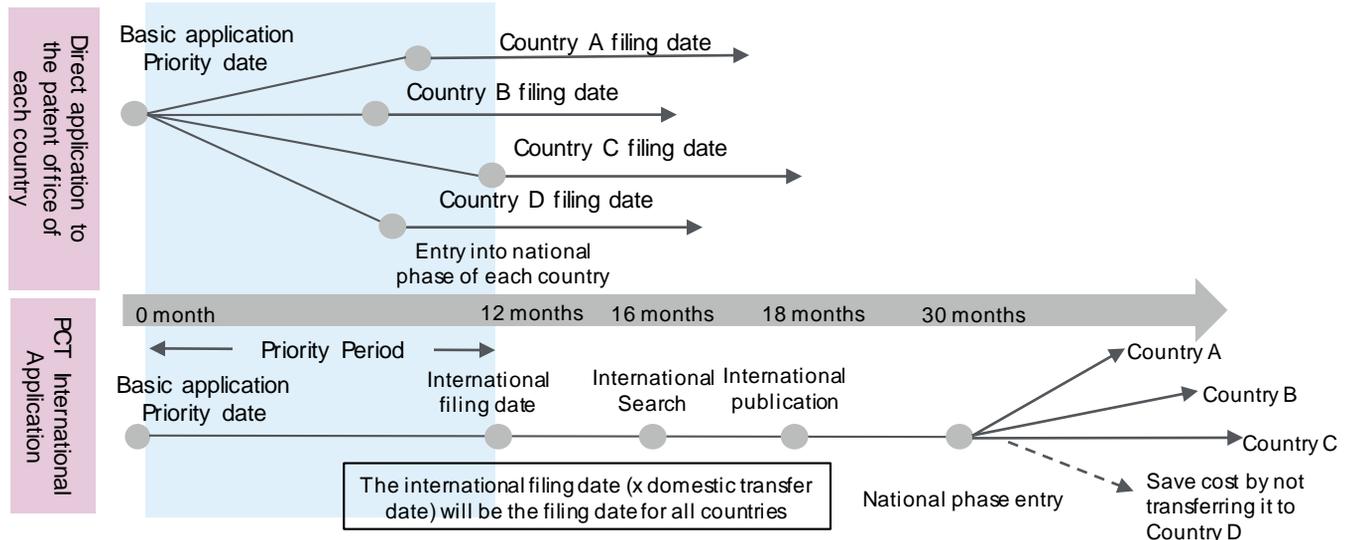


2. Procedures of an international patent application

Two routes are available to file an international application: "direct application route" and "PCT route". In the "direct application route" the filing is made to each of the countries in which you wish to obtain a patent right. However, in the case of a foreign application claiming the priority right under the Paris Convention, if the application is filed in a second country (foreign country) claiming priority under the Paris Convention within 1 year from the filing date in Japan, the date of the original patent application will be used for judgment.

In the case of "PCT route", an international application should be filed within 1 year of filing a domestic application (basic application), and then within 30 months of filing the basic application, the application will enter the national phase where you wish to obtain a patent.

As you may add claims within 1 year of filing a domestic application, you can monitor the market trend and add claims and decide which foreign country to file your application in 30 months after the domestic application is filed.



Source: Revised from the textbook "Intellectual Property Rights System Information Session 2018 (for practitioners)"

Challenge 9: Dealing with core technology not sufficiently protected by patents (1/2)

How can we better position the rights of our core technology to earn income from other companies, protect the company from competitors, or target specific parts of the value chain?

Points

- Check if the **scope of your rights matches the nature of your business**.
- If there are gaps, protect your core technology as soon as possible by getting additional patents, etc.

Case study¹⁵

Strengthening the protection of your core technology by filing patents on peripheral technologies

1. Challenges of the Startup

The startup believed that its current core technology was already protected by the patents they had already filed. However, because they were primarily focused on obtaining patent rights when they applied for these patents, they did not examine the content and scope of their applications, and their current business has shifted a bit from what they had in mind when they applied for the patents. As a result, they found that their current business was not fully protected by the patents they have now.

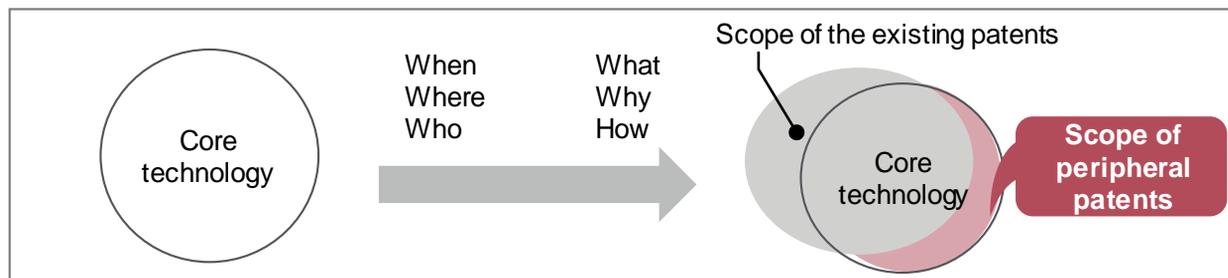
At the time, the startup was in the process of negotiating a joint R&D contract with a major company and there was a concern that if this core technology was not protected, the company's bargaining power with the major companies would be compromised, and there was a concern of not being able to conclude contracts in the favor their own company.

2. Support from IPAS

The mentoring team proposed to file new patent applications for the peripheral technologies of the existing patents and to secure the peripheral patents.

In applying for the peripheral patents, the mentoring team examined the 5W1H of the business and made an adjustment in the business plan, and then identified what parts of the core technology were not protected by the existing patents.

● Protection of the company's core technology by acquiring peripheral patents



3. Key factors in this case

Envision your business in detail when applying

A patent is meaningful only when it is used in your business, not when it is obtained, and to try to obtain a patent with a specific business in mind when applying for a patent.

File additional applications for the parts that are not protected

If you realize that the patents you have already obtained do not protect your current technology or business, try to file additional applications to cover the scope of your business as much as possible.

Challenge 9: Dealing with core technology not sufficiently protected by patents (2/2)

How can we better position the rights of our core technology to earn income from other companies, protect the company from competitors, or target specific parts of the value chain?

Case study

Filing a divisional application to strengthen protection for your technology in order to protect current MVPs

1. Challenges of the Startup

The startup was looking to build their business on the core technology that the president of the company had acquired at the university. However, when the mentoring team identified the MVP (Minimum Viable Product: the simplest product with the minimum number of functions), they found that the existing patents were not sufficient to protect the MVP, and the concern was that the startup would not be able to compete with other companies that release similar products.

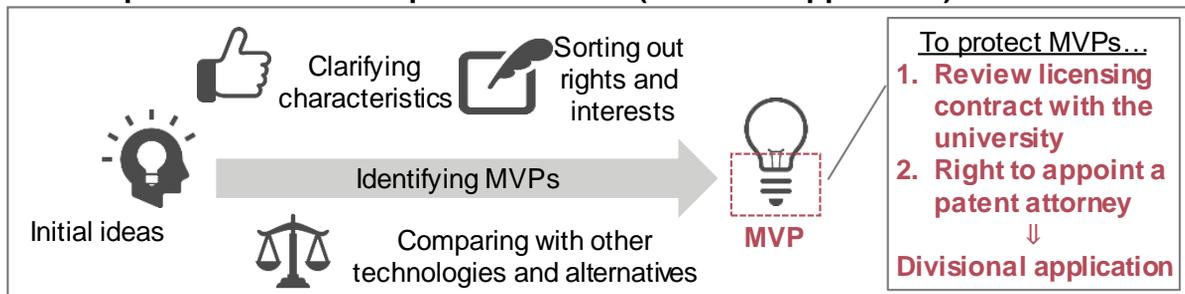
This was perhaps because the startup was still in the development stage and didn't have a concrete vision of the business, and the MVP was not yet clear at the time of filing the patent application.

2. Support from IPAS

The mentoring team identified the MVPs based on the value of the technology to their customers and what parts of it were not protected with existing patents.

Then, they proposed to protect the MVPs by filing a divisional application for the existing patents.

- **Examples of measures to protect the MVP (divisional application)**



The existing patent was obtained by the president of the company when he was at the university and was under the name of the university.

The expert proposed that the startup enter a licensing contract with the university and include a clause in the contract giving the startup the right to choose its own patent attorney in the event of a divisional application, etc. This would facilitate the formulation of policies for divisional applications and the handling of patent examinations.

3. Key factors in this case

Always be aware of the scope of existing patent rights

The core technology required for your business may be different at the time of filing a patent application and now. Therefore, it is important to regularly review the scope of existing patents and take the necessary actions.

Prepare an easier environment to reinforce your patents

If you have a patent license, you will need to negotiate with the licensor to strengthen the patent. Therefore, it is effective to take measures such as devising a license contract to ensure that the patent can be strengthened smoothly.

Challenge 10: Understanding the patent landscape around your technology and taking necessary actions (1/2)

How can we utilize search results of competitor's patents related to the product or core technology that we plan to develop?

Points

- Even if you realize that another company is filing an application for similar technology to your own, don't give up, but **deal with it calmly**.
- If a right holder already exists, decide on a course of action considering **your relationship with them** and **the damage to your company if the rights are exercised**.

Case study¹⁷

Responding calmly to a competitor's patent filing by accurately understanding the application status and reasons for rejection

1. Challenges of the Startup

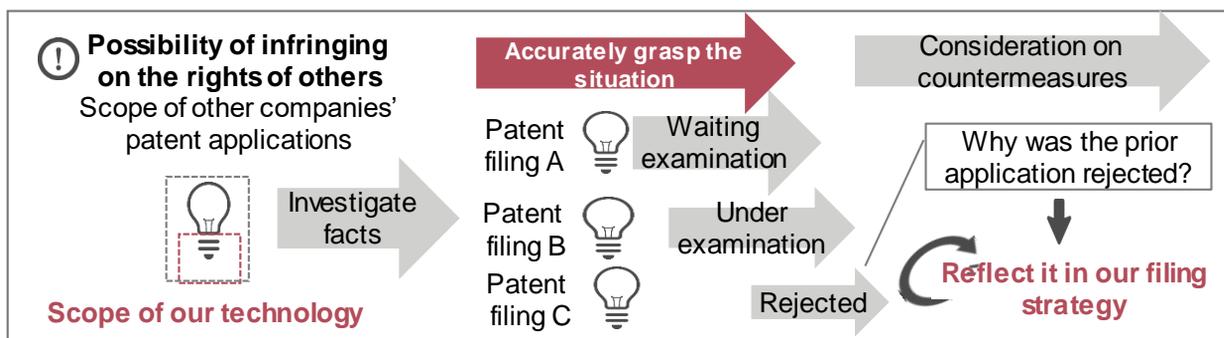
The startup was looking to develop a product, but a competitor had already filed a patent that was broadly conceptualized and had a broad scope. Although the startup did not expect the full scope of the application to be patented, they were not certain how to plan a patent filing strategy to differentiate themselves from the valid scope of the competitors' rights.

2. Support from IPAS

The mentoring team first investigated the patent application status and prosecution status in each country, around the technology areas of the startup.

As a result, they found that patents with a broad scope tended to be rejected in this area of technology. With respect to the patent filings of the competitor, the filing with a broad scope was rejected, and the other filings with narrower scopes were still pending and might not be patented.

- **Grasp the situation accurately even if there is a possibility of infringement and make it useful to your own filing strategy.**



In addition, the startup was looking to obtain patents with as wide scope of rights as possible, so the mentoring team analyzed the findings and discussed ways to help the startup obtain patents.

3. Key factors in this case

- **Keep calm when another company files an application**

Even if a patent application has been filed, we don't know if it will be granted as it is. Therefore, it is important to keep abreast of the prosecution status of patent applications filed by another company.

- **Learn from prior applications**

Analyze the content and status of other companies' patent applications in the areas in which your company is filing applications and make use of this information in your own applications.

Challenge 10: Understanding the patent landscape around your technology and taking necessary actions (2/2)

How can we utilize search results of competitors' patents related to the product or core technology that we plan to develop?

Case study¹⁸

Deciding on a course of action based on your relationship with right holders of any existing patent

1. Challenges of the Startup

The startup was an IT company with an advanced algorithm.

They thought patent search and review of patent applications related to its technology they did were not sufficient but didn't know how exactly to proceed with search and how to respond to the results of it.

2. Support from IPAS

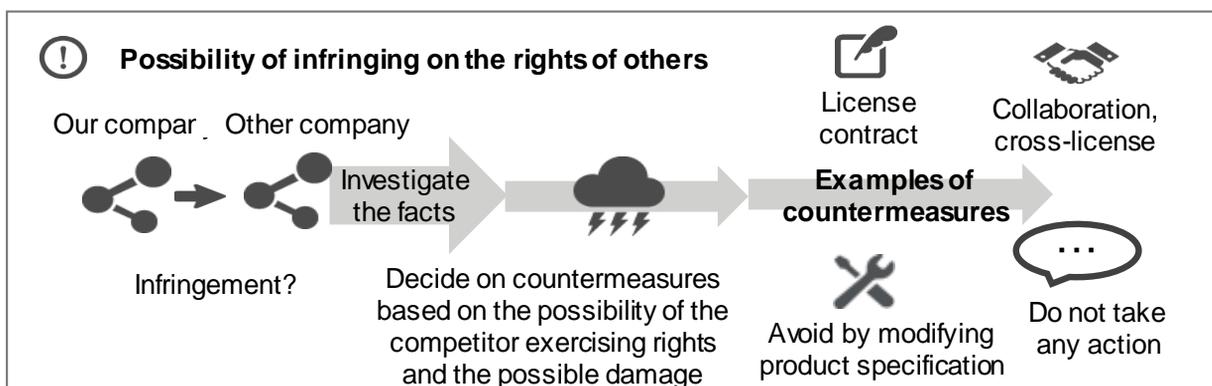
The mentoring team explained, using specific examples, how to do a patent search, and how to interpret them, including the extent to which they have been granted.

In addition, regarding advanced technologies, patent applications for technologies commonly used by engineers in this field have already been filed in some cases, so they gave advice on how to deal with such a case.

In other words, if another company's patent is granted in the future, you may obtain a license or get away with it by modifying the specifications on the startup side. On the other hand, if the patent will not be granted, you may not take any action, but you should consult with experts in detail.

The team advised that which of the above measures to take commonly depends on the level of damage the company will suffer if other companies enforce their rights in the future. They also advised that there are other options, such as setting up a common front to use it by collaborating with another company that will be affected in the same way or aiming for a cross-licensing.

- **Examples of countermeasures in cases where there is a possibility of infringement on other companies' rights**



3. Key factors in this case

Consider changing specifications

If your company's technology is different from any one of the contents of the claims, it will not be an infringement in principle, so if there is a concern about patent infringement, consider modifying the specifications first.

Consider measures based on damage caused by rights exercised

Regarding countermeasures when there is a concern of infringement, consider the best way to deal with them, considering the damage you may suffer if other companies exercise their rights in future.

Challenge 11: Thoroughly considering agreements and terms of service (1/2)

How can we review the conditions and wording in contracts when receiving orders, contracting, conducting joint research, conducting joint development, etc., and in the terms of service when providing our services?

Points

- Have a good grasp of the **theory of contract negotiations** in advance.
- Consult with **experts who have expertise** in the basics of the contract and terms of service.

Case Study¹⁹

Being aware of the theory of contract negotiation before negotiating with large companies

1. Challenges of the Startup

The startup was pursuing to conduct a joint development but was having difficulty with the contract proposed by the other party, which was very unfavorable to the company.

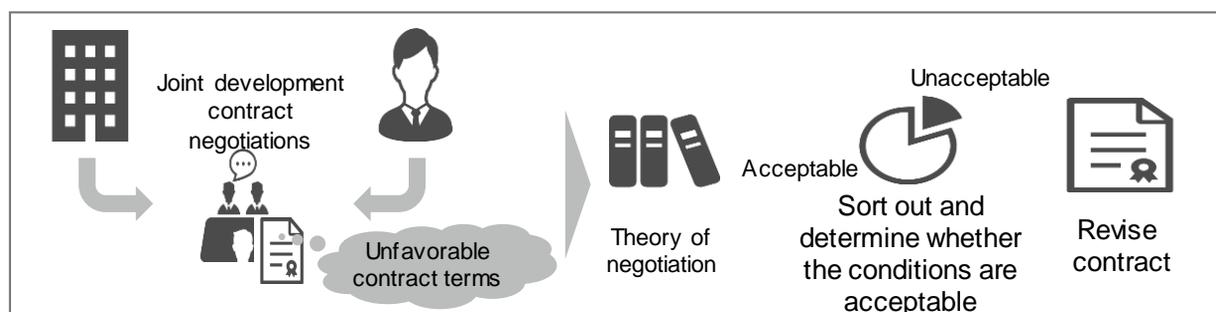
This is a common thing, especially in contract negotiation between a large company and a startup, but it is a challenge that arises due to the lack of practical experience in negotiation.

2. Support from IPAS

The mentoring team gave them the advice to decide how far they were willing to make a concession, including the theory of contract negotiation. They divided the conditions in the draft contract provided by the other party into acceptable and unacceptable parts and revised the wording of the unacceptable parts in a way such that they can make a concession.

As a result of negotiation based on the revisions proposed by the mentoring team, the other party accepted the startup's terms and conditions and they were able to negotiate while maintaining a good relationship with them.

● Brush up on contract negotiations by consulting with experts



3. Key factors in this case

Be aware of the theory of negotiation in advance

The first draft draft of the contract prepared by the other party will often include conditions favorable to the other party. Keeping this in mind, consider the wording carefully and decide exactly how much your company can concede.

Consult with an expert

Consult with an expert who has a lot of knowledge on points that will cause dispute later, especially when it comes to contracts.

Challenge 11: Thoroughly considering agreements and terms of service (2/2)

How can we review the conditions and wording in contracts when receiving orders, contracting, conducting joint research, conducting joint development, etc., and in the terms of service when providing our services?

Case study²⁰

Consulting with experts and preparing terms and conditions that fit your services

1. Challenges of the Startup

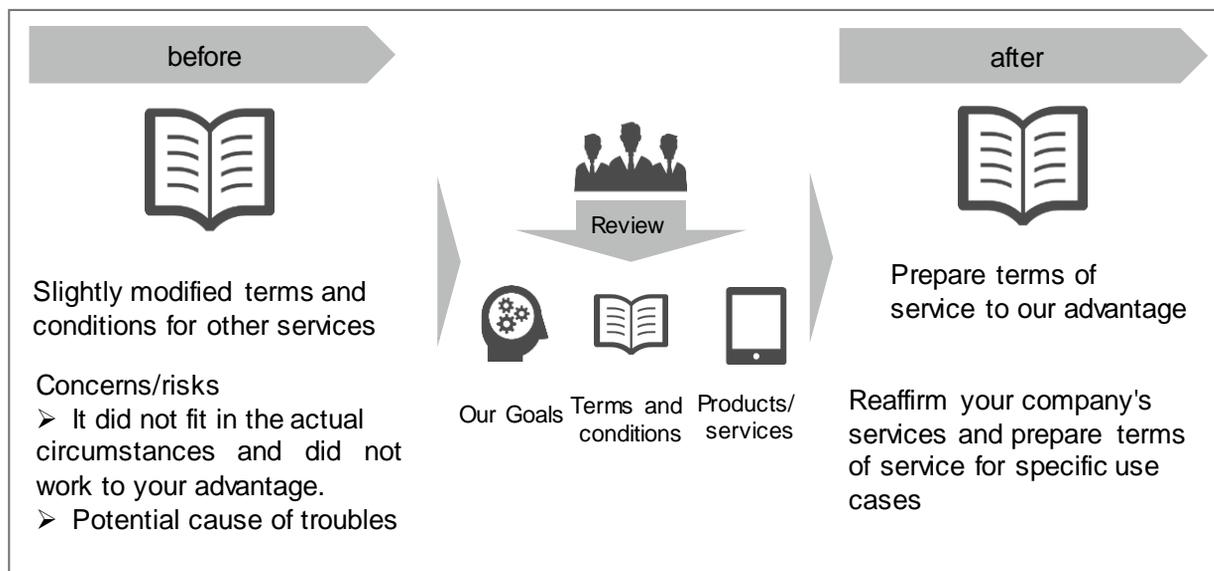
The startup planned to offer its product (data) to customers on the web, but they were thinking of using a slightly modified version of the terms of service for another service. However, the content was not appropriate for the company to develop its services.

2. Support from IPAS

The mentoring team reviewed the draft of the terms of service and summarized the points to be considered.

After the review, the mentoring team checked the method of providing the products and services with the startup and advised them on things that needed to be modified. The key points, in this case, were to define the words to be used and organize the ownership of the rights of the product generated through the secondary use of data by users.

● Formulation of terms of use that match the company's products and services



3. Key factors in this case

Your terms of use should be appropriate for services you provide

If you use another service's terms of service as a template, the wording may be obsolete or may not fit your service. Check your company's service content and business model again and prepare terms of service for specific use cases.

Consult with an expert

It is important to consult with an attorney or other professional, as preparing a contract requires specialized expertise.

Challenge 12: Clarifying your questions to experts (1/2)

How can we know whether our technology can be patented, and if so, how can we secure an effective right, and know other matters we should consult with experts.

Points

- Know that some of your company's technology **can be patented**.
- Learn **how to create a scope of rights** when acquiring rights.

Case study²¹

Having an expert review technology to see if patent requirements are met

1. Challenges of the Startup

The startup did not think that they were able to get patents on these technologies because they thought their technologies were common.

This may be because the startup had no knowledge on the state of the art and the requirements of a patent (novelty, inventive step, etc.).

2. Support from IPAS

The mentoring team had the startup explain the product and the mechanism of how to provide their products to users.

In doing so, the mentoring team recognized the patentability of the product provision mechanism (interface with the users) rather than the product itself and advised them to file a patent in this regard.

3. Key factors in this case

Do a stock take of your technology with experts

Doing a periodical stock take of your technologies with the help of a patent attorney or other experts can help you discover patentable seeds of technologies.

Explain your technology in an easy-to-understand manner

When you consult with a patent attorney, you will be able to receive more effective advice by explaining the features of your technology, market characteristics, business activities, etc. in an easy-to-understand manner.

Column3

What You Should Do When You Have to Disclose Your Invention in Advance



The contents of the invention are disclosed before the application is filed...

Inventions that have become publicly known, publicly worked, or publicly known through publication in Japan or overseas prior to filing a patent application cannot be patented (Article 29(1) of the Patent Act), and thus, if the contents of the invention are made public prior to filing a patent application, it will be impossible to obtain a patent right.

Countermeasure 1: Use of NDA

If the information is disclosed after signing a nondisclosure agreement (NDA) with investors, collaborators, customers, and others to whom you have no choice but to disclose the information, the information will not be publicly known or publicly worked, and the novelty will not be lost.

Countermeasure 2: Using the “grace period”

Inventions that became publicly known, publicly worked, or publicly known through publication against the will of the startup or as a result of their actions will be treated as not having lost their novelty, as long as the application is filed within 1 year from the date they became publicly known, etc. (Article 30 (1) and (2) of the Patent Act). However, in the latter case, a certificate to show that the exception to lack of novelty is applicable must be submitted (Patent Act, Article 30 (3)).

However, in Europe, even if the invention has been published by the applicant, the exception to lack of novelty is limited to inventions published at public expositions, etc., and the period mentioned above is only 6 months. Thus, if you are considering filing a patent in Europe, you need to be particularly careful.

Challenge 12: Clarifying your questions to experts (2/2)

How can we know whether our technology can be patented, and if so, how can we secure an effective right, and know other matters we should consult with experts.

Case study²²

Utilizing experts to obtain a patent with a wide scope of rights

1. Challenges of the Startup

The startup was considering filing a patent application based on a brilliant idea.

However, although they had an idea, it was not yet concrete and was not enough to obtain patent rights. In addition, because they were trying to review and file the application on their own, they were unable to properly secure the key points such as wording for the scope of rights, which resulted in a narrow scope of rights.

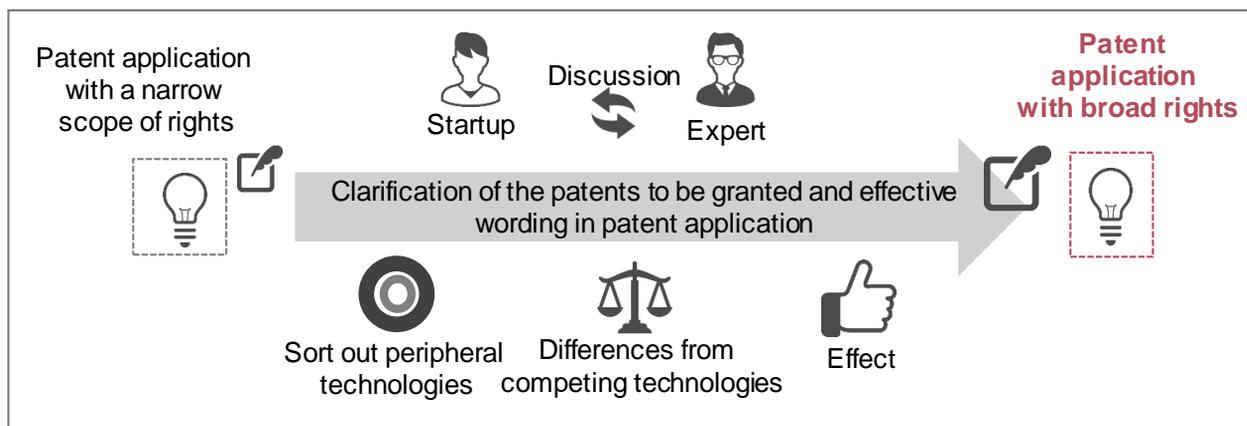
2. Support from IPAS

The mentoring team had the startup explain their technology and listened to the ideas they had in terms of what to file a patent application. In particular, the IP experts reviewed the content of the patents with the startups, while supplementing their knowledge of the leading-edge fields by listening.

As a result, the team reached a conclusion as to what kind of patents the company should obtain in order to compete with their competitors, taking into account such factors as "peripheral technologies of the core technology", "differences between the core technology and the competing technology", and "its effects". The mentoring team then gradually concrete the ideas and established a broader scope of rights.

The process above led the startup to file a patent application.

● To obtain a patent that can be used to compete with competitors



3. Key factors in this case

Take advantage of expertise

Patents require specialized knowledge and experience in the use of terminology and in wording unrivaled in the industry, so it is essential to make full use of the expertise of a patent attorney.

Flesh out your ideas by discussing with experts

When considering filing an application, it is effective to discuss with an expert in order to obtain the rights that cover your core technology to the peripheral technologies and various embodiments.

Challenge 13: Sharing IP information within your company (1/2)

How can we let our employees know our important patents and create an opportunity to share them?

Points

- Do a stock take of your company's IPs to **recognize the importance of and relationship with each IP** and use them in your business.
- Establish a system where you can **share information about your IP**.

Case study²³

Effectively managing the large number of patents you own

1. Challenges of the Startup

Although the startup owned many patents in Japan and overseas and assigned an IP in-charge, they were not able to carry out effective IP management.

This is because the importance of the patents they owned was not shared between the IP in-charge and management, making it difficult for them to work in an organized manner.

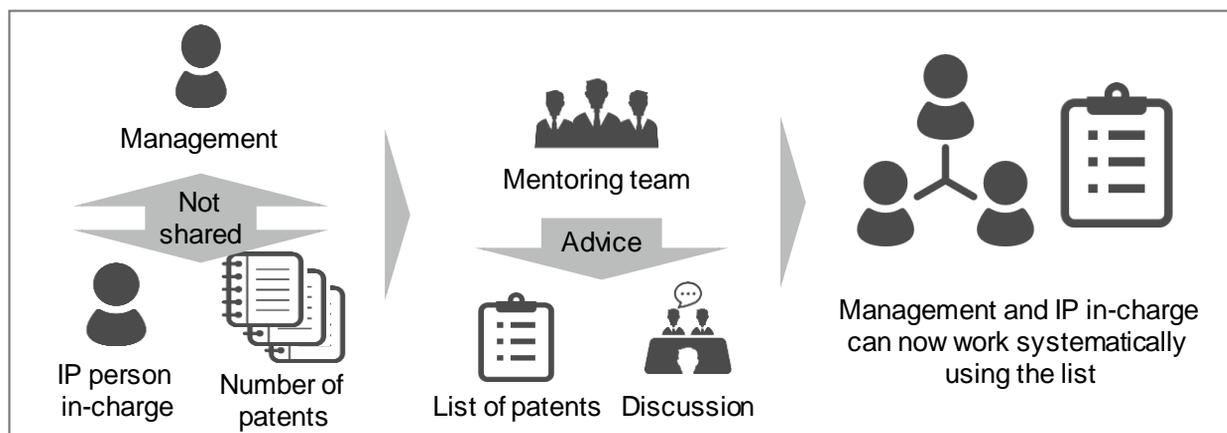
2. Support from IPAS

The mentoring team provided a format for organizing patents that would be useful for the startup to share the status of their patent internally.

The startup prepared a list of patents according to the format.

The mentoring team used the list to discuss which of the startup's patents would be considered important to its current business, formulated a policy on how to organize the future patent, and shared it within the company.

● Stocktaking of patents and visualization of patent status



3. Key factor in this case

Prepare a format to sort out your patents

When you have many patents, you may not understand the necessity and relationship of each patent. Therefore, it is advisable to establish an environment where you can have a good grasp of the status of your company's IP at any point in time, such as the preparation of a list of your patents.

Challenge 13: Sharing IP information within your company (2/2)

How can we let our employees know our important patents and create an opportunity to share them?

Case study²⁴

Creating a methodology to pick up and find technologies of which rights can be acquired.

1. Challenges of the Startup

Although the startup was aware of the importance of IP to the company, they didn't have a specific IP strategy or a place to share information about the IP they own within the company.

As a result, even if there was a technology that could be patented, they were concerned that it would be buried within the company and we would miss the opportunity to patent it.

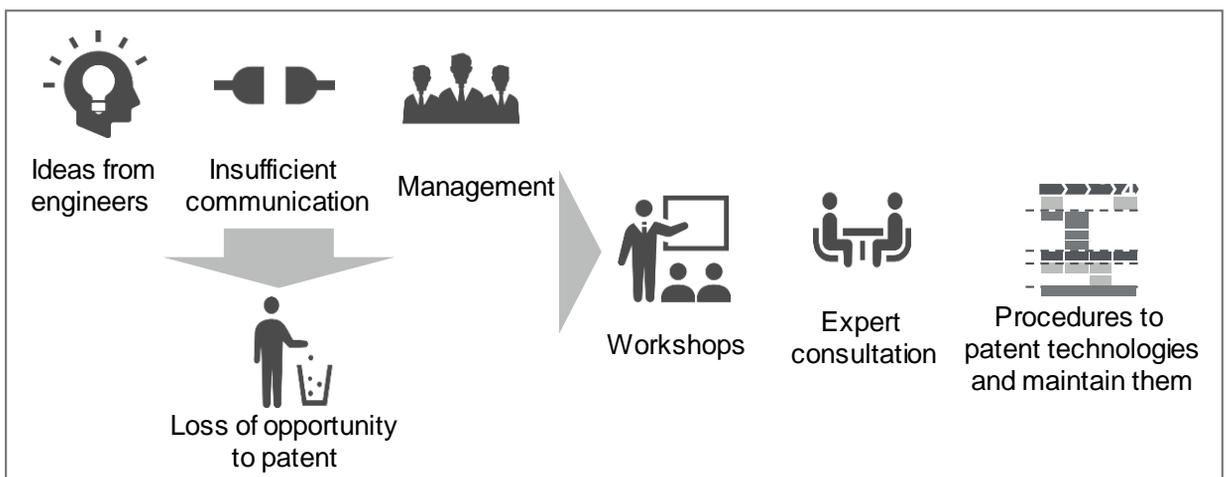
2. Support from IPAS

The mentoring team took one of the businesses the startup was considering as an example and conducted a case study focusing on establishing an IP strategy.

Then, we generalized the case study, organized procedures, such as how to do stocktaking of technology seeds, for example by having monthly workshops, when to consult with experts about IP, and how much money to spend on patent acquisition and maintenance, etc., and prepared an IP strategy procedure manual, summarizing key points to keep in mind when establishing an IP strategy.

As a result, the case study was useful to establish an IP strategy that can be applied not only to the simulated business but also to other businesses.

● Establishing a system to share information about your IP within the company



3. Key factor in this case

Hold periodical workshops

Arrange monthly workshops to identify technologies that can be patented, investigate trends in competitors' applications, review the latest cases, and share information within the company.

Challenge 14: Teaching the necessity of IP strategy in your Company

How can we deal with lack of understanding for the necessity within the company, and how can we create an environment where we can gain active cooperation?

Points

- Set up an **internal system**, such as a reward system, etc.
- **Set up a system** for a successful business by utilizing IP, such as a licensing business.

Case study²⁵

Creating an internal environment to help others understand the necessity of an IP strategy

1. Challenges of the Startup

The startup had been growing having contracted development as its core business and was considering developing the licensing business to achieve further growth in the future.

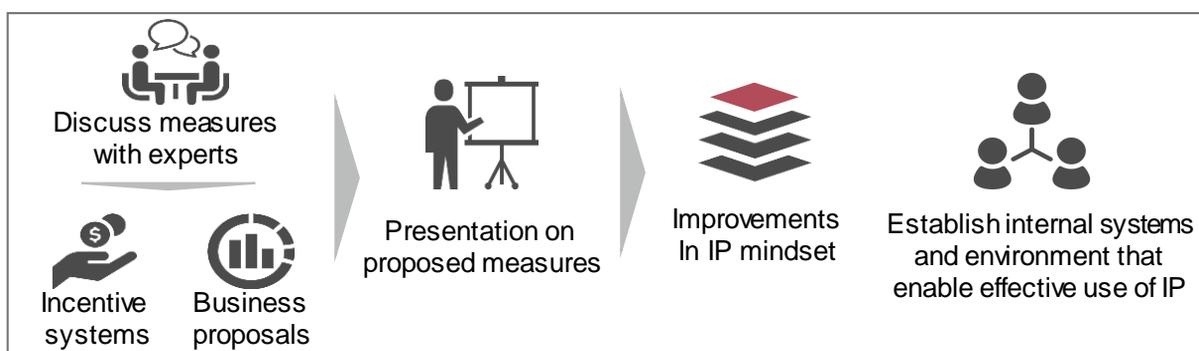
However, employees who had been involved in the contracted development business did not understand the concept of "business utilizing IP" which caused problems such as technology often buried away and salespersons in charge of negotiations for contracted development agreements lacking awareness of IP, etc.

2. Support from IPAS

The mentoring team worked with the IP person in-charge and reviewed measures to foster a mindset for internal IP. Specifically, the mentoring team prepared concrete proposals to establish an IP incentive system and other measures to realize the licensing business.

The board members and the IP officers in the startup agreed on the establishment of an internal IP system and promotion of the licensing business, etc. by summarizing the above measures into a presentation material and proposing them to the board members for discussion to foster a mindset for internal IP and to realize this policy.

● Improving the internal environment for a deeper understanding of IP strategy



3. Key factors in this case

Set up an internal system to foster mindset for IP

For example, it is effective to establish a system where employees will be rewarded when patents are created as a result of the development, they are responsible for, so that employees can relate their daily work to patents.

Establish an environment that enables licensing business

To realize the licensing business, it is useful to allocate necessary human resources in place and establish an environment that includes advisory contracts with lawyers and business advisors.

3 Conclusion

After IPAS2018-2019 (Summary)

Looking back on IPAS 2018-2019, we found three common points were important to protect and utilize IP effectively. They are as follows:

Business
XIP

Point
1

Establish an IP strategy that is linked to your business

- **By examining the prospective customers and needs of your product in detail, you will have a clearer picture of your strengths in the value chain. Startups should develop an IP strategy based on this picture, such as the acquisition of rights and licensing of core technologies.**
 - ✓ Who are the prospective customers and what are their needs that match the strengths of your core technology, products and services?
 - ✓ To maximize your strength in the value chain, which processes will you be responsible for, and who do you collaborate with?
 - ✓ Is a patent needed for licensing purposes or to prevent infringement by other companies?



Point
2

Be careful of the timing to create your IP strategy

- **When disclosing your technology to other parties, such as at the launch of a business or service, you should carefully consider your IP.**
 - ✓ When launching a business or filing a patent, can you determine whether you should keep it confidential or acquire rights?
 - ✓ When collaborating with other companies or outsourcing production, have you filed necessary patents, etc., and have you sorted out the confidential information according to its confidential nature?
 - ✓ Have you filed the patents necessary for the launch of your product or service?
 - ✓ When concluding contracts and preparing the terms of use, do you consider IP clauses having future business in mind?



Point
3

Consult with experts more proactively

- **IP and business experts have a lot of expertise, so if possible, consult with them together regularly.**
 - ✓ Consult with the business expert about funding and corporate partnerships.
 - ✓ Ask the IP experts to help you obtain rights to your technology and set up a more appropriate scope of rights.
 - ✓ When consulting with an expert, explain your current situation and issues, as well as what you want to achieve and your policies and strategies, etc.

IP Acceleration Program

Collection of case studies

Published in April 2020

Planning and Research Division, General Affairs Department, Japan

Patent Office

Deloitte Tohmatsu Group

● Contact Information ●

3-4-3 Kasumigaseki, Chiyoda-ku Tokyo 100-8915, Japan

Venture Support Team, Planning and Investigation Division, General
Affairs Department, Japan Patent Office

Tel: 03-3592-2911 Fax: 03-3580-5741