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SME Case Studies

Checklist

Take-Away Messages

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1. Technology Transfer to China - Why Worry?

Many European companies are keen to come to China. While in the past, European companies came to China to take advantage of low-cost manufacturing for export, more recently, they have come to enter the Chinese domestic market, establish R&D, engage in cooperative development, take advantage of a skilled work force, establish suppliers, and develop long-term partnerships in China. In order to achieve this, they are often willing to 'transfer' their key technology and designs to Chinese subsidiaries of European firms, joint-venture (JV) partners, or Chinese manufacturing and service companies. One of the challenges facing European companies coming to China is devising creative solutions to minimize the risk to their intellectual property (IP) associated with such technology transfers.

A technology transfer happens in a number of different ways. European companies most commonly transfer their technology by licensing their patents, designs, software, trade secrets, and know-how. Ownership of the technology may be transferred, but this type of transfer is less common. A common misconception is that a technology transfer is limited to transfers

of high technology. However, many European companies using contract manufacturing to manufacture low technology, consumer, or industrial products, for example based on product designs, must deal with many of the same risks to their IP as their high technology counterparts.

"A common misconception is that a technology transfer is limited to transfers of high technology."

The Chinese government encourages the lawful and legitimate transfer of technology while at the same time supporting innovation by Chinese companies, otherwise known as 'indigenous innovation'. Over the years, gaining market access in exchange for bringing foreign technology to China has been a successful bargain for many European companies. Unfortunately, some Chinese companies seeking to acquire foreign technology often obtain it from European companies either through inadvertent leakage of IP, or in breach of agreements or Chinese law. Protection of IP through courts and other avenues in China remains mixed as the legal system continues to develop. As a result, European companies who do not think carefully about how >>

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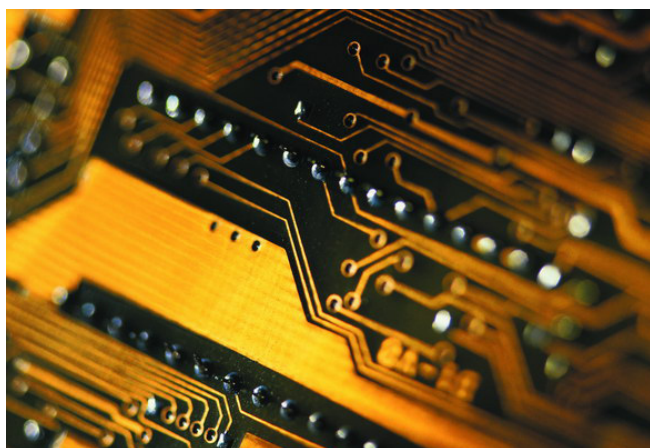
to guard against IP risk when transferring technology to China may unwillingly suffer a loss of competitiveness and market share as a result of losing their IP to Chinese competitors.

2. Thinking of Transferring Technology? - The First Step

If you are new to China or if your business is considering bringing technology to China, your first house-call will be the Catalogue for Prohibited and Restricted Technology Imports (the 'Technology Import Catalogue'), published by the Ministry of Science and Technology (MOST) and the Foreign Investment Catalogue, jointly published by the Ministry of Commerce (MOFCOM) and the National Development and Reform Commission (NDRC).

Technology Import and Export Catalogues:

Technology imports in China are divided into 'freely importable', 'restricted', and 'prohibited' technology. Restricted and prohibited technologies are specifically enumerated in the Technology Import Catalogue, while technologies not listed in the Technology Import Catalogue are deemed freely importable. In most cases, technology is deemed freely importable, with only certain technologies related to economic policy development or national security classified as restricted or prohibited. If technology will be later exported, you also need to check the corresponding Catalogue for Prohibited and Restricted Technology Exports (the 'Technology Export Catalogue') and whether there are any relevant regulations in the destination country.



Foreign direct investment:

In addition, where the technology is to be brought into China via foreign direct investment (FDI) such as with

the establishment of a joint-venture (JV) or wholly foreign-owned enterprise (WFOE), it is important to consider the Foreign Investment Catalogue to determine what restrictions, if any, apply to the establishment of the Chinese entity. For example, the foreign investment in design and manufacturing of civil aircraft equipment is limited to JVs. For technology transfers in the form of a FDI, the permitted form of FDI will be critical in determining what contractual and non-contractual solutions you will need to protect your IP.

3. What Can Companies Do to Protect Themselves?

3.1 Picking the Right Partners

It is important to recognize at the outset that part of the motivation for the Chinese company in a technology transfer is obtaining foreign technology and know-how. This fact is not a secret and you should not treat it like one. Consequently, as a first step to protecting your IP in a technology transfer, it is important to make sure you choose the right partners. Essentially, the ideal partner will be complementary, but not well-positioned to directly compete with your business. However, in order to make an informed decision, you need to take a closer look at your business as well as the potential Chinese partner by following these three-steps:

Step 1 Analyse your strengths. What is it that makes your company competitive? What measures and IPRs are used or can be used to defend your competitiveness (e.g. trade secrets, patents, new applications for technology requiring know-how, etc.)? Which IP assets can be transferred to third parties without losing competitiveness or market share in the mid- to long-term?

Step 2 Analyse your competitors and the Chinese market in which you wish to operate. Do you know who your competitors in China are? What are their strengths? What is their strategy? This analysis should also include your potential and existing partners in China: are you aware of their specific objectives? Are they in a special situation which influences your cooperation? For example, State Owned Enterprises (SOEs) may be obliged to abide by local and State industry policy which requires them to gain more know-how transfer and R&D investment rather than

maximising short-term profits.

Step 3 Design your own procedures when dealing with China. They need to be practical, but also indicate where you will draw the line when trading off IP protection for operational efficiency. Define your limits and vigorously defend your position.

3.2 Structure

Once you have selected the right partner, structuring your technology transfer is critical to effectively protecting your IP. The IP risk associated with a particular technology transfer will vary depending on whether you are licensing, setting up a JV, or setting up a WFOE. In all three of these situations, you need to prevent your IP from being inadvertently leaked or intentionally misappropriated or misused by a related or unrelated Chinese party. However, each situation presents unique opportunities and challenges:

1. Licensing the technology to an unrelated Chinese company (such as in a contract manufacturing context).

When licensing to unrelated Chinese companies such as in contract manufacturing, you generally have the least control over your IP, but you have the option to use multiple Chinese suppliers and can use what is known as a 'modular strategy' which basically involves using different Chinese suppliers to source different components of your product, so that no single Chinese supplier can make your product. In addition, phased implementation is often used to test out the Chinese partner before transferring additional technology. Both of these strategies are widely used by many European companies.

2. Setting up a JV (maybe because you want to take advantage of the local partner's contacts or existing facilities, or you are required to by the Foreign Investment Catalogue).

In the context of a JV, modular strategy and phased implementation is limited because typically business efficiency requires the JV to be able to deliver a completed product. In addition, there is the added challenge of transferring your technology to the JV while preventing your IP from leaking to your Chinese JV partner. In such circumstances, it is important to be creative and to not let the deal get in the way of protecting your IP. It is extremely important to define

the roles of not just the JV, but also your Chinese JV partner. For example, many companies keep critical design work or the manufacturer of critical components in a separate wholly-owned subsidiary or completely off-shore. A Chinese JV partner with strong local contacts and sales networks can be structured as an authorised distributor of the JV's products, but being otherwise limited in the activities of the JV.



3. Setting up a WFOE (maybe because it is permitted in your industry and you want to have the greatest amount of control).

If a WFOE structure is used, IP risk is less because you have the greatest amount of control over your wholly-owned subsidiary. In these structures, addressing IP risk often means focusing on reducing or preventing IP leakage by employees and business partners. For example, when establish an R&D centre, it is important to ensure that employee-inventors are properly remunerated and developed IP is routinely captured and managed, including filing patents and registering copyrights. Use of confidentiality agreements and non-compete agreements for certain employees who are intimately knowledgeable about your business and technology is strongly recommended.

3.3 Contracts

In addition to structure, the other key to successfully protecting your IP in technology transfers is to make sure you have all the relevant contracts in place and that they are airtight. It is recommended that companies use IP licenses with their Chinese partners; in addition to establishing each party's rights, the IP license ensures that the technology transferred is documented in case issues arise later on. This is especially critical when the Chinese party is also contributing technology and IP becomes difficult to identify or differentiate.

Improvements:

One of the most negotiated parts of the IP clauses of a technology transfer agreement is the provision for the creation of improvements and the ownership of improvements made by the Chinese party. This is because improvements to the transferred technology are often extremely valuable and form the basis for the cooperation. As a result, the foreign party typically wants to own all improvements to the technology made by the Chinese party. However, there are a couple of important points under Chinese law on improvements you need to know:

1. Commissioned IP belongs to the commissioned party, unless the contract states the commissioning party owns the IP. This means that it is important that the contract states clearly what IP is to be developed and who will own it.
2. Improvements are owned by the party that makes the improvements and cannot be automatically 'granted-back' to the other party without some form of compensation or without reciprocation such as granting a license to the other party's improvements. This means that the typical automatic ownership of improvements being owned by the foreign party will be unenforceable.
3. A Chinese party cannot be restricted from making improvements to transferred technology and using the improvements. This means that a Chinese party can make improvements and any such restrictions will be unenforceable.

The implications of these three rules create many problems for European companies looking to transfer

their technology to China. Since the Chinese party is permitted under Chinese law to make and use improvements, European companies have to think twice about what technology they are willing to bring to China and allow the Chinese party to improve on. It is important to discuss your technology transfer with an experienced lawyer who can help you come up with effective ways to structure the terms of the contract in order to address the development, ownership, and use of improvements.

Confidentiality:

It is important to include strong confidentiality provisions in the technology transfer contract. European companies often go to great lengths to protect their confidential information, trade secrets and know-how, including using key-card access, closed-circuit TV, virtual data rooms, and sophisticated document tracking measures. While these measures may be expensive and difficult to administer, they should be seriously considered if critical IP is transferred.



Reverse engineering:

In addition to dealing with the issues related to improvements to the technology, European companies must also think about reverse engineering, which is the acquisition of technology by taking apart and studying an existing product in the market. Reverse engineering is permitted under Chinese law and not considered a theft of trade secrets. As a result, well-drafted technology transfer contracts should include a provision limiting or prohibiting the Chinese party from engaging in reverse engineering.

SME Case Studies

Case Study 1: Joint Venture Supplier

EuroCraft, a European manufacturer of civil aircraft components wants to set up a parts supplier in China and also market and sell the parts to Chinese civil aviation companies. The Foreign Investment Catalogue requires a JV structure for this industry, and so a potential partner with existing manufacturing facilities is found. However, the partner is an SOE which owns a subsidiary that makes similar components. The EuroCraft board considers this a high IP risk situation, but there are no other suitable partners.

To minimise IP risk, the company structures the deal such that the JV is set up as an exclusive parts supplier to EuroCraft. To avoid being unable to identify IP after it is transferred to the JV and incorporated into products, the Chinese partner does not contribute any IP. The JV will manufacture the parts and sell them to EuroCraft for export. The JV partner, which has significant ties in the domestic Chinese market, will serve as EuroCraft's exclusive dealer in China, earning a commission on sales. Parts design will remain with EuroCraft's European subsidiary. In addition, the JV will start manufacturing non-critical parts which will be phased into the project. Manufacture of critical bearings, for which EuroCraft has developed a proprietary process to improve performance, will remain in Europe.

Most of EuroCraft's IP is in the form of trade secrets and know-how. EuroCraft concludes an IP license with strong confidentiality provisions with the JV. IP transfer takes place exclusively through a virtual data room accessible only by authorised individuals. In addition, strict documenting procedures are put into place to make sure transfers of technology are fully documented.

Case Study 2: Contract Manufacturer

EuroTat is a European company that designs, manufactures, and sells tattoo chairs. EuroTat's tattoo chairs use a patented special balancing mechanism which automatically senses the weight of the user and location of the tattoo artist and adjusts the chair accordingly. Looking to reduce manufacturing costs and enter the growing market for tattoo chairs in China, EuroTat identifies three potential manufacturers. One factory is able to dedicate the entire facility to making tattoo chairs for EuroTat and at the cheapest cost. However, EuroTat instead decides to use one factory to manufacture the seat pads and another factory to manufacture the metal frame. The balancing mechanism remains manufactured in Europe and shipped to EuroTat's WFOE located in Shanghai. Final assembly takes place at EuroTat's WFOE facility.

The WFOE also engages in R&D activities to help develop the next generation balancing mechanism. EuroTat requires all employees to sign confidentiality agreements and an inventor assignment and reward agreement which provides that all inventions created by the employee is owned by EuroTat. The product development manager is required to sign a non-compete agreement. The WFOE provides periodic trainings to employees on IP protection.

Key lessons:

1. Conduct due diligence on potential partners, find complementary partners not competitively-positioned partners.
2. Structure the deal to minimize IP risk by designating exclusivity, segregating roles such as product design from manufacturing, and using phased implementation. Keep critical components or technology offshore.
3. Conclude an IP license and make sure the transfer of technology, including documents, demonstrations, drawings, and oral communications are well documented.

Key lessons:

1. Register patents to your technology before bringing the technology to China.
2. If possible, use different manufacturers for different components, keep critical components offshore, and have final assembly take place at a WFOE or offshore.
3. Sign employee confidentiality agreements, invention assignment and reward agreements, and non-compete agreements with employees. Provide regular training on IP protection.

Technology Transfer IP Protection Checklist

Protect products and technologies

- Design products for sourcing in China on a modular basis, so that different modules can be produced by different manufacturers, thus ensuring that each supplier obtains only partial knowledge.
- Combine and test key functions in key components which are always developed and manufactured in-house and delivered to your own system integration department for installation.
- Conduct due diligence of a potential Chinese partner, the location and local industrial policies and laws.
- Communicate know-how, documents, customer relations, designs, strategies, update plans, etc. to Chinese suppliers strictly on a 'need-to-know' basis, and only following signature of a confidentiality agreement.
- Do not send drawings around, especially not in un-encoded mails.
- Protect unauthorised copying by way of patents, trademarks, designs, etc. and pursue counterfeiters.
- Clearly define ownership of rights of inventions, creations, and improvements including in case of termination.
- Carry out regular supplier audits with the emphasis on contractual obligations checking for IPR leakage and undeclared royalties.
- Put in place export restrictions and actively follow-up on any detected breaches.
- Ensure employment contracts contain non-compete clauses and confidentiality agreements as well as non-solicitation clauses.
- Keep highly qualified Chinese employees working in subsidiaries of European firms and JVs through incentives such as pay, promotional opportunities, etc.
- If you use agents, commercial and sales partners, include safeguard clauses in the agency agreement, especially if you are not yourself present on the market. If necessary, provide training for your sales partner's staff.
- Screen visitors to R&D centres and ensure they are accompanied at all times.
- Restrict physical access to sensitive work sections.
- Do not take on every contract. Do not penalise the sales department if it turns down a contract for technology protection reasons after consultation with the legal department.
- Where possible have your own team on site, specialised in know-how protection and Chinese law.



Use the system!

- Register your patents, trademarks, copyright and design not only in EU, but especially also in China!
- Ensure that transfers of know-how are made on a clear legal basis for all parties involved, define

precisely and in detail the object and recipient of the transfer, including formalities and documentation.

- In the event of a transfer of technology, make sure you conclude a non-disclosure agreement.
- Oblige your contractual partner to comply with all administrative rules for technology import and export.
- Specify in the contract that suppliers must not sell the products in question to third parties without authorisation.
- Limit, to the extent possible, the number of sublicenses given.
- Use the China IPR SME Helpdesk, your embassy's trade section and Delegation of the European Union to convey concerns and problems.

Related links

For the Catalogue for Prohibited and Restricted Technology Imports (in Chinese), see http://www.gov.cn/flfg/2007-11/02/content_793830.htm

For the Catalogue for Prohibited and Restricted Technology Exports (in Chinese), see http://www.gov.cn/flfg/2008-09/25/content_1105522.htm

For the Foreign Investment Catalogue (in Chinese), see http://www.fdi.gov.cn/pub/FDI_EN/Laws/GeneralLawsandRegulations/MinisterialRulings/P020071121358108121219.pdf



Take-away messages

- European companies who do not think carefully about how to guard against IP risk when transferring technology to China may unwillingly suffer a loss of competitiveness and market share.
- Refer to the *Catalogue for Prohibited and Restricted Technology Imports* (the 'Technology Import Catalogue') and the *Foreign Investment Catalogue* to make sure that you will be allowed to bring your technology to China.
- To protect your IP in a technology transfer it is important to make sure you choose the right partners at the outset. It is recommended that companies use IP licenses with their Chinese partners
- The IP risk associated with a particular technology transfer will vary depending on whether you are licensing, setting up a JV, or setting up a WFOE. However, in all three of these situations, the goal is the same - to prevent your IP from being inadvertently leaked or intentionally misappropriated or misused by a related or unrelated Chinese party.

The China IPR SME Helpdesk provides European small and medium-sized enterprises (SMEs) with free, confidential, business-focused advice relating to China IPR.

Helpdesk Enquiry Service: Submit further questions to the Helpdesk via phone, email (question@china-iprhelpdesk.eu) or in person and receive free and confidential first-line advice within seven working days from a China IP expert.

Training: The Helpdesk holds training sessions on China IPR protection and enforcement across Europe and China, tailored to the needs of SMEs.

Materials: Helpdesk business-focused guides and training materials on China IPR issues are all downloadable from the online portal.

Online Services: Helpdesk multi-lingual online portal (www.china-iprhelpdesk.eu) provides easy access to Helpdesk guides, case studies, E-learning modules, event information and webinars.

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