



# **China IP SME Helpdesk – an initiative of the European Commission**

**Project Introduction**

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- ➔ Launched through European Union funding in 2008 and currently implemented by DEVELOPMENT Solutions, SD policies, University of Alicante and the European Union Chamber of Commerce in China.
- ➔ Raising awareness and preparing SMEs for IPR issues in Mainland China, Hong Kong, Macao and Taiwan: *“know before you go”*
- ➔ **Free of charge** resource and services for EU and COSME country SMEs
- ➔ **Business-focused and practical** first-line advice
- ➔ Delivering **IPR business tools** and **self-help solutions** (guides, E-learning)
- ➔ Enabling EU SMEs to make informed IPR decisions (protection, enforcement, IP management)

**It is challenging but possible to deal with IPR in China and minimise risks for SMEs!**

# Importance of IPR

## Why is IPR Important for the SMEs engaged in the water industry?

- **IP is your main business asset**
  - It gives you advantage over your competitors
  - Trade mark allows you to distinguish yourself from the competitors
  - Patent provides you with an exclusive right of exploitation
- **IP Commercialisation**
  - Licensing
  - Attracting investments

**About 80% of SMEs that fail in China, do so because of not protecting their IP in China.**

# Helpdesk free services

## Enquiry Helpline



*question@china-iprhelpdesk.eu*

## Training Workshops



## Webinars



## Website & Blog



*<https://ec.europa.eu/ip-helpdesk>*

## Guides & Factsheets



# Industry Specific Guides





**GUIDE**

1. Introduction
2. Copyright Protection
3. Patent Protection
4. Trade Secret Protection
5. Contractual Protection and Preventive Confidentiality Measures
6. Case Studies
7. Related Links

## Industry 4.0 and IP Protection

CHINA IPR SME HELPDESK

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2 Industry 4.0 and IP Protection

### 1. Introduction

The fourth industrial revolution is currently transforming economies, jobs, and even the society itself in ways that can truly change how we live, work and relate to one another. "Industry 4.0" refers to this jump in physical and digital technologies making companies more efficient, and transforming their decision making. Examples of these technologies include artificial intelligence (AI), the industrial internet of things (IIoT), cloud computing, block chain and 3D printing among others.

Of course, Industry 4.0 is changing the Chinese market, and this is particularly visible in government plans to upgrade the manufacturing capacities of Chinese industry into a technology powerhouse. To that end, the Chinese authorities are focusing on developing sectors such as FinTech, e-commerce, healthcare and smart logistics. All these sectors could offer business opportunities for EU SMEs whose know-how and technology continues to be sought after.

Industry 4.0 technologies usually involve the development of hardware and software, but also rely largely on the development of data and information that are usually extremely easy to copy and disseminate on a large scale. Formulating a smart IP strategy adaptive to these changes is crucial to your success in the era of Industry 4.0.

It is sometimes difficult to apply the traditional concepts of IP to new technologies, so how can you protect and successfully exploit new technologies, business processes and creations, when doing business with China? This guide addresses the Intellectual Property issues often faced by SMEs engaged in Industry 4.0 walking you through how to safeguard your rights through registration and creation and implementation of contractual, cybersecurity and IP management best practices to secure both registered IP and trade secrets.

### 2. Copyright Protection

In accordance with Article 4 of the Copyright Law of the People's Republic of China, copyright in China protects "works of literature, art, natural science, social science, engineering technology" and in particular, computer software. Note that copyright protects only the expression of an idea, not the idea itself. There are a number of new technologies which can be protected by copyright which we will explore below.

**What can copyright protect in the industry 4.0 sector?**

**Software**  
One important use for copyright in industry 4.0 technologies is to protect software from being copied. However, you should be aware that copyright only protects the expression of ideas, not the ideas themselves so it does not protect an idea or a technical solution or a software function. As a result, if a third party changes the code by making some modifications, for example by using different code libraries or equivalent means, this would not be considered as copyright infringement. Patent protection could potentially be used to protect the functionality of a piece of software, however, software patents are allowed under special circumstances. See Section 10 for more information on software patents.

**Algorithms**  
Algorithms are one of the most valued intangible creations in industry 4.0. Algorithms are closer to ideas, principles or methods, which are usually excluded from IP protection so they can be difficult to protect. Under copyright law, an algorithm, as a mathematical principle, belongs to the realm of ideas that are free to use and cannot be appropriated, while, under patent law, software is usually excluded from being patented with the exceptions that we will see in Section 10.

However, in most cases, an algorithm is actually a creation integrated into the source code of software that can be protected under the copyright law. As such an algorithm which is integrated into the source code of software can be protected by copyright.

**Databases**  
Databases can be protected by the copyright law if they qualify as "compilation works". In accordance with the Copyright Law, this means that such works should: 1) be a collection of data and 2) be arranged in a way that adds to the value of the data, such as through the selection or arrangement of the data, or the originality in the presentation of such data. In other words, there needs to be an element of originality in the compilation in order to receive some form





**GUIDE**

1. Chinese IP Law Regarding AI
  - A. Introduction
  - B. How to Protect Algorithms
  - C. How to Protect Data
  - D. Protecting Algorithms and Data through Trade Secrets
2. Application of Blockchain in IP Protection
  - A. Introduction
  - B. Preservation of Evidence
  - C. Smart Contract
3. Take Away Messages

## IPR Protection for AI Technology & Application of Blockchain in China

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2 IPR Protection for AI Technology & Application of Blockchain in China



Artificial intelligence (AI) has become one of the most important and potentially revolutionary technological advancements of the 21st century playing a major role in industries ranging from automated driving to language and speech recognition. China is one of the leading players in this field with more than 30 universities in the country having established AI departments/schools. China, thus, offers many opportunities for European SMEs to collaborate on the field of AI development. AI and the data associated with it are highly known as Intellectual Property (IP). IP is a critical consideration for European SMEs that come to China, wishing to tap into the market potential for business growth for their AI-related products, or to recruit from the talent pool of China's booming AI industry.

Similarly, blockchain technology is emerging as an important technology in sectors ranging from property and banking to food safety. It is also having an impact in the legal sector. For European SMEs wishing to secure intellectual property such as trademarks, copyrights and trade secrets, blockchain could be an extremely useful asset, especially in the Chinese context where blockchain-based evidence is recognised in court.

This guide provides European SMEs, active in the AI-traverse industries, with knowledge on how AI is protected by IP laws in China, outlining how to protect AI and data through copyright, patent and trade secrets. It also gives European SMEs an overview of legal opportunities provided by blockchain, and the use of blockchain in Chinese courts.

## Stay Connected

The **China IP SME Helpdesk** provides **free, confidential, business-focused advice** to European Small and Medium sized Enterprises (SMEs) relating to **IPR** in China.

For more information about our services and how the China IP SME Helpdesk can add value to EU SMEs:



### Enquiry Helpline:

[question@china-iprhelpdesk.eu](mailto:question@china-iprhelpdesk.eu)

### Phone:

+86 10 6462 0892

### Online Services:

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