



**BUREAU VAN DIJK**

A Moody's Analytics Company

# Combining patent and company data

*Deriving useful insights for your research and analysis of innovation*

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Head of Intellectual Property Solutions – APAC



**orbis**  
intellectual  
property

Welcome to the business of certainty

# Agenda

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1. What is Orbis Intellectual Property?
2. Basic patent analysis
3. Enhanced patent analysis
4. Creative ways commercial entities manage patents



1

**What is  
Orbis Intellectual Property?**

# Orbis: The largest database of company information



## We treat data to add value



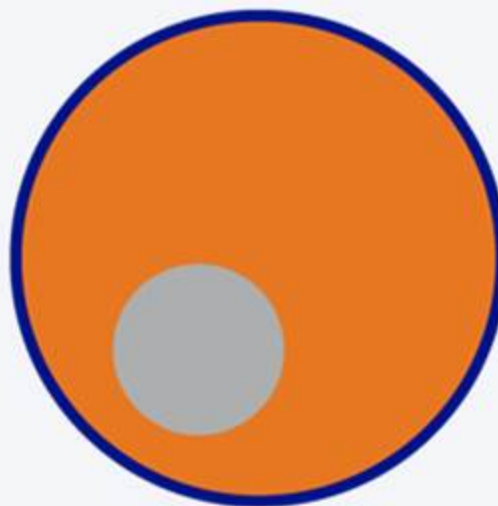
# Masters of Corporate Ownership

Knowing the people behind a company is becoming increasingly important for regulatory compliance, to counter financial crime and for reputation risk management. We have the most extensive corporate structures available and we even let you choose your definition of beneficial ownership.

Our ownership researchers:

- Do 5 million edits per month
- Have created 969 million ownership links
- Have identified 84 million beneficial owners and 48 million ultimate owners, global and domestic

Because we have such extensive ownership structures, we can really speed up your research. Screen entire corporate groups for PEPs, sanctions and adverse news quickly and easily.



**969m**  
total ownership links

**845m**  
historic ownership  
links  
▲60%

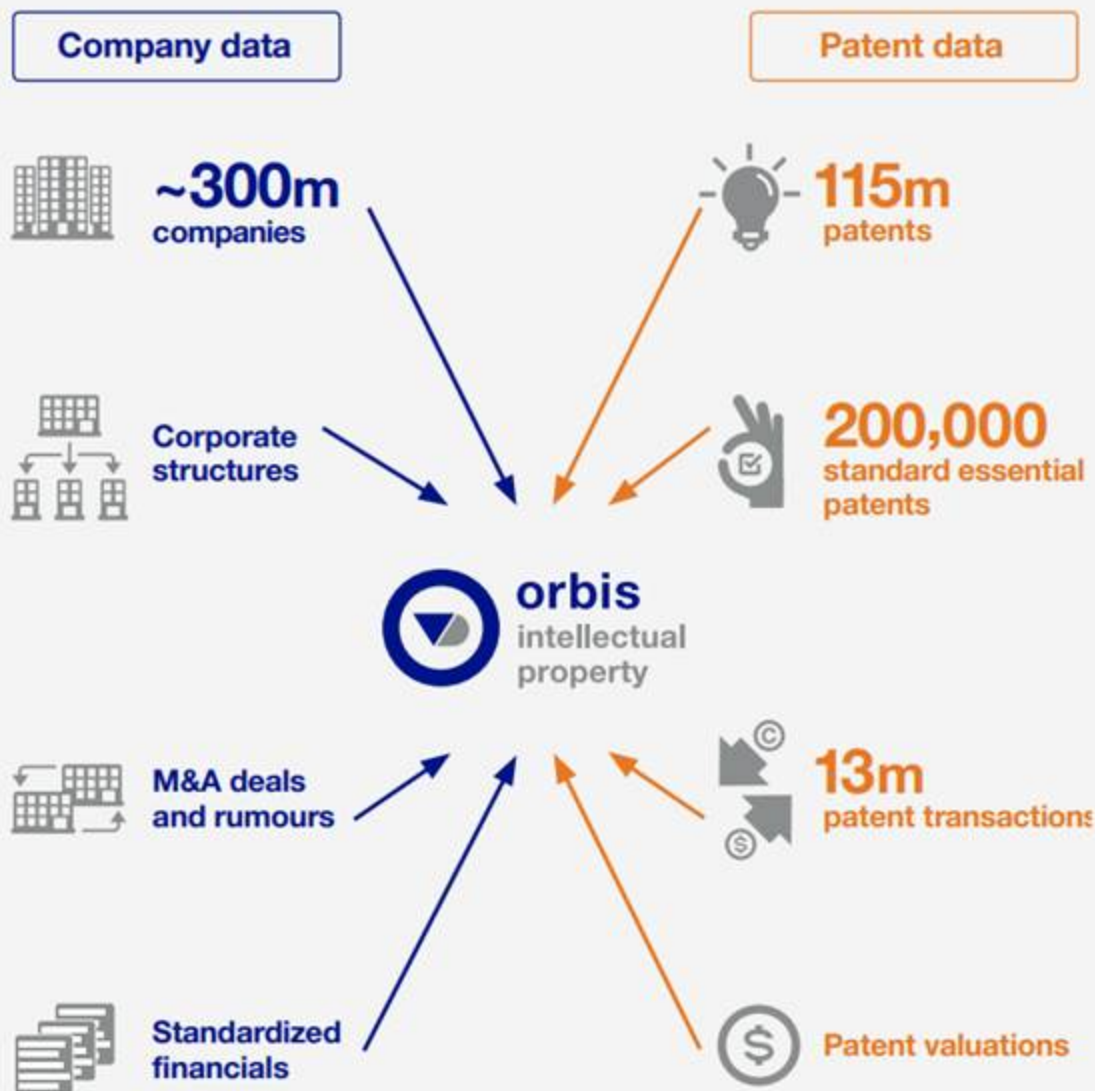
**124m**  
active ownership  
links  
▲25%

**84m**  
beneficial owners  
▲29%

**103m**  
current  
shareholders  
▲21%



# Orbis Intellectual Property: Combining company and patent data



# Derive insights unavailable in traditional patent solutions

## Corporate ownership

- True ownerships of patents via corporate structures.
- Identify linkages between patents and beneficial owner.

## Financial information

- Full range of Orbis company data.
- Over 300 million companies and unique identifiers.
- Detailed overview and financials.

## Patents and M&A transactions

- Comprehensive coverage of all patents.
- Defined patent transactions status and types.
- Monitor global M&A transactions.



## Industry sectors

- Primary and secondary industry codes for easy analysis.
- Business and innovations activity.

## Patent valuations

- Valuations for all live and granted patents.



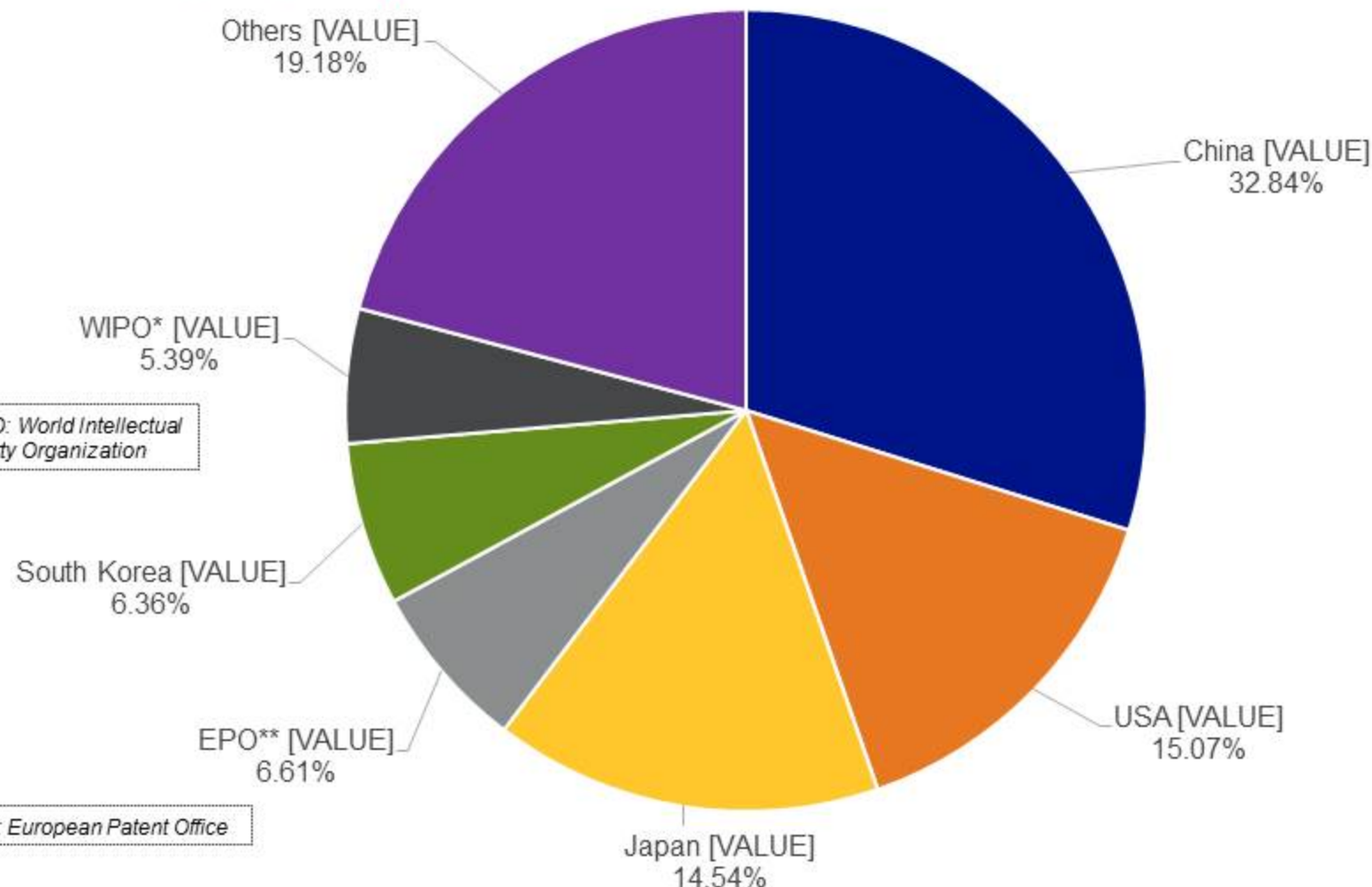
# 2

## Basic patent analysis



# Patents published by Patent Office: 2000-2019.

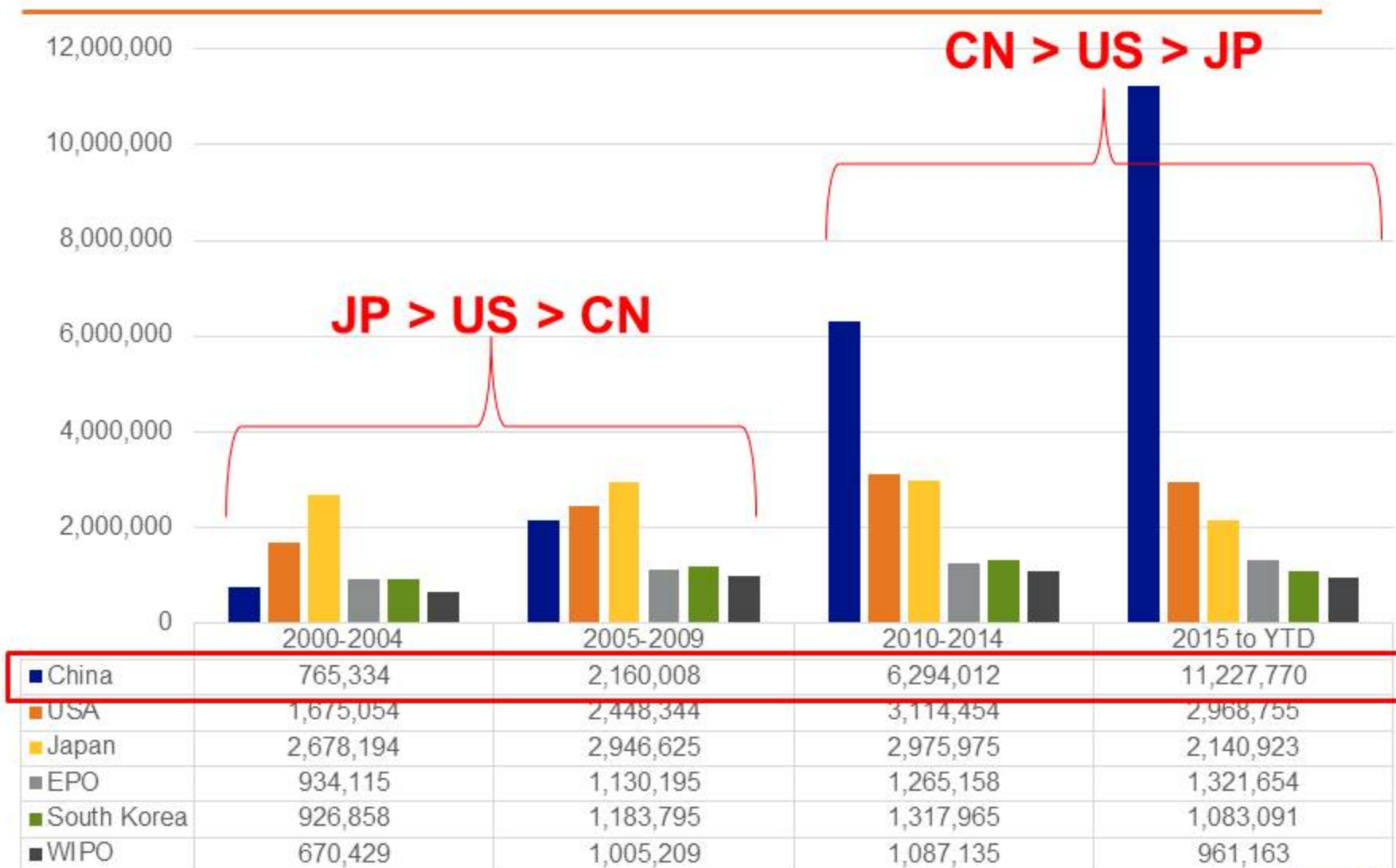
Total: 68,658,929 patents



\*Data from Orbis Intellectual Property - Year 2000 to Feb 2019.



# 2000-2019: 5 year breakdown.



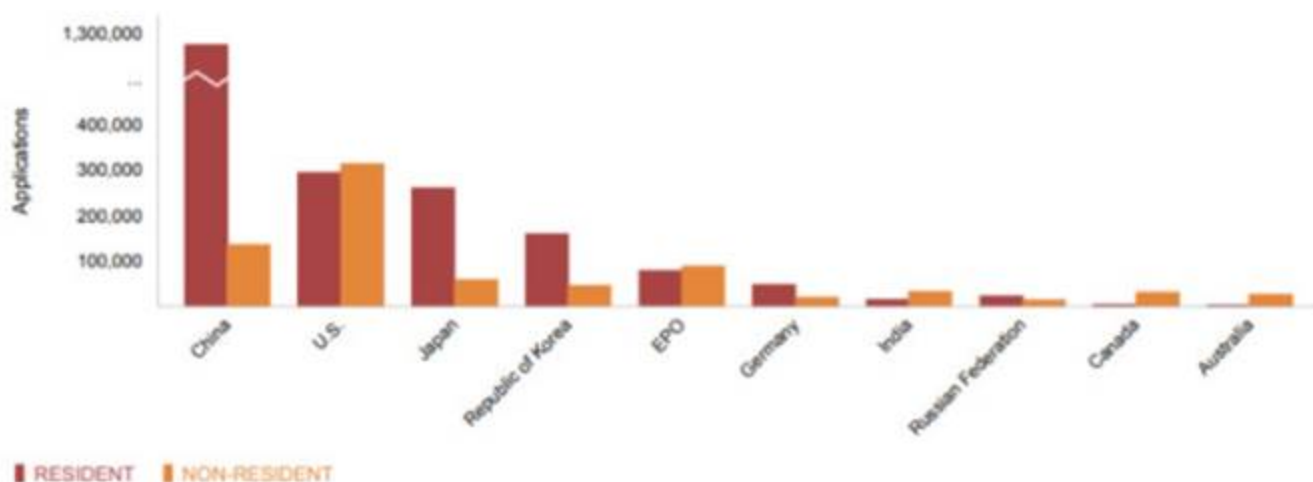
\*Data from Orbis Intellectual Property - Year 2000 to Feb 2019.

# CNIPA is swimming in paperwork

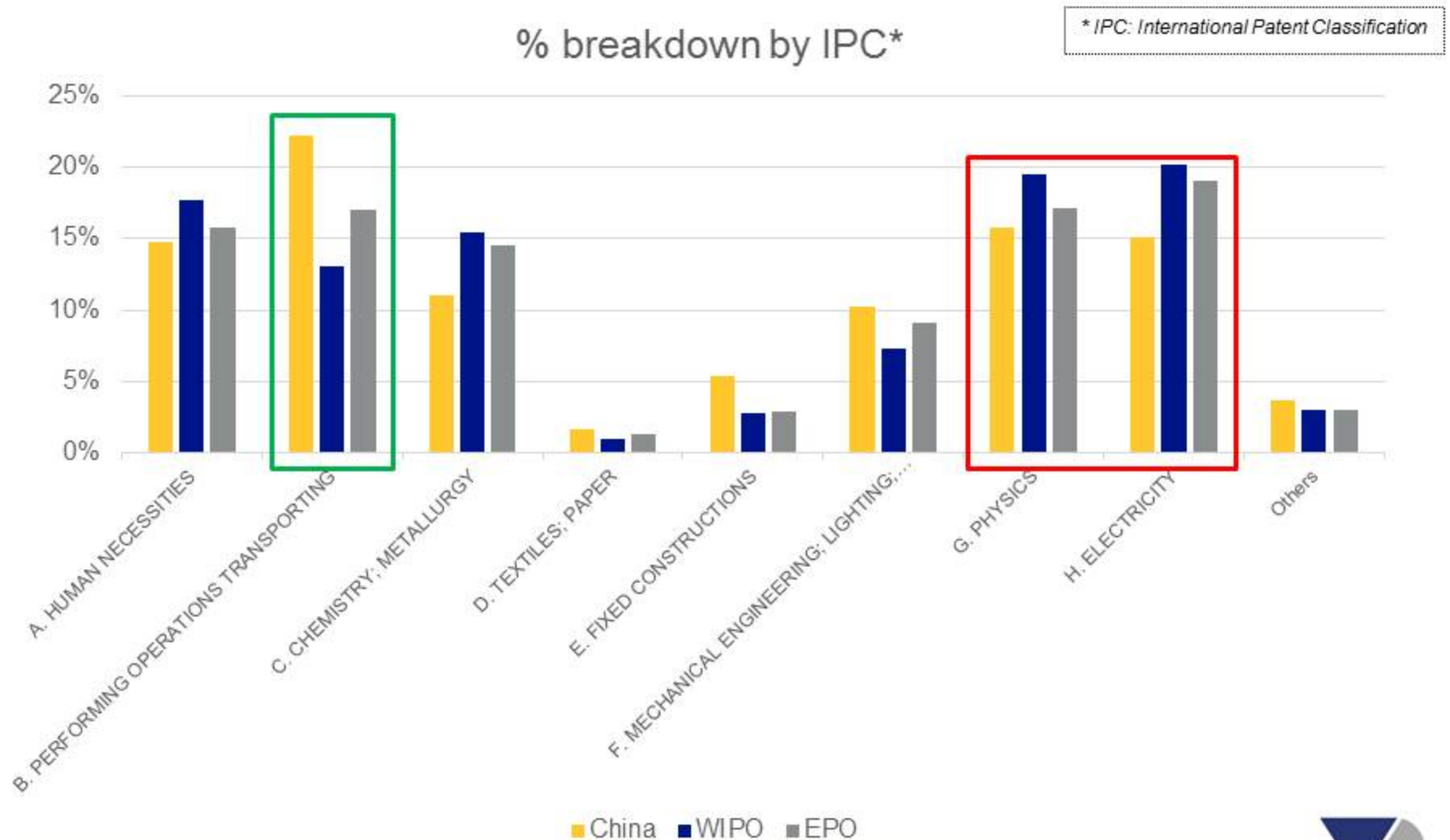
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- Applications received by China's National Intellectual Property Office (CNIPA) hit 1.38 million in 2017.
- It has recorded increases in filing activity for the past 21 years.

1.2. Patent applications at the top 10 offices, 2017



# What is China publishing in?



\*Data from Orbis Intellectual Property - Year 2000 to Feb 2019.



# What is IPC?



The screenshot shows the WIPO website's header with the logo and navigation links. Below the header is a breadcrumb trail leading to the 'International Patent Classification' page. The main heading is 'International Patent Classification (IPC)'. The text explains that the IPC, established by the Strasbourg Agreement 1971, is a hierarchical system for classifying patents and utility models. A button at the bottom of the main content area says 'Access the International Patent Classification'. To the right, a 'Resources' box lists links to general information, a PDF guide, statistics, and frequently asked questions.

**WIPO**  
WORLD INTELLECTUAL PROPERTY ORGANIZATION

IP Services Policy Cooperation Knowledge About IP About WIPO Search WIPO

Home > Knowledge > International Classifications > International Patent Classification

## International Patent Classification (IPC)

The International Patent Classification (IPC), established by the [Strasbourg Agreement 1971](#), provides for a hierarchical system of language independent symbols for the classification of [patents](#) and utility models according to the different areas of technology to which they pertain. A new version of the IPC enters into force each year on January 1. [Find out more about the IPC.](#)

[Access the International Patent Classification](#)

### Resources

- [General information on the IPC](#)
- [Guide to the IPC](#) [PDF](#)
- [IPC statistics](#)
- [Frequently asked questions](#)

<https://www.wipo.int/classifications/ipc/en/>





International patent  
classification (IPC) >

Cooperative patent  
classification (CPC) >

United States patent  
classification (USPC) >

WIPO technology  
classification >

Code type >



Search by name

▶ A - HUMAN NECESSITIES >

▼ B - PERFORMING OPERATIONS TRANSPORTING >

▶ B01 - PHYSICAL OR CHEMICAL PROCESSES OR APPARATUS IN ... >

▶ B02 - CRUSHING, PULVERISING, OR DISINTEGRATING; PREPAR... >

▶ B03 - SEPARATION OF SOLID MATERIALS USING LIQUIDS OR U... >

▶ B04 - CENTRIFUGAL APPARATUS OR MACHINES FOR CARRYIN... >

▶ B05 - SPRAYING OR ATOMISING IN GENERAL; APPLYING LIQUI... >

▼ B06 - GENERATING OR TRANSMITTING MECHANICAL VIBRATI... >

▼ B06B - GENERATING OR TRANSMITTING MECHANICAL VIBR... >

B06B1/00 - Processes or apparatus for generating mech... >

B06B1/02 - making use of electrical energy (B06B00011... >

B06B1/04 - operating with electromagnetism (dynamo-... >

B06B1/06 - operating with piezo-electric effect or with e... >

B06B1/08 - operating with magnetostriction (magnetost... >



# WIPO technology classification

International patent classification (IPC) >

Cooperative patent classification (CPC) >

United States patent classification (USPC) >

**WIPO technology classification >**

Code type >

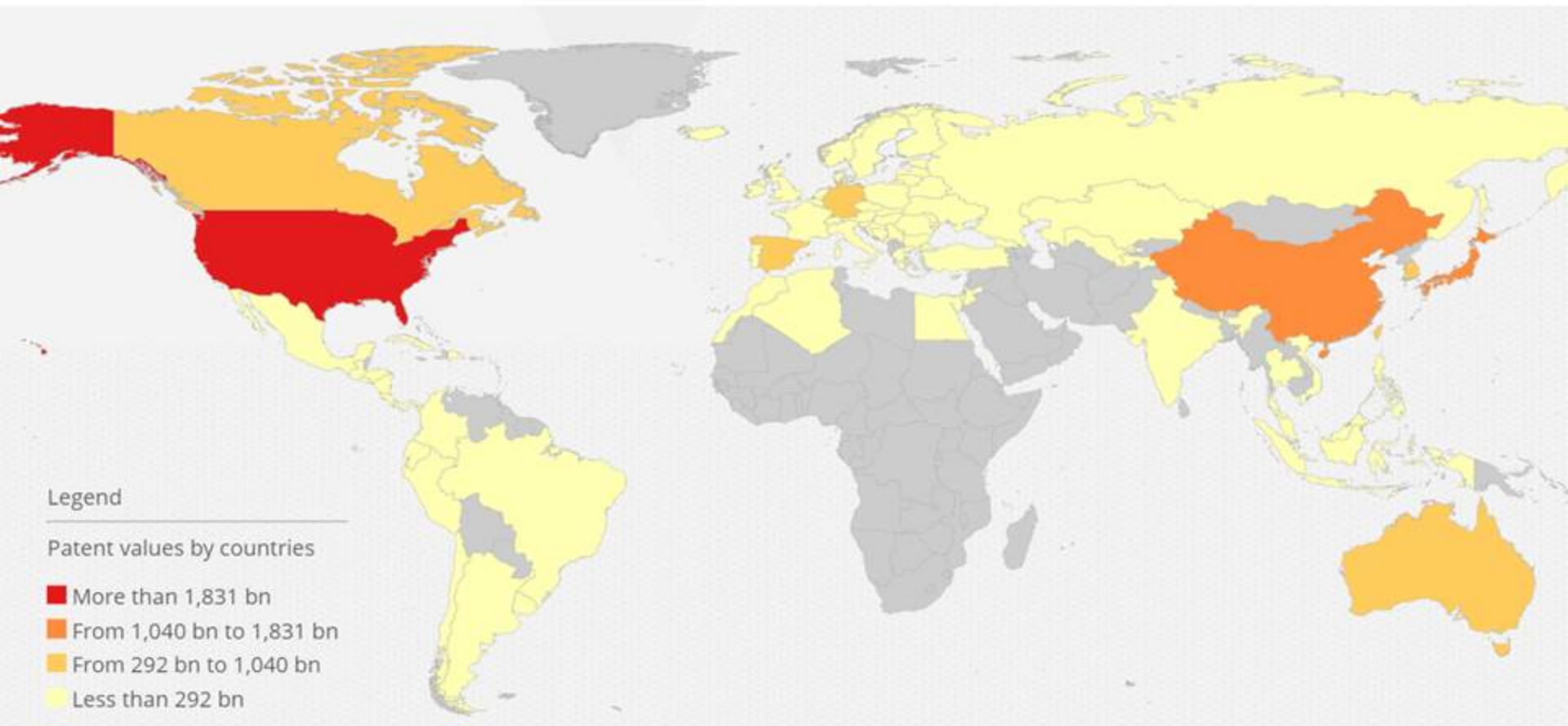
Search by name

- ▶ Electrical engineering >
- ▶ Instruments >
- ▶ Chemistry >
- ▼ Mechanical engineering >
  - 25 - Handling >
  - 26 - Machine tools >
  - 27 - Engines, pumps, turbines >
  - 28 - Textile and paper machines >
  - 29 - Other special machines >
  - 30 - Thermal processes and apparatus >
  - 31 - Mechanical elements >
  - 32 - Transport >
- ▶ Other fields >



# Who is the richest amongst them all?

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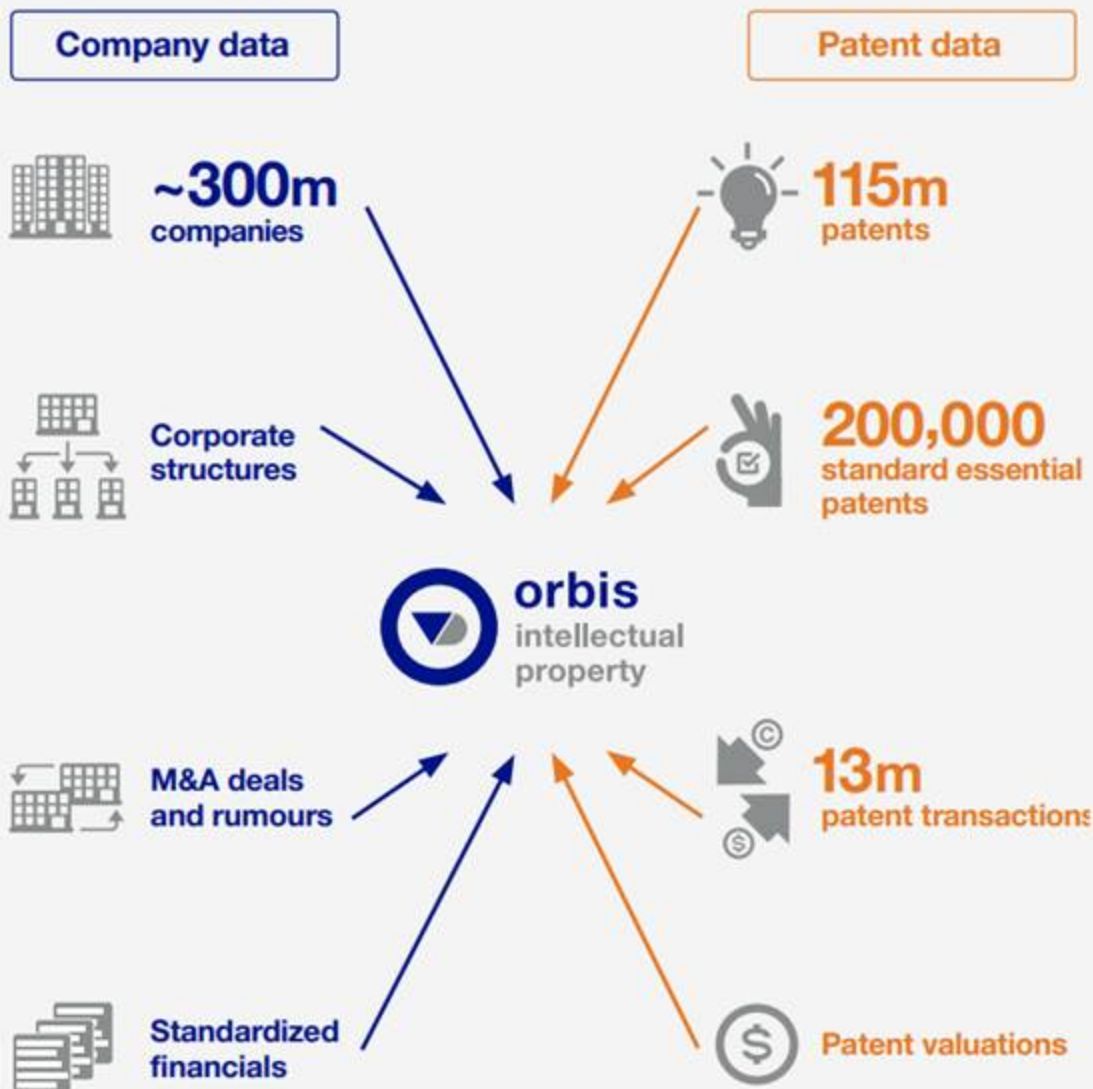
**With such a meteoric boom, will there be a bubble?**



# 3

## Enhanced patent analysis

# What so special about Orbis IP?





# Using “Industry classification codes”

NACE Rev. 2



US SIC



NAICS 2017



Code type



Search by name



85 - Education

- ▶ 75 - Veterinary activities >
- ▶ 77 - Rental and leasing activities >
- ▶ 78 - Employment activities >
- ▶ 79 - Travel agency, tour operator reservation service a... >
- ▶ 80 - Security and investigation activities >
- ▶ 81 - Services to buildings and landscape activities >
- ▶ 82 - Office administrative, office support and other bu... >
- ▶ 84 - Public administration and defence; compulsory so... >
- ▼ 85 - Education ✓
  - ▶ 851 - Pre-primary education >
  - ▶ 852 - Primary education >
  - ▶ 853 - Secondary education >
  - ▶ 854 - Higher education >
  - ▶ 855 - Other education >

There are 3 types of industry codes we can use.

With these codes, you can effectively search for specific commercial industries as well.



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intellectual  
property



# How to identify universities as industry?

We use industry classification codes to identify patents that are published by a specific type of “company”.

Your search



## Search step

☐ 1. Date: Publication date between 01/01/2004 and 31/12/2018

☐ 2. World region/Country/Region in country: Japan

☒ 3. NACE Rev. 2 (Primary codes only): 85 - Education

Boolean search:

1 and 2 and 3

Refresh



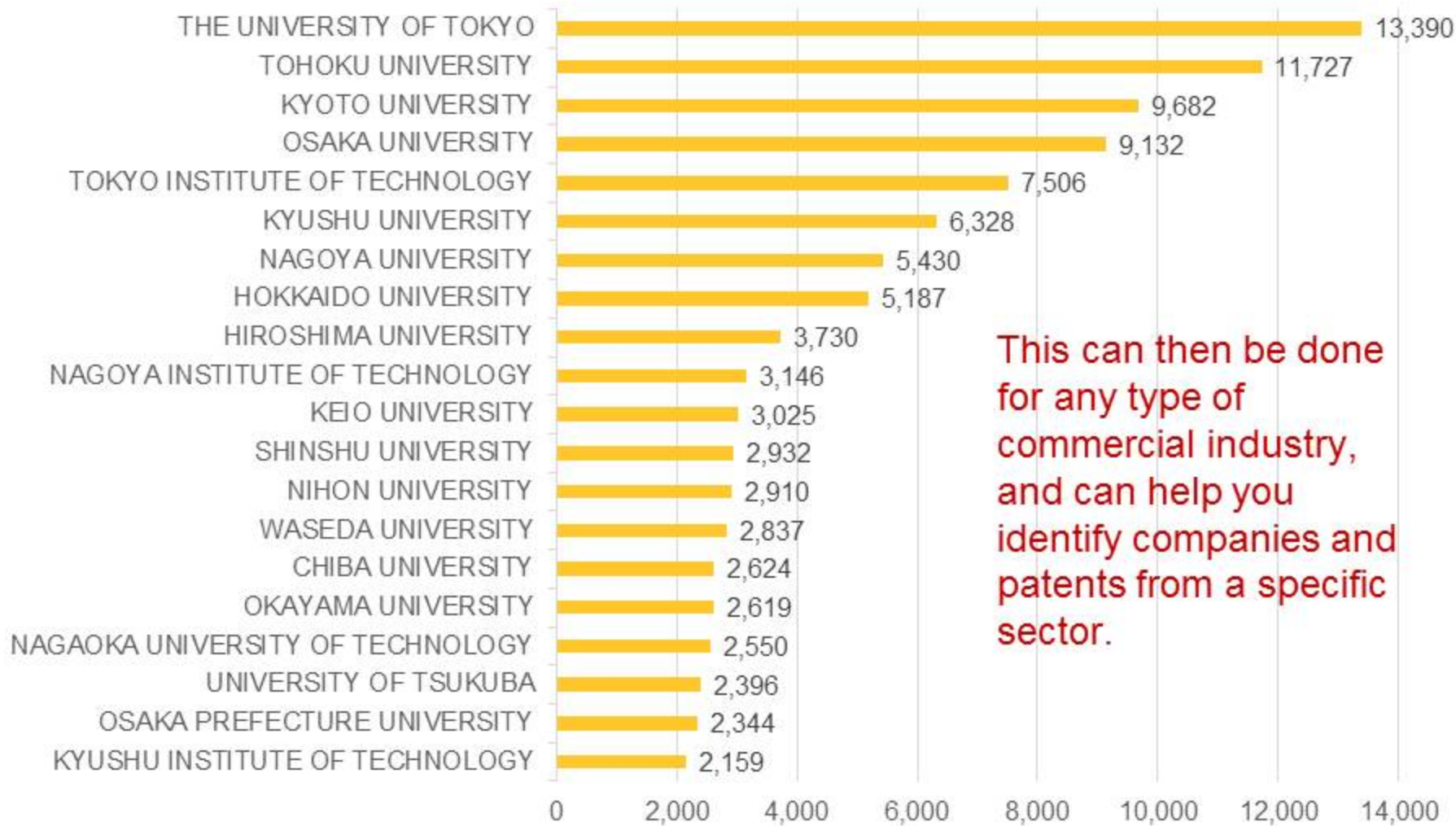
169,874 patents

302 companies

In this case, we are using the **NACE Rev. 2 code of <85 – Education>**.



# Which university publishes the most patents in Japan?



This can then be done for any type of commercial industry, and can help you identify companies and patents from a specific sector.



# What are Japanese universities publishing patents on?

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WIPO Classification	Number of patents
1. Biotechnology	20,039
2. Measurement	13,875
3. Medical technology	12,722
4. Pharmaceuticals	11,803
5. Electrical machinery, apparatus, energy	11,036
6. Organic fine chemistry	9,728
7. Semiconductors	9,284
8. Materials, metallurgy	9,202
9. Computer technology	7,507
10. Chemical engineering	5,996





# What are Japanese industries publishing patents on?

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WIPO Classification		Number of patents
1. Electrical machinery, apparatus, energy	#5 – 11,036	1,036,499
2. Optics		830,096
3. Computer technology	#9 – 7,507	773,047
4. Audio-visual technology		729,106
5. Semiconductors	#7 – 9,284	650,889
6. Transport		569,615
7. Measurement	#2 – 13,875	502,844
8. Telecommunications		376,760
9. Furniture, games		355,956
10. Textile and paper machines		350,613



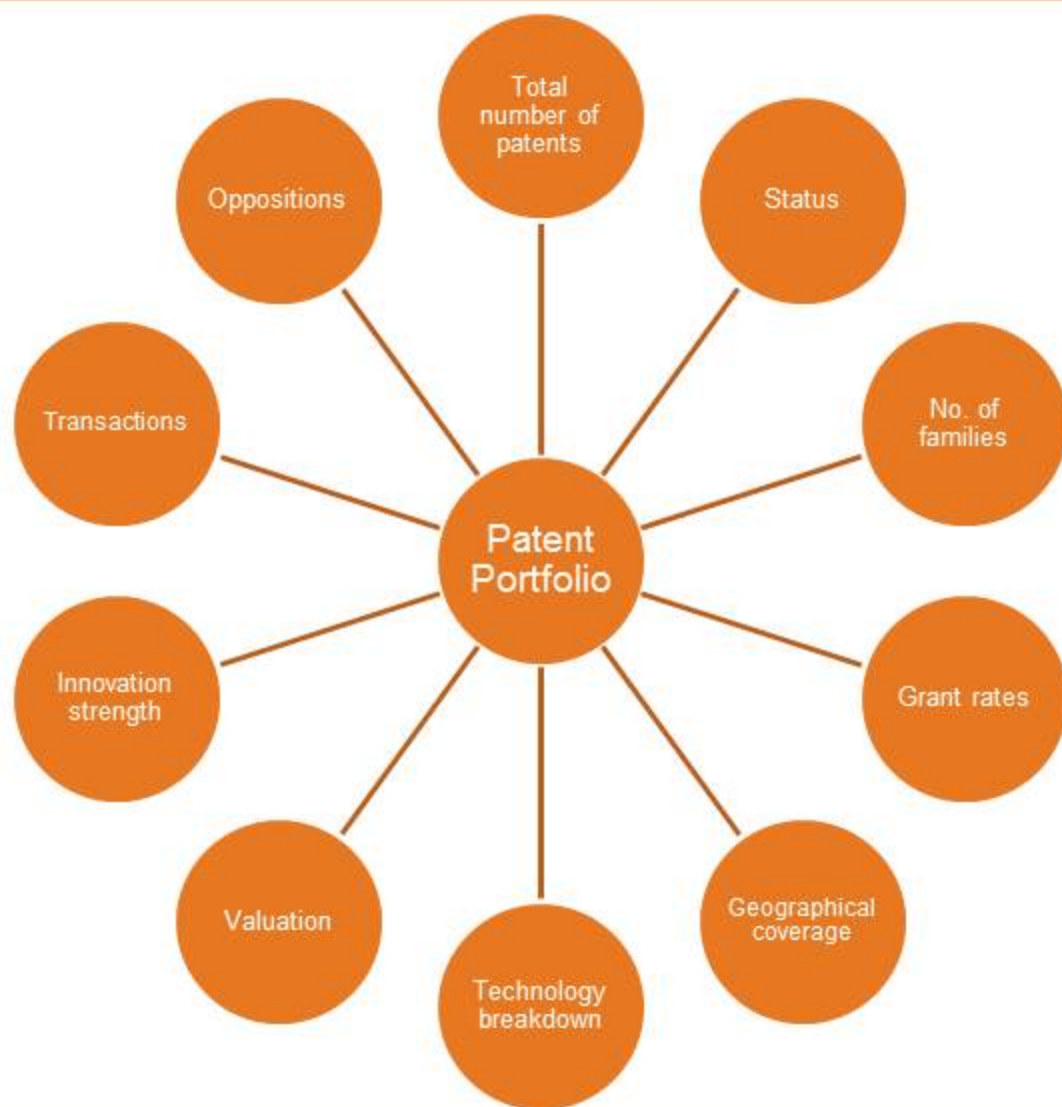


# 4

**Creative ways commercial  
entities manage patents**

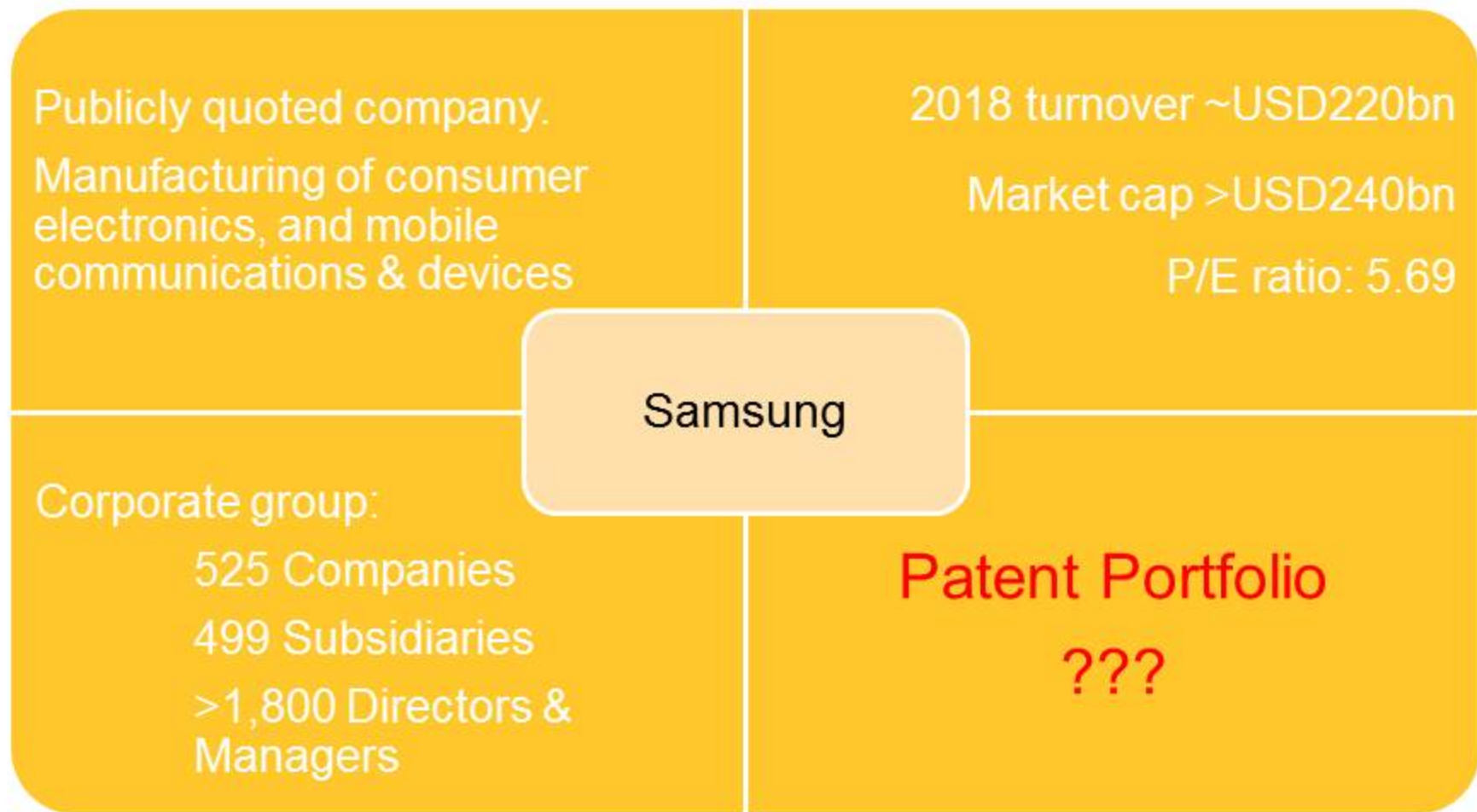
# Understanding your patent portfolio

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## Let's look at a commercial entity...

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# If you were Samsung, would you know...

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- What is the total number of patents owned by your company and all of your subsidiaries?
- How many transactions has your company made in total? Who did you buy from or sell to?
- What is the valuation of each patent? Do you know your total portfolio worth?

**What about your industry and your competitors?**

# I am a medium-sized SG company...

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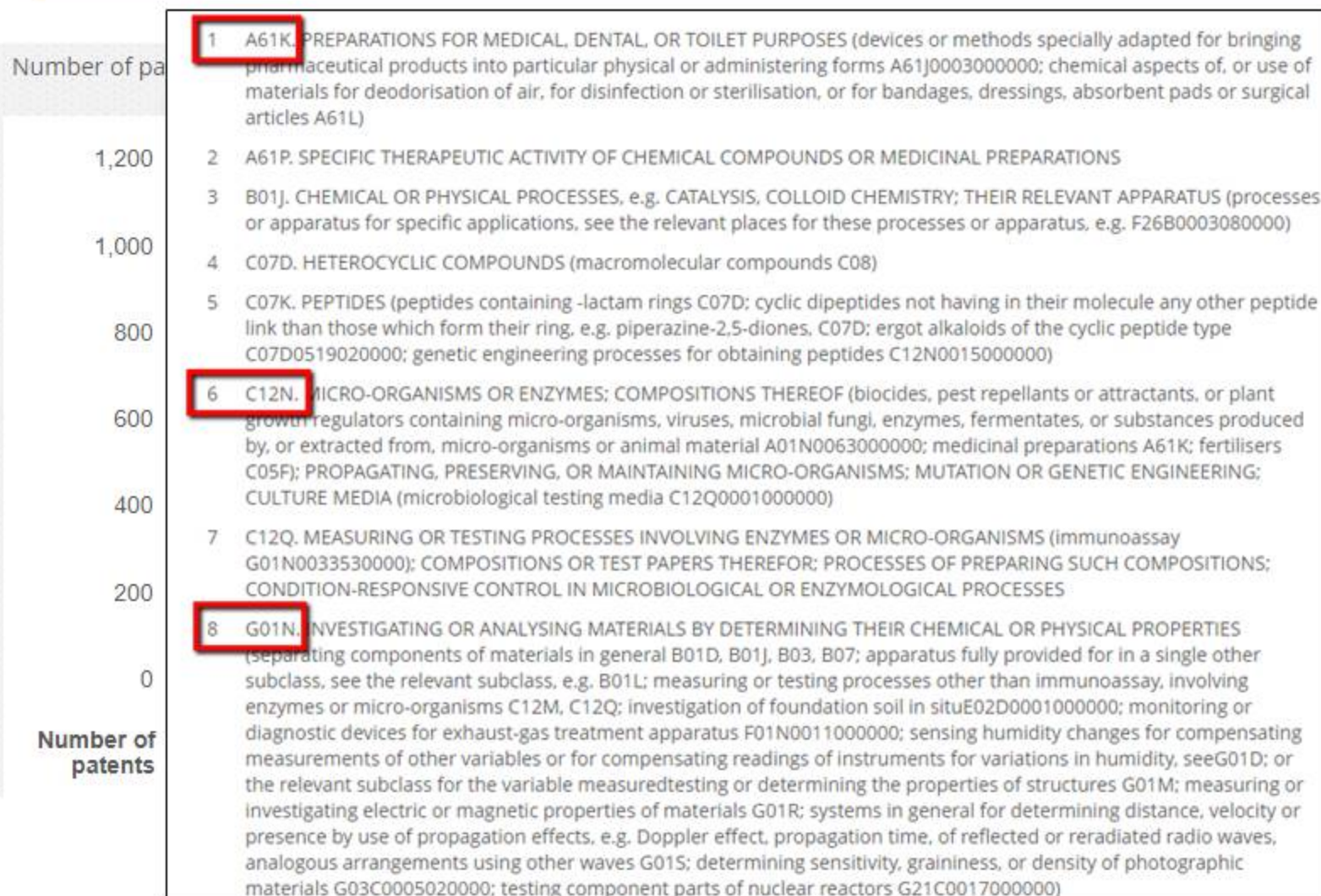
My target market is Japan, and there are many similar companies based there:

- I am looking for potential collaborators to do research work on?
- I am looking to acquire and divest patents that are of interest to me?
- What is my industry and competitors working on? What are they buying and selling?





# What areas am I innovating in?



# Which Japanese companies are publishing the same patents?

	Company name		Country ISO code	BvD ID number	Number of publications	Number of SEP's	Number of publications
2.	HONDA MOTOR CO LTD	 	JP	JP6010401027577	254,922	2	254,922
3.	JAPAN POST HOLDING CO LTD	 	JP	JP5010001112697	204	n.a.	204
4.	NISSAN MOTOR CO	 	JP	JP9020001031109	228,035	5	228,035
5.	NIPPON TELEGRAPH	 	JP	JP7010001065142	254,110	6,252	254,110
6.	JXTG HOLDINGS, INC	 	JP				41,727
7.	JXTG NIPPON OIL & ENERGY CORPORATION	 	JP				21,933
8.	HITACHI, LTD.	 	JP				992,120
9.	SOFTBANK GROUP CORP	 	JP				23,949
10.	SONY CORPORATION	 	JP	JP5010401067252	567,448	1,621	567,448
11.	AEON CO LTD	 	JP	JP6040001003380	509	n.a.	509
12.	PANASONIC CORPORATION	 	JP	JP5120001158218	1,205,345	4,319	1,205,345
13.	MITSUBISHI CORPORAT	 	JP	JP5010001008771	71,816	6	71,816
14.	MARUBENI CORPORATI	 	JP	JP9010001008776	1,894	n.a.	1,894
15.	TOKYO METROPOLITAN	 	JP	JP8000020130001	855	n.a.	855
16.	TOYOTA TSUSHO CORPO	 	JP	JP6180001031731	1,732	n.a.	1,732
17.	NATIONAL FEDERATION OF AGRICULTURAL CO-OPERATIVE ASSOCIATIONS	 	JP	JP8010005002090	537	n.a.	537

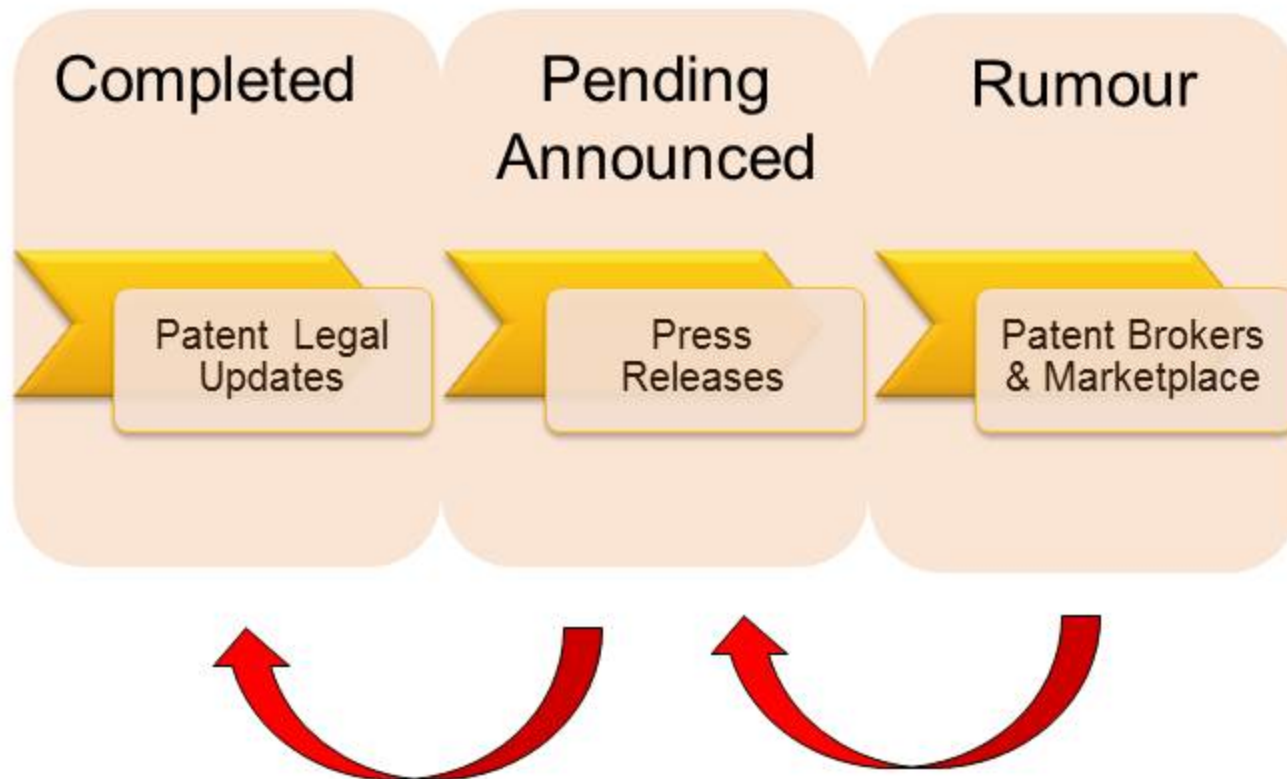
Potential collaborators?

Can I monetize my IP through them?

Any patents for me to acquire?



## We track the 3 different stages of patent transactions





# Patent Transactions – Deal Classifications

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1. **Research & Innovation Partnership**: If any innovation institute or University transfers IP to another entity these transactions can be classified into this category
2. **Corporate Acquisition**: If the acquisition is between two practicing entities (any firm other than universities, banks, investment funds, law groups, NPE's)
3. **Non Practicing Entities**: For any transaction involving an NPE entity as an acquirer would be classified into this category
4. **Assignment as Collateral** : If the name of the acquirer involves an entity type as bank/ funding agency – the deals are then classified into this category
5. **Release of Collateral**: If the name of the vendor involves an entity type as bank/ funding agency – such deals are to be classified into this category
6. **M&A**: Patents were transferred as part of an M&A deal
7. **Intra-company**: Patent transfers between entities falling under the same GUO for tax/legal reasons
8. **Government**: Assets of interest to government will be acquired/reassigned to government agencies for security



# Usage of detailed patent transaction information



Status	>	<input type="checkbox"/> Rumoured
Type	>	<input type="checkbox"/> Announced
Time period	>	<input checked="" type="checkbox"/> Completed

Status	>	<input checked="" type="checkbox"/> Research and innovation partnership
Type	>	<input type="checkbox"/> Intra-company
		<input type="checkbox"/> Assignment as collateral
		<input type="checkbox"/> Release of collateral
		<input checked="" type="checkbox"/> Corporate acquisition
		<input type="checkbox"/> Government
		<input type="checkbox"/> Others

Status	>	<input checked="" type="radio"/> From	<input type="text" value="01/03/2017"/>		To	<input type="text" value="05/03/2019"/>	
Type	>	<input type="radio"/> Any					
Time period	>	<input type="radio"/> Last 6 months					
		<input type="radio"/> Last year					
		<input type="radio"/> Last 5 years					
		<input type="radio"/> Last 10 years					

\*Screenshots from Orbis Intellectual Property.





# Individual patent valuations

LONG-TERM PREDICTION ENCODING METHOD, LONG-TERM PREDICTION DECODING METHOD, DEVICES THEREOF, PROGRAM THEREOF, AND RECORDING MEDIUM



Publication n° is EP1837997A1

The current owners are NIPPON TELEGRAPH AND TELEPHONE CORPORATION (JP) and The University of Tokyo (JP)



This publication is live and pending

[fre] PROCEDE DE CODAGE A PREDICTION SUR LE LONG TERME, PROCEDE DE DECODAGE A PREDICTION SUR LE LONG TERME, DISPOSITIFS PROGRAMME ET SUPPORT D'ENREGISTREMENT ASSOCIES

[ger] KODIERVERFAHREN UND DEKODIERVERFAHREN MIT LANGZEITVORHERSAGE, VORRICHTUNGEN, PROGRAMM UND AUFZEICHNUNGSMEDIUM DAFÜR

2 current owners

NIPPON TELEGRAPH AND TELEPHONE CORPORATION (JP)  
The University of Tokyo (JP)

2 original applicants

NIPPON TELEGRAPH AND TELEPHONE CORPORATION (JP)  
The University of Tokyo (JP)

5 inventors

MORIYA, Takehiro (JP)  
HARADA, Noboru (JP)  
KAMAMOTO, Yutaka (JP)  
+2 more

More >

14 family members

More >

This is a Standard Essential Patent, according to :

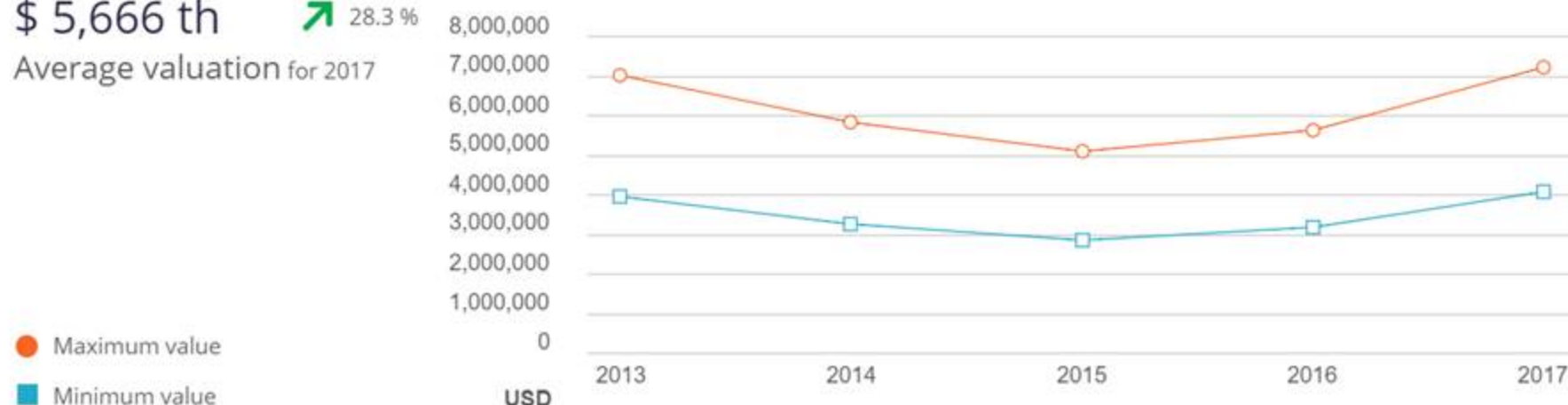
- International Telecommunication Union (ITU)



# Individual patent valuations

< > Patent value

\$ 5,666 th ↑ 28.3 %  
Average valuation for 2017



**IPBI - Intellectual Property Business Information** is a Dutch company focusing on IP valuation, IP big data processing and IP data in general.

For this collaboration with **Orbis Intellectual Property**, IPBI has processed datasets from different official patent offices worldwide, with different algorithms and rule sets. All live and granted patents are given a valuation, and form the extensive dataset used in the evaluation of the Innovation Strength Indicators.

IPBI is a spin off company of **InTraCom Group**, the global leader in patent transactions. The InTraCom Group is often engaged for their services in IP litigation advisory, as well as being called up as expert witnesses in litigation lawsuits.

