

# HOW TO EXPLORE IDEAS

~Using Intellectual Property~



**WIPO JAPAN OFFICE**

**WIPO**  
WORLD  
INTELLECTUAL PROPERTY  
ORGANIZATION

# HOW TO EXPLORE IDEAS USING INTELLECTUAL PROPERTY

Today, instant noodles are part of our food culture, eaten all over the world. But did you know that instant noodles were invented through the creative thinking of Momofuku Ando? What's more, thanks to intellectual property (IP), he was able to protect and further develop his instant noodles invention.

So *what is IP?* In general, IP refers to “creations of the mind” such as inventions, literary and artistic works, designs, and symbols, names and images used in business. IP is protected through, for example, patents, copyright, industrial designs and trademarks. IP enables people to receive recognition or gain financial benefit from what they invent or create, by giving them certain rights to determine how their inventions or creations may be used by others.

This straightforward booklet explains the roles and the applications of IP in a way that is easy to understand. It also introduces you to the creative thinking process that is necessary to create IP, through the story of the development of **Chicken Ramen** and **Cup Noodles**.

Let's learn together about IP and the creative thinking process.

**WIPO JAPAN OFFICE**

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**Let's start!**



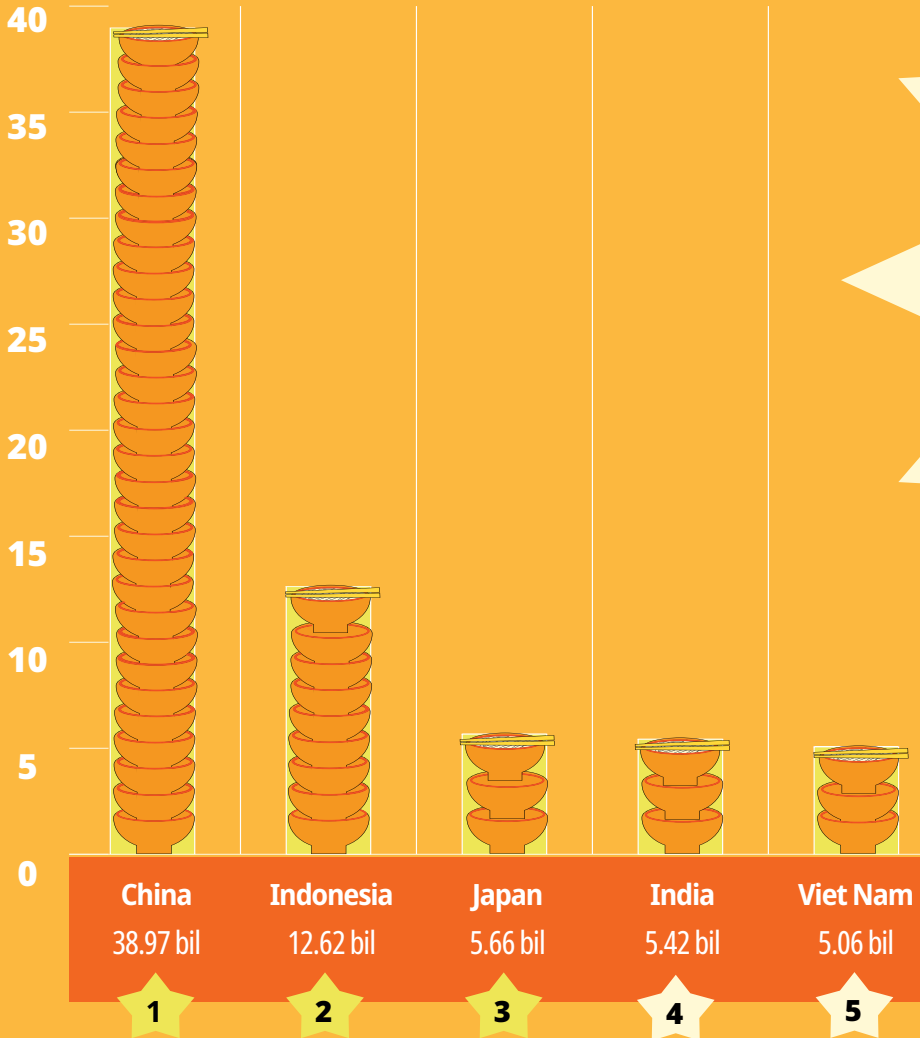
**Michi**

# 1

## Clues are everywhere

**About 100 billion servings of instant noodles are eaten around the world every year**

(billion servings)



# Global Demand TOP 10 RANKING



Figure 1. Top 10 ranking of total servings of instant noodles eaten in 2017. Adapted from *Instant Noodles at a Glance*, by World Instant Noodles Association, 2019, Retrieved from <https://instantnoodles.org/en/noodles/report.html>. Copyright 2019 by World Instant Noodles Association.



**USA**

4.13 bil

**6**



**Philippines**

3.75 bil

**7**



**Republic of Korea**

3.74 bil

**8**



**Thailand**

3.39 bil

**9**



**Brazil**

2.23 bil

**10**

## The invention of Chicken Ramen, the world's first instant noodles!

### How it all began

The story of **Chicken Ramen** began in the 1950s with Momofuku Ando. Before his invention of instant noodles, he had lost everything after his previous businesses failed.



Photo: Nissin Foods Holdings Co., Ltd. (Nissin)

**No employees**

**No company**

**No money**

However, he refused to give up, because he still had imagination and creativity. These tools would help him achieve his dream of running a successful business.



Momofuku Ando tried to think of a problem in need of a solution. He thought about how often people would line up at food stalls for a simple bowl of ramen noodles.



Image: Little Bee Books

That's it! Let's invent ramen noodles that can be quickly and easily prepared at home!



Photo: Nissin

**Chicken Ramen** was born in a small and humble work shed with nothing but the ordinary items of everyday life.



## The invention of Chicken Ramen, the world's first instant noodles!

### Problem

Ordinary ramen noodles take a lot of time and preparation. No one knew how to make noodles that could be stored for long periods and quickly prepared, using only boiling water.



### Idea

Let's dry the noodles by frying them in hot oil!



Figuring out a method of drying the seasoned noodles was no simple task, but Momofuku Ando conducted his experiments by following five development principles, and after trying and failing several times, he finally succeeded.

#### 5 development principles

1. **Must be delicious**
2. **Must be able to be stored for a long period of time**
3. **Must be easy to prepare**
4. **Must be affordable**
5. **Must be safe and sanitary**



One day, when Momofuku Ando went into the kitchen, he noticed his wife was making tempura. Tempura is a Japanese dish that consists of vegetables, fish and other ingredients coated in flour which has been mixed with water. The coated ingredients are fried in hot oil so that the water evaporates from the coating. The scene inspired Momofuku Ando.



# Invention

Dehydration by  
flash frying



Photo: Nissin

[Implementation]

Chicken Ramen  
launches



Frying noodles in hot oil removes the moisture from the soft dough, making them almost completely dry and hard. Afterwards, when boiling water is poured over the fried noodles, the water is absorbed through small holes in the dough made during the dehydration process. It is this process that allows for the rehydration of the noodles, quickly restoring their softness.

Dehydration by flash frying became the main technology behind instant noodles, and Momofuku Ando obtained a patent for this technology. But there was still much to do before he could make his instant noodles available for sale. He had to consider how he should package the instant noodles and what he should name his product. With the support of his family, in 1958, he began the sale of his flagship product, **Chicken Ramen**, the world's first instant noodles.

## Chicken Ramen and IP

**Chicken Ramen** became a big hit. However, many bad-quality counterfeit imitations of the product also appeared on the market. Thanks to the use of patents, industrial designs and trademarks, Momofuku Ando could protect his invention from the other companies and their fake products.

### Problem



### Product

- Must be easy to store for long periods of time.

### Packaging

- Consumers must be able to easily recognize the new product.

### Naming

- Consumers must be able to easily understand the type of product.
- Must be easy to remember, so consumers become familiar with the name.



In the end, Momofuku Ando established the first industrial association for instant noodles and invited his competitors to join. This assured that the quality level of instant noodles would be preserved, because the companies that were part of the association could use Momofuku Ando's patented invention through licensing agreements. This way, consumers could trust the quality of the products, ultimately expanding the market for instant noodles.

## Idea



## IP

- In order to dry the noodles, they are deep fried in hot oil.
- A transparent window in the package makes the product contents visible.
- Noodles are seasoned with chicken soup.

**Dehydration by flash frying**  
(patent)



**Packaging**  
(industrial design)



**Chicken Ramen**  
(trademark)

チキンラーメン

## The invention of Cup Noodles!



Photo: Nissin

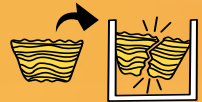
### Problem: food culture variation

When Momofuku Ando went abroad to the USA for a research trip, he came across a new challenge. Americans ate **Chicken Ramen** by breaking the noodle blocks into pieces and putting them in a cup rather than a bowl. What's more, they ate the noodles with a fork!

### Next Problem



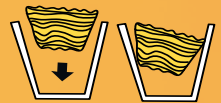
The noodle block would break apart.



### Another Problem



When the noodle block is placed in the cup, it tilts or flips upside down.





Momofuku Ando wanted to make instant noodles that could be eaten all around the world, but he faced many problems before he could transform his idea into a product.



## Idea

Let's make instant noodles in a cup that can be held in one hand as you eat the noodles with the other!



## IP

Instant noodles in a cup.



## Idea

Let's fix the noodles in the middle of the cup by making the diameter of the bottom of the cup smaller than that of the noodle block!



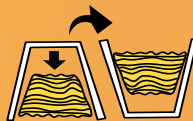
## IP

A structure that allows the noodle block to be suspended inside the cup.



## Idea

Let's fit the cup over the noodle block and flip it over!



## IP

A method of placing the cup upside down over the noodle block and then turning it right side up.

## Cup Noodles and IP

**It is possible to protect products with multiple types of IP**

### Cup Noodles



### Patent

Noodle block's dense structure\*



### Utility model

Noodle block's suspended structure inside the cup\*

\*The period of protection for this right has expired.

## Trademarks

**CUP NOODLE**  
カップヌードル



Word marks

Stylized word marks

Position mark

## Industrial designs



Cup shape\*

Noodle block shape

\*The period of protection for this right has expired.



### 3 Let's change our point of view

#### What else is there? From ideas to IP

## Problem



## Clue



I don't want to get an injection because it hurts.

- We don't notice when a mosquito bites us.
- That's because the tip of its mouth is serrated!



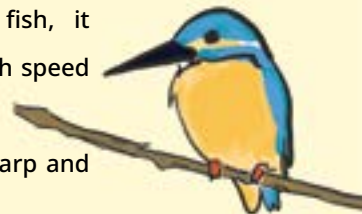
I don't like when I bring my wet umbrella inside and water drips everywhere.

- Lotus leaves repel water.
- That's because the leaves are rough, covered in small clusters of cells, which help maintain the surface tension of water, allowing it to slide right off!



Bullet trains make a loud crashing sound when they pass through a tunnel.

- When a kingfisher hunts fish, it dives into the water at a high speed without making a sound.
- That's because its beak is sharp and has a square pyramid shape!





## Idea



## IP

Make the tip of the syringe needle serrated.



**Invention**  
"Painless"  
needle syringe

Create a rough surface, covered with small protrusions, on the surface of the umbrella.



**Invention**  
Extremely  
water-  
repellent  
umbrella

Make the front of the bullet train sharp with a square pyramid shape in order to reduce air resistance.

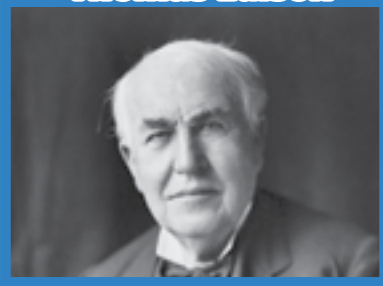


**Industrial  
design**  
Bullet train

### 3 Let's change our point of view

## What else is there? Products protected by patents

**Thomas Edison**



## Problem



*"I find out what the world needs, then  
I proceed to invent."*

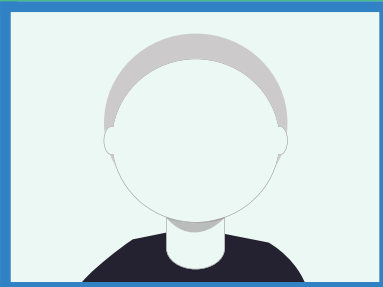
*- Thomas Edison*

**Prof. Satoshi Omura**



*"I have long been convinced that Nature has  
all the solutions we need to solve our past,  
present and future problems - we just need to  
find them."*

*- Satoshi Omura*





**Patents** make our lives richer by helping industries develop and protect new and original techniques. Do you know anything about the inventors from your country? You can check the **WIPO IP Advantage database** at [www.wipo.int/ipadvantage](http://www.wipo.int/ipadvantage).



## Idea



## IP

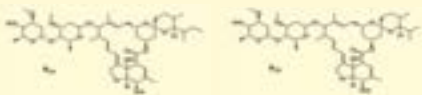
Develop an electric lamp suitable for home use by placing a light-conducting, carbonized filament inside a glass vacuum bulb.



**Edison lamp:** The first commercially available electric lamp with a filament made with carbonized bamboo from Japan, which could radiate for a long time.



Develop a new medicine to combat parasitic diseases by isolating a substance produced by useful microorganisms that kills off parasites.



**Ivermectin:** Medication made from modified avermectins, a series of insecticides, which are used to treat many types of parasitic diseases



## 3 Let's change our point of view

### What else is there? Products protected by industrial designs and trademarks

#### Industrial Designs

##### Flat-panel television

Combining wireless technology and edge-lit LED made it possible to create a thinner and lighter television. **This innovative design allowed people to use television in different ways, creating new lifestyles.**



##### Smartphone

Touchscreen mechanics reduced the number of buttons on a device. The birth of this technology led to the design of the smartphone, which is **cool and easy to use.**



##### Plastic bottle

Plastic bottles feature usability and a strong product concept.





## Trademarks

### Two-legged walking robot

**ASIMO**

Advanced

Step in

Innovative

MObility

A mark that appeals to customers by interesting them in a company's new technology.



### Basketball

This ball is certified by the International Basketball Federation (FIBA):

A mark that highlights the product's quality and high-level technology to consumers.



## Global brands

Increases the value of a company



### 3 Let's change our point of view

#### Let's respect creations

**Counterfeit products might harm the health of the consumers and expose them to danger.**



The internal liquid from counterfeit lithium batteries can leak; it may catch on fire or even cause an explosion.

**Counterfeit products can ruin the profits and sales of the original brands, or even damage the product's image to customers.**



At first glance, original and counterfeit products may look similar, but there is a great difference in quality between them.



When buying counterfeit products, they can break very easily, meaning that you, the consumer, will suffer a loss. When buying a counterfeit product, you are sabotaging the company's desire to create innovation and produce new inventions.

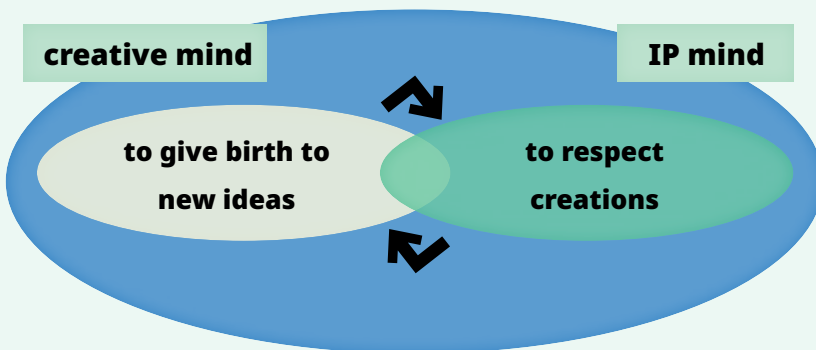


It is important to constantly develop two mindsets:

**creative mind**

and

**IP mind**





# Creative Thinking

There are **three steps** to creative thinking:

**Problem** → **Idea** → **IP**

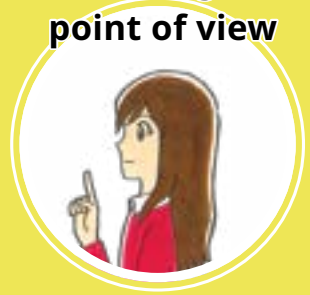
Clues are  
everywhere



Let's develop  
our ideas

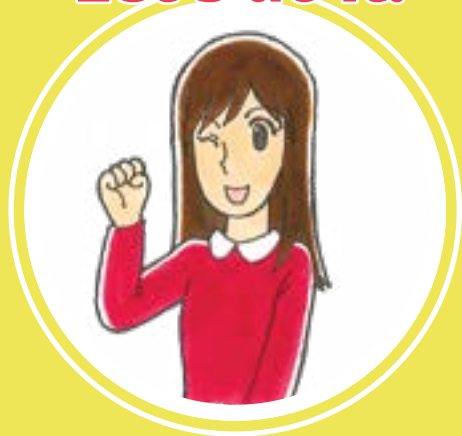


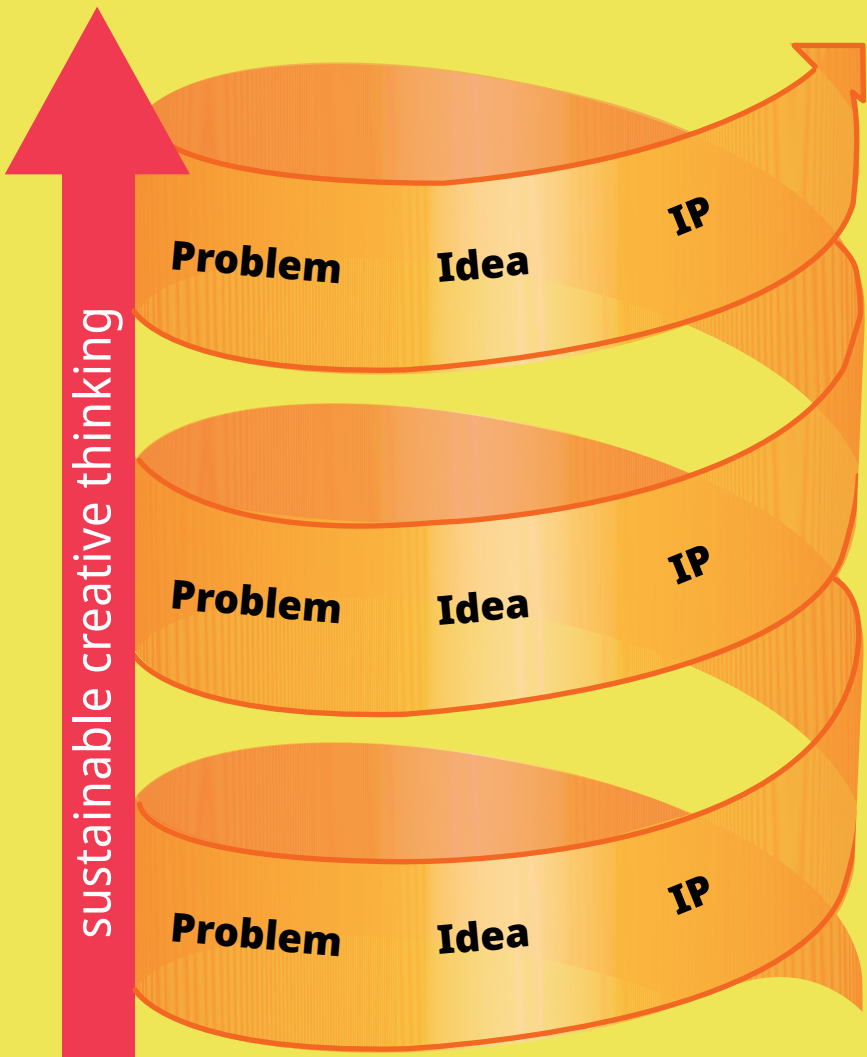
Let's change our  
point of view



**Let's do it!**

Aim-high!





**It's important to sustain this process!**

## INTELLECTUAL PROPERTY RIGHTS DIAGRAM

### INTELLECTUAL PROPERTY RIGHTS

#### Promote Creativity

#### CREATIONS OF THE MIND

##### Patent rights

Protect inventions

##### Utility model rights

Protect concepts such as the shape of a product

##### Industrial design rights

Protect merchandise designs

##### Copyright

Protect literature, arts and sciences, music, programming and other types of works

##### Plant breeders' rights

Protect new species of plants

##### Trade secrets

Protect know-how

#### Maintain Trust

#### INDICATIONS OF SOURCE

##### Trademark rights

Protect marks of goods and services

##### Geographical indications

Protect regional brands

##### Trade names

Protect company names and the like

##### Labeling and packaging

Regulate labels, packaging and other activities that can confuse customers

#### INDUSTRIAL PROPERTY RIGHTS

Patents  
Utility models  
Industrial designs  
Trademarks



## EXAMPLES OF INTELLECTUAL PROPERTY RIGHTS

**IP protects ideas that create the things we use in our daily lives**

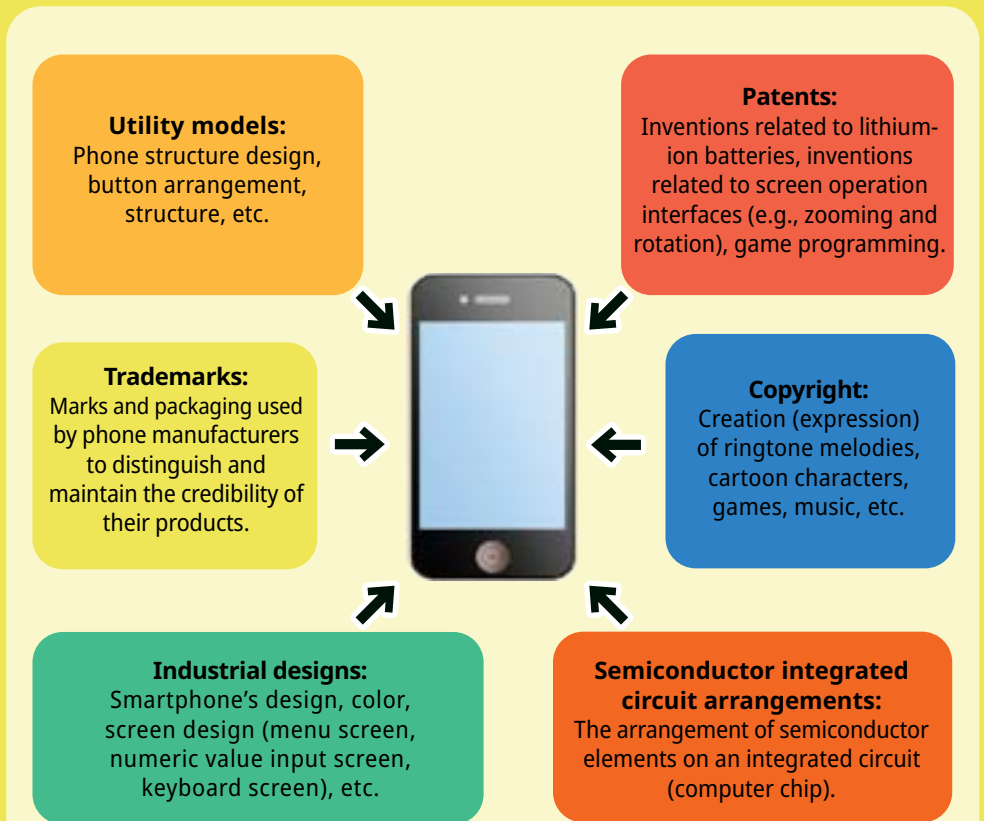


Figure 2: A concrete example of intellectual property rights. Adapted from "Other Types of Intellectual Property Rights (1)," by Japan Patent Office, 2013, *Curriculum and Lecture Materials for Courses on the Intellectual Property System for Science and Engineering Students*, slide 4, Retrieved from [https://www.jpo.go.jp/resources/report/kyozai/document/rikoukei\\_shiryou/generally\\_12.pptx](https://www.jpo.go.jp/resources/report/kyozai/document/rikoukei_shiryou/generally_12.pptx). Copyright 2013 by the Japan Patent Office.

## Different flavors and packaging of instant noodles from all over the world!

### China

A beef broth-based soup with "five-spice powder" (spice blend of fennel, cinnamon, cloves, citrus unshiu peel and star anise) is the most popular flavor.

### Indonesia

"Mie Goreng" fried noodles are the most popular. Flavors seasoned with chili pepper, vegetables and chicken are quite popular.

### Japan

Pork bones, chicken, seafood broth mixed with soy sauce are common flavors. There are also plenty of low-calorie options available in the market.

### Viet Nam

The most popular flavor is "Tom ChuaCay" (shrimp flavor with spices). Chewy noodles are preferred.



Figure 3: A variety of instant noodle cultures. Adapted from *Instant Noodles at a Glance*, by World Instant Noodles Association, 2019, Retrieved from <https://instantnoodles.org/en/noodles/report.html>. Copyright 2019 by World Instant Noodles Association.

## India

Masala curry and chicken tikka flavors are popular. For religious reasons, many people are vegetarian, so the soup is commonly made of vegetables or tomatoes.

## USA

Chicken is the most popular flavor of instant noodles. There are plenty of other flavors such as beef, shrimp and vegetables. It is common to eat noodles using a fork.

## Republic of Korea

Spicy instant noodles that have red hot chili soup are very common. The popular flavors are beef and seafood.



## Philippines

"Pancit Canton" is the most popular type of fried noodles. Calamondin (citrus fruit) and hot chili are popular flavors.

## Thailand

"Tom Yum Goong", "Thai Suki" and flavors with minced pork meat are popular. They are commonly well spiced with chili peppers.

## Brazil

The most popular flavor is chicken and strong, salty flavors, often without much soup.



# What kind of instant food would you make?

**Flavor:**

**Ingredients:**

**How are you going to make your product?**



**Product name:**

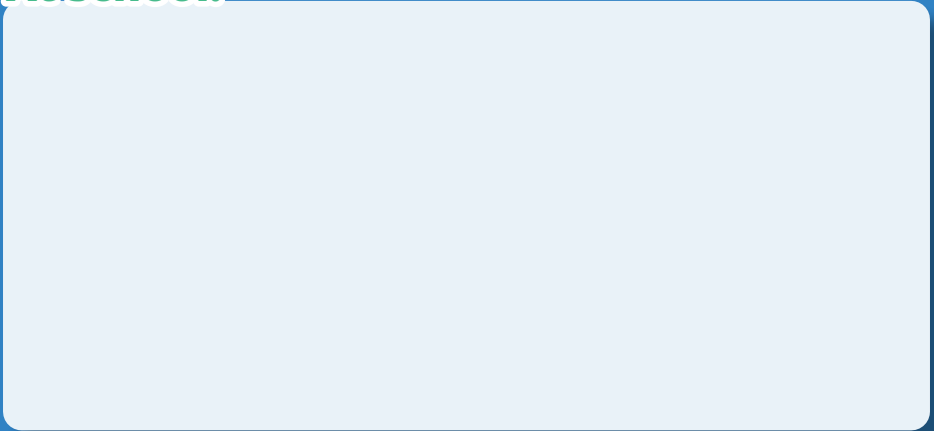
**Packaging:**

**Best feature(s):**

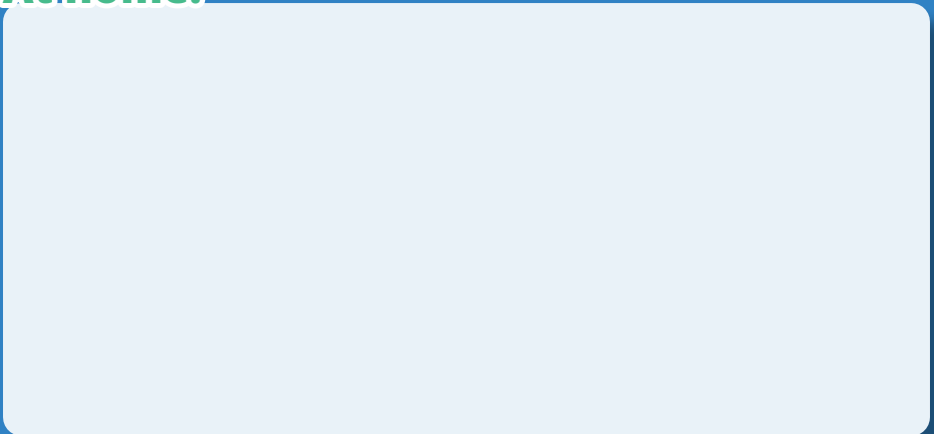


**Finding out problems! What kind of problems do you face in your daily life?**

**At school:**



**At home:**





**Is there anything that makes you think  
“I wish I had something like this?”**

**When you are playing:**

**In the city:**

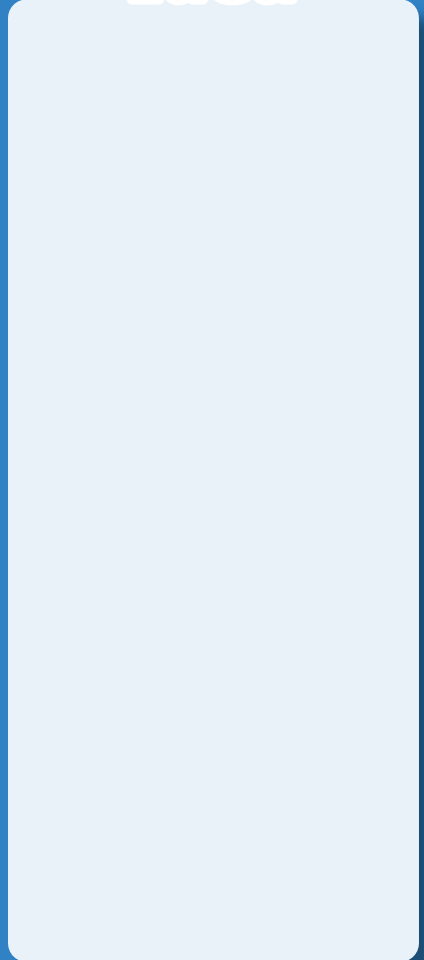
**In society as a whole:**

Let's think of some ideas  
to solve these problems!

**Problem**



**Idea**





**How are you going to protect these ideas?**

**Idea**



**IP**

# Message

**Your only limitation is your imagination.**

**Respect the creations of others.**

**Keep trying until you succeed!**

## Notes

## About World Intellectual Property Organization (WIPO)

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[WIPO](#), headquartered in Geneva, Switzerland, is an United Nations agency with the mission to lead the development of a balanced and effective international IP system. WIPO has 193 member states including Japan and administers 26 treaties (as of July 2021).

IP system through rights such as patent, design and copyright enables innovation and creativity necessary for the economic development, and through trademark and domestic laws that prevent unfair competition functions as the mechanism to tackle uncertainty, disturbance and fraudulent and as the tool to maintain market order .

WIPO, since its establishment in 1967, has been the global forum for IP services, policy, information and cooperation. We facilitate international discussion about the IP related treaties and standards, supports each government's use of IP as part of their development strategy, and offers IP related trainings to various institutions and private companies. Our services for the end users of IP system includes [international patent application system](#), [international trademark application system](#), [international design application system](#) and [arbitration and mediation services](#), as well as various charge-free databases of IP related information.



## About WIPO Japan Office

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WIPO Japan Office is one of the external offices of WIPO and stationed in Tokyo, Japan. We actively seek opportunities to promote the purposes and roles of IP system, in and out of Japan, and to encourage inventors, scientists, engineers, innovators and artists.

### Promotion of IP system

As a country with limited recourses and as we witness a rise in significance of intangible assets, it is paramount that Japan effectively uses IP which is one of Japan's strengths and to contributes to innovation, culture and prosperity of mankind.

Given the importance of IP and increasing focus on establishment of IP systems, [WIPO Japan Office](#) actively promotes purposes and roles of IP system covering patent, copyright, geographical indication, traditional knowledge, design, and plant breeders' rights through domestic and international symposium, lectures, and online seminars.

### Cooperation with Government of Japan and Courts

WIPO Japan Office is one of the few offices of international organizations that are located in Kasumigaseki, the government district of Japan. Taking advantage of its location, WIPO Japan Office bridges between WIPO, a specialized agency of the UN, and those who are responsible for IP system in Japan, namely the Government of Japan including Cabinet Office, Ministry of Foreign Affairs, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Ministry of the Environment, Agency for Cultural Affairs, Japan Patent Office, and Japan Fair Trade Commission, and courts such as Intellectual Property High Courts.

In particular, we jointly work on projects under the Japan Funds-in-Trust, coordination on various policy implementation and treaties, promotion IP system and assistance to the developing countries,

cooperation towards the achievement of SDGs and creation of IP cases database with the Supreme Court.

### Promotion of International Applications

In order to effectively exercise industrial property rights, such as patents, trademarks and designs, it is important to secure the right to operate in countries and regions of intended business operation. The difference in IP systems throughout the countries and regions makes it a challenge to seamlessly secure international rights. We aim to harmonize the systems and procedures required throughout the world and promote international application systems administered by WIPO.

WIPO Japan Office encourages use of these systems in Japan through information sharing, responding to enquiries in Japanese language and discussions with individual companies.

### Assistance for developing countries

Japan has over 130 years of IP system history. IP system has contributed greatly to the development of Japan since the opening of the country in the 19th century. In view of that sharing such experience with developing countries can be of benefit for them, WIPO Japan Office contributes to IP capacity building in the developing countries through [IP Advantage database](#) and workshops with the support of [Japan Funds-in-Trust](#).

### Response to international challenges

WIPO engages in various activities to achieve SDGs. For example, we have [WIPO GREEN](#) to address environmental challenges such as climate change and [WIPO Re:Search](#) to fight against neglected tropical diseases. WIPO GREEN, in particular, was initiated by the Japanese industry and now became one of the main pillars of WIPO activities. With active promotion and focus on this issue at the WIPO Japan Office, the recent years have seen a rapid increase in Japanese WIPO GREEN partners including private companies and academic institutions, which now records the largest number of partners registered by country.



## **Editorial supervision**

WIPO Japan Office

Nissin Foods Holdings Co., Ltd.

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## **Resources**

*CUPNOODLES MUSEUM Website*, [www.cupnoodles-museum.jp](http://www.cupnoodles-museum.jp).

*Japan's Top Inventions: Instant Ramen*, NHK WORLD-JAPAN

*Nissin Foods Group Website*, [www.nissin.com](http://www.nissin.com).

Wang, A. (2019). *Magic ramen: The story of Momofuku Ando*.

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