Crowdsourcing

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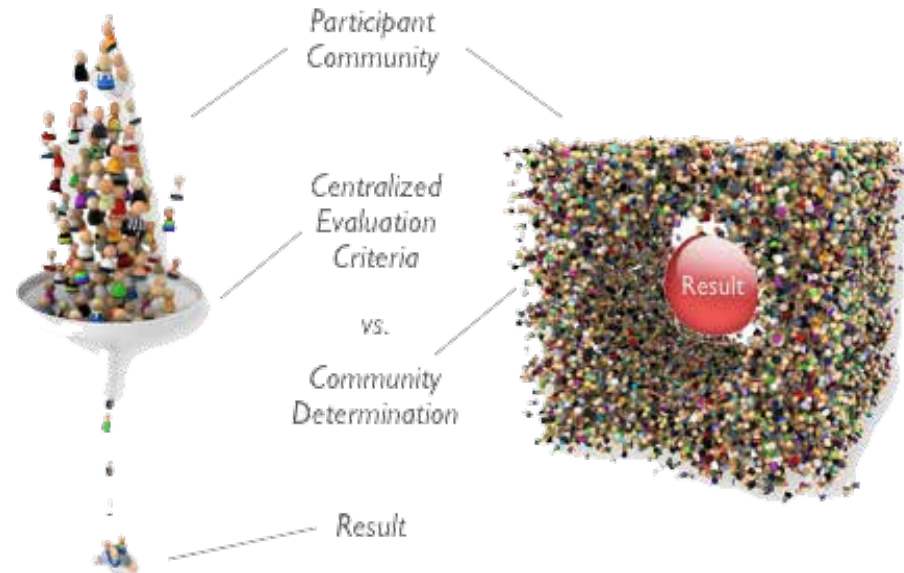1155021490 Wong Chi Wing
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Outline

1. What is crowdsourcing
2. Origin and history
3. Motivation to crowdsource
4. Examples of crowdsourcing
5. Pros and cons
6. Conclusion

What is crowdsourcing?

Outsourcing a job performed by traditional employee **to the crowd**.

Crowdfunding
Financial contributions from online investors, sponsors or donors to fund for-profit or non-profit initiatives or enterprises.

Tools
Applications, platforms and tools that support collaboration, communication and sharing among distributed groups of people.

Cloud Labor
Leveraging of a distributed virtual labor pool, available on-demand to fulfill a range of tasks from simple to complex.

Civic Engagement
Collective actions that address issues of public concern.

Collective Knowledge
Development of knowledge assets or information resources from a distributed pool of contributors.

Collective Creativity
Tapping of creative talent pools to design and develop original art, media or content.

Community Building
Development of communities through active engagement of individuals who share common passions, beliefs or interests.

Open Innovation
Use of sources outside of the entity or group to generate, develop and implement ideas.

What is crowdsourcing?

It can be of any type of job as long as the redistribution of **work** and **reward** are handled properly.

What is crowdsourcing?
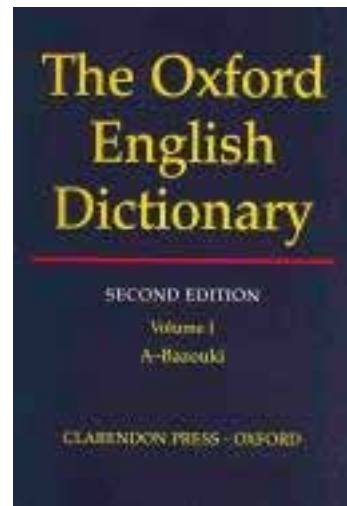
Origin and History

- Earliest term reference in 2006
- Journalist Jeff Howe published the definition in a blog to his June 2006 *Wired* magazine article, "The Rise of Crowdsourcing".

Origin and History

The Oxford English Dictionary

- Earliest example in the mid-19th century
- Open call for volunteers was made for contributions identifying all words in the English language with usage examples

The Oxford English Dictionary

SECOND EDITION

Volume I
A-Bazouki

CLARENDON PRESS · OXFORD

Motivation to crowdsource

- **Increasing** or **initially high demand** of services which cannot be supplied by limited traditional workforces
  - Employment of whole work group is **not financially possible**
  - Even if it is possible, such a number of employees comes with **management problems**
- Connect with unlimited number of people through **internet**

Examples of crowdsourcing

Examples of HK

1. Studio KUMA Call Filter
2. WaterForFree

Examples from different aspects

1. Collective Knowledge   (NASA)
2. Open Innovation   (Lego)
3. Civic Engagement   (GreenChallenge, WeatherSignal)
4. Crowdfunding   (Kickstarter, Indiegogo, Crowdrise)
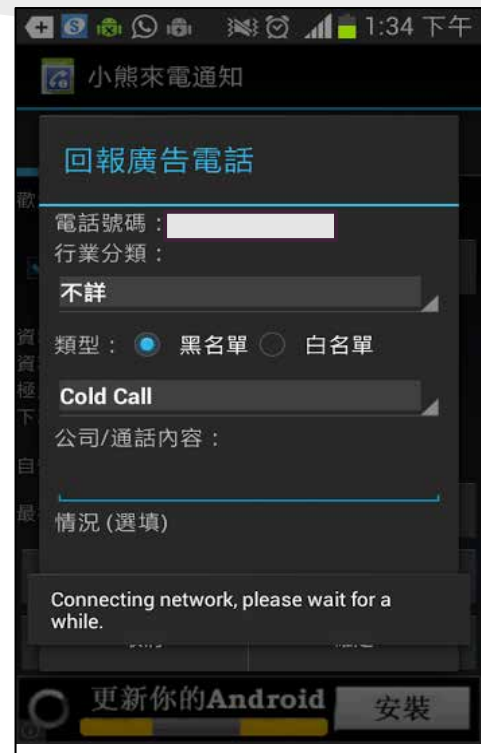5. Cloud Labour   (GoGoVan)

Example - Studio KUMA Call Filter (HK)

- integrates **user-created tags** and constructs a reliable communication network for everyone

- block **junk calls** and let user have a harassment-free calling experience

Example - Studio KUMA Call Filter (HK)

- user can submit the junk call number to the database
  - they can put the phone number into the blacklist or whitelist

- **all people can contribute** to the database

- Since it outsources the data collection task to the general public, it is an example of crowdsourcing

Example - Studio KUMA Call Filter (HK)

Why it needs crowdsourcing?
● too many junk call numbers
  o hard to find out all of them
  o can gather the junk call information in a more efficient way if crowdsourcing is used-->save time

Example – WaterForFree(HK)

- a mobile app and website that shows the locations of public water fountains and dispensers throughout Hong Kong
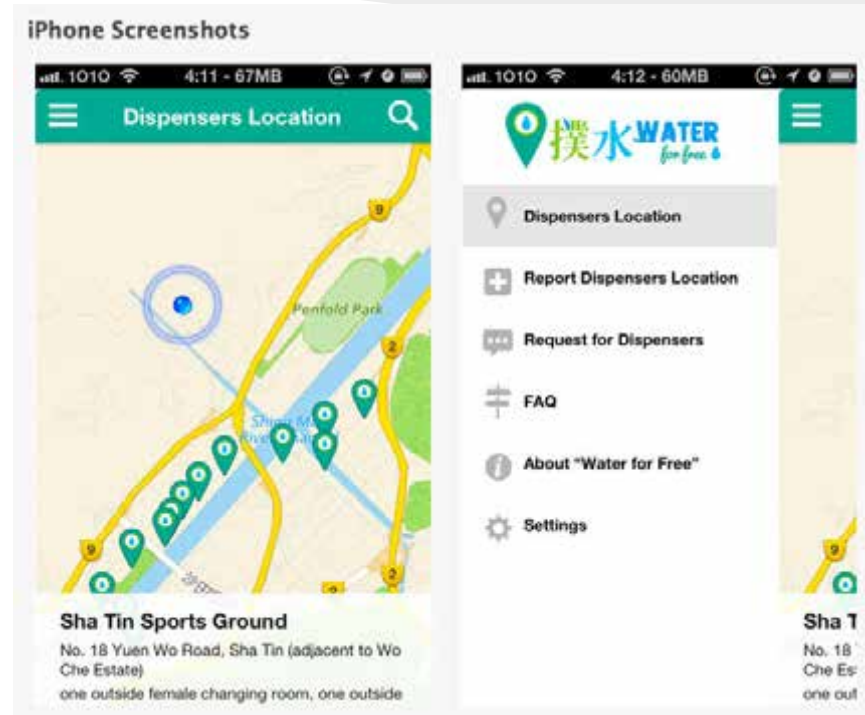- **everyone** can report the location of the fountain

Report a Fountain

We need your help to tell us the location of more water fountains. Please email us at waterforfreehk@gmail.com and specify:

- detailed location of water fountain (including name of building and floor),
- whether the water fountain is connected to (1) filter; or (2) big bottle of distilled water or mineral water,
- if convenient, please email us photos of the water fountain and the surrounding environment.

撲水
WATER
for free

Example - WaterForFree(HK)

- Reasons why it needs crowdsourcing
  - too many public water fountains and dispensers in Hong Kong,
    - hard to find out all of them by only a few people

  - crowdsourcing provides a more **efficient** way to gather the information of the locations of water fountains

Example - Astronomy

NASA

Recently, NASA has seeked help from the public in different projects and crowdsourced ideas for improvement

- Image Detective Programme
- New technologies for astronauts
- New technologies for discovery of space
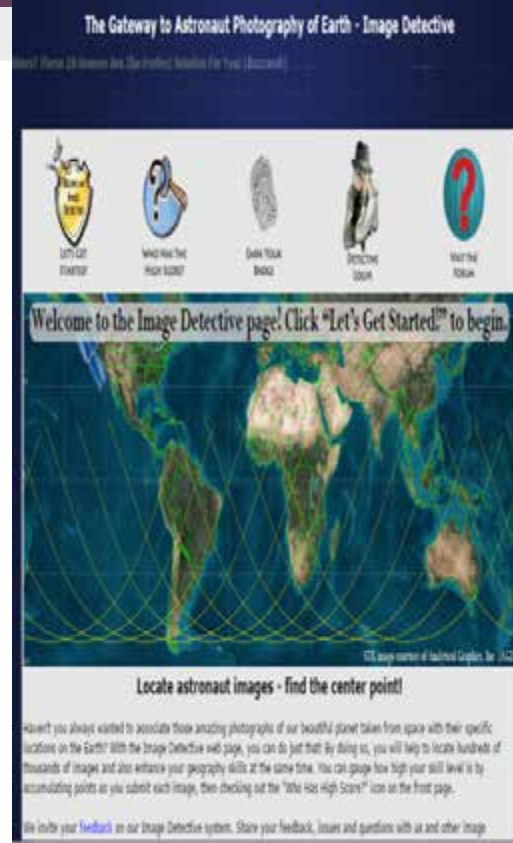- Knowledges about earth science

Open an online platform for professionals to share knowledge

Example - Astronomy

Image Detective Programme (2014)

- Since the early 1960s, thousands of photos collected
  → **Too much workload** for NASA

- Launched a programme to **seek help from the public**
  - Make these photos available online
  - More than 1.9 million photos
  - People are asked to identify particular towns and landmarks
  - Images being identified are mostly night images

Example - Astronomy

1. Dark skies
   Requires **no scientific expertise** ; Categorise cities, stars or other objects

2. Night cities
   Require knowledge about local geography to match photos with possible positions on maps ;
   Datas are used to make light maps of cities

3. Lost at night
   Most difficult one; identify cities in photos

Example - Astronomy

How to do?

- Pick identified images
- Tag them on the amount on cloud cover and other features they can identify

Hundreds of volunteers → already classify almost 20,000 photos

Yet,

more people are needed to review images for accuracy ensurement

Rewards will be offered to people who identify the most images

Example - Lego design and voting

The Lego Group
- Family-owned company
- Best known for the manufacture of Lego brand toys.

Change in the lego group
- Historic loss of 188 million Euros is recorded for lego.
- Reason: Become less popular

Open innovation and crowdsourcing

Example - Lego design and voting

1. No interaction between LEGO Group and its customers

   LEGO ambassadors :

   Transmitting information in one way or another and are completely integrated into the design of new products.

2. Raising awareness of young adults

   LEGO Mindstorms :

   Users hack the system to customize and use it in a way that the company had not foreseen.

Example - Lego design and voting

Lego Cuusoo projects

A Program ran since 2008 with a Japanese crowdsourcing company Cuusoo

- assists the company to develop new ideas from its fans and customers

Lego's Crowdsourced Toys

Ghostbusters 2014
Creator: Brent Waller
$49.99

DeLorean Time Machine 2013
Creator: Masashi Togami
$34.99

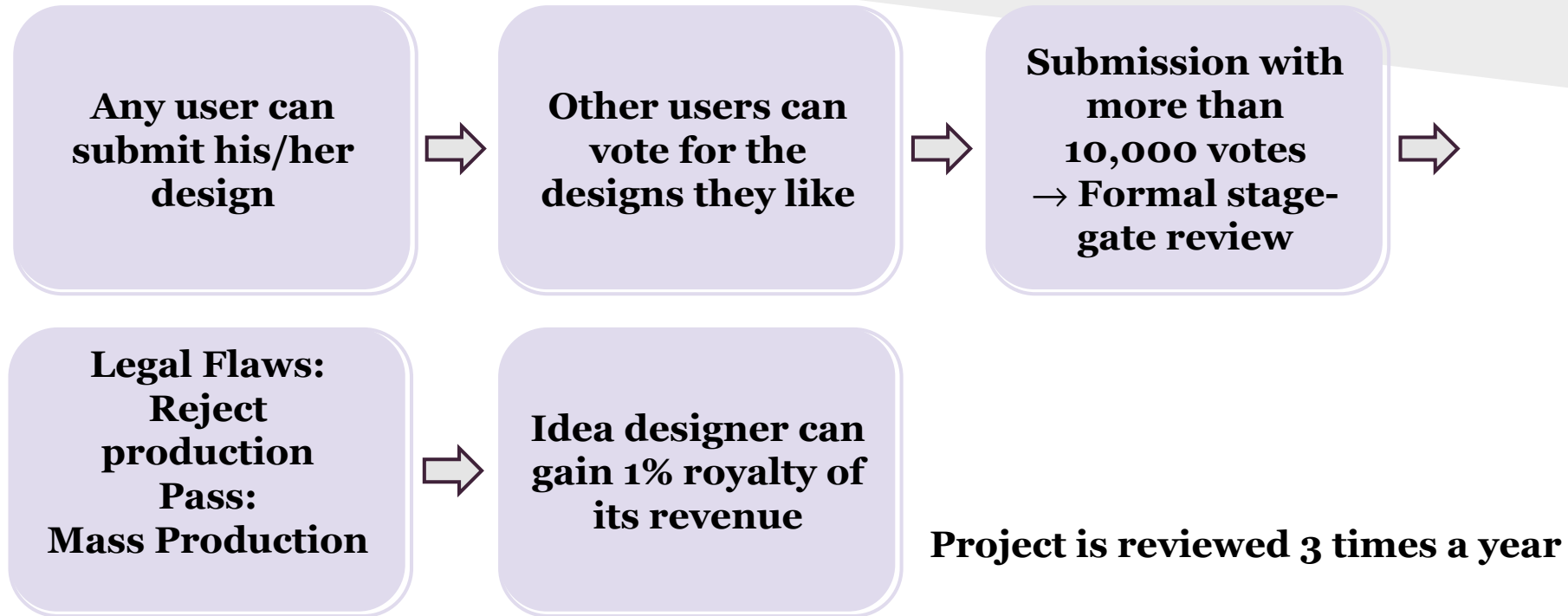**Minecraft Micro World** 2012
Creators: Chris Malloy, Michael Thomas, Kyle Tingey, Bjarne Panduro Tveskov
$34.99

COURTESY THE LEGO GROUP

Lego Cuusoo Project

Any user can submit his/her design ⇒ **Other users can vote for the designs they like** ⇒ **Submission with more than 10,000 votes → Formal stage-gate review** ⇒

Legal Flaws: Reject production Pass: Mass Production ⇒ **Idea designer can gain 1% royalty of its revenue**

Project is reviewed 3 times a year

Example - GreenChallenge

GreenChallenge

- The largest annual and international green business plan competition.

- Inspired and supported by former US president Clinton

- Aim to look for those dedicated entrepreneurs with brilliant green business plans.

- speed up the transition towards a low carbon economy.

Example - Crowdfunding

- Funding a **project** or **venture** by raising monetary contributions from a large number of people via the internet

- A new and inspiring way of funding projects

- In 2013, the crowdfunding industry has grown to **over $5.1 billion** worldwide in total

Example - Crowdfunding

KickStarter
www.kickstarter.com

Indiegogo
www.indiegogo.com

Crowdrise
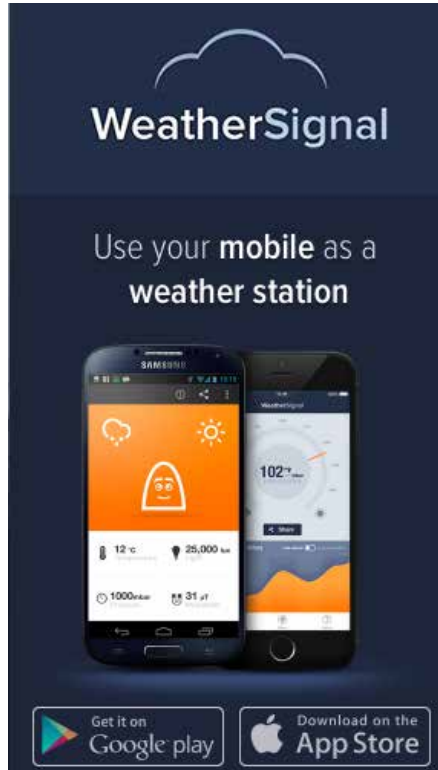https://www.crowdrise.com/

Example - Crowdfunding

IMPACT:

- **Interactive** and **open** when compared to traditional funding method.

- **Anyone** who is determined can start a project

- A wide variety of project types, from making T-shirts to shooting a movie

- A broad width of funding scale

Example – Weather Signal

Background
- Team behind OpenSignal
- The company that creates independent maps of mobile phone network coverage from mobile phone users.

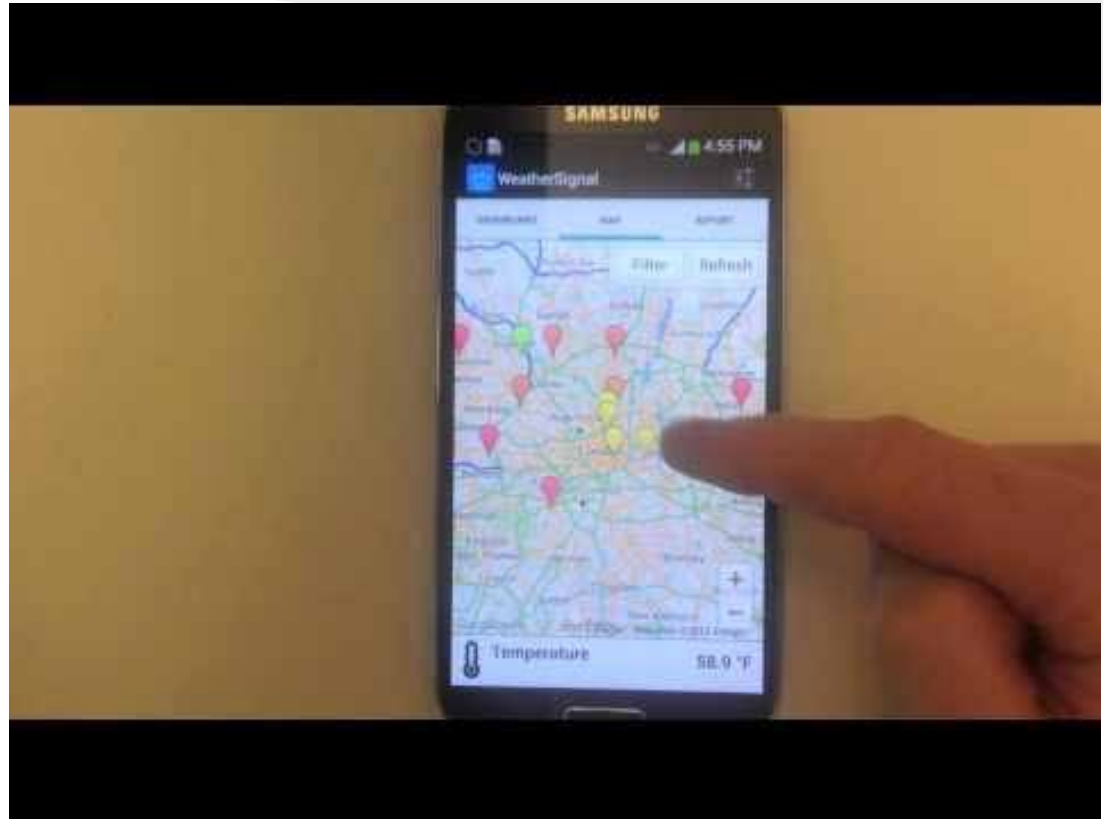## Crowdsourced Weather Map Apps
- Everyone can view online or in-app on the live-updating weather map
- Collecting Weather data of users from all the world (Temperature, Pressure, Humidity etc.)
- Through the sensors have recently been implemented in smartphones
- Monitor local atmospheric conditions
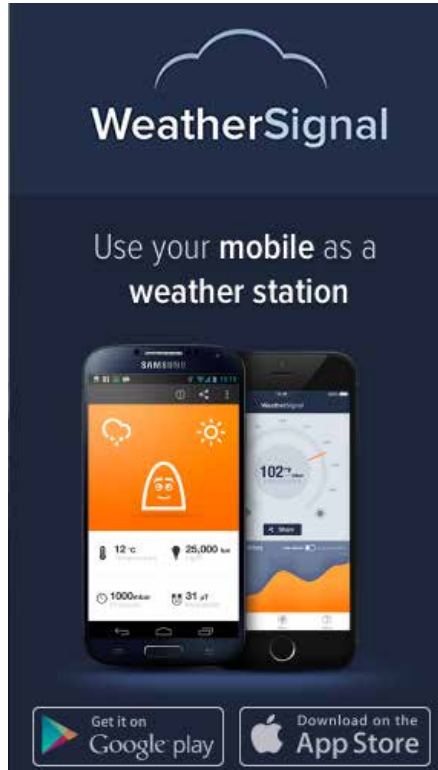
Example – Weather Signal

Features:

- Pressure
- Temperature
- Light Intensity
- Humidity
- Magnetic Flux

http://weathersignal.com

Example – Weather Signal

WeatherSignal

Use your **mobile** as a weather station

Get it on Google play   Download on the App Store

Incentive of the Crowdsourcing Project

- Extent of the data that can now be collected through a cell phone
- In London, talking about the weather takes up a great deal of our time.
- The role of smartphone may be able to play in enhancing weather forecasts.
- Crowdsource weather have relied on **active participation** by users (Time cost, labor cost)
- Currently known as **passive participantion**

Example - GoGoVan

- Local Start-up Business
- Crowdsourced logistic to **optimize** the supply and demand

Procedure to use GoGoVan service

Step 1 — Select the service and key in the route (fee will be reflected)

Step 2 — Set the date and time

Step 3 — Enter your information and place the order instantly

http://gogovan.com.hk/en/how-it-works/

Example - GoGoVan

Traditional Logistic Process

- Full-time Driver (monthly member fee)
- B2C operation
- Time Consuming, Communication misunderstanding

Crowdsourced Logistic Concept

- Everyone can be the GOGO VAN driver
- C2C operation platform
- GPS tracking technology
  - Report the Location of the driver
  - Take the order with distance limited

Pros and cons

Pros
- Everyone can contribute, quantity of participants is unlimited.
- Reward to the crowd can be of many type other than money, social recognition, self-esteem, or the development of individual skills are also applicable.

Cons
- Less credible product, compared to professionals
- Legal risks of intellectual property infringement are high with crowdsourcing
- The job has to be made simple and straightforward for the crowd to understand ways of participation

Conclusion

- Crowdsourcing is best suited for simple tasks
- Apply in different aspects
    - Open Innovation (Lego Group)
    - Cloud Labour (Gogo Van)
    - Collective Knowledge (NASA)
    - Crowdfunding (kickstarter)
    - Civic Engagement (Green Challenge , WaterForFree)

With the sharp development of information technology, crowdsourcing will become more popular and applicable in our daily lives.

References

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http://open-your-innovation.com/2010/04/01/open-innovation-crowdsourcing-and-the-rebirth-of-lego/

http://greenchallenge.info/index.php/competition/about-us

www.kickstarter.com

www.indiegogo.com

OPEN INNOVATION

In a world of widely distributed knowledge, where the boundaries between a firm and its environment have become more permeable, companies are crowdsourcing to ensure they maintain a competitive advantage, seeking research and ideas from broader constituent groups.

CLOUD LABOR

Crowdsourcing is used to connect labor demand and supply. Virtual workers perform activities that range from simple to specialized tasks.

COLLECTIVE KNOWLEDGE

Crowdsourcing is used to develop, aggregate, and share knowledge and information through open Q&A, user-generated knowledge systems, news, citizen journalism, and forecasting.

COMMUNITY BUILDING

Crowdsourcing can be used to increase audience engagement and build loyalty through online dialogue with customers or a broader population. It can also be leveraged to provide a forum where views and opinions can be shared, ideas can be generated, and to receive feedback on products and services.

CROWDFUNDING

Crowdfunding has four financial model types: (1) as a donation with no expected financial return (2) in return for a share of revenues or royalties (3) to include capital and interest payments (4) in exchange for equity. Crowdfunding is an approach to raising capital for a new projects and businesses by soliciting contributions from a large number of stakeholders.

COLLECTIVE CREATIVITY

Crowdsourcing is used to tap into online communities of thousands of creatives to develop original products and concepts, including photography, advertising, film, video production, graphic design, apparel, consumer goods, and branding concepts.

CIVIC ENGAGEMENT

Crowdsourcing can be leveraged for social initiatives such as community programs, social production, group organizing, environmental issues, medicine, government and politics, and religion. These are non-commercial applications of crowdsourcing where individuals or groups are invested in bettering the lives of others and in sharing information on beliefs, passions and causes.