Fostering Collaboration by Location-based Crowdsourcing

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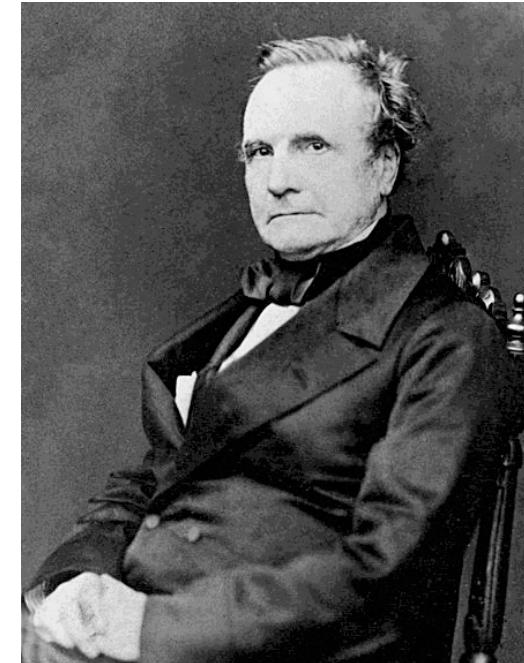
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The collaborating crowd

- "Crowdsourcing" represents a specific class of collaboration: collaborating with a large, undefined group of people.

- "Crowdsourcing" = the act of **taking a task once performed by an employee, and outsourcing it to a large, undefined group of people** (Howe 2006, Bayus 2013)

The basic idea of crowdsourcing is <u>not</u> new!

- In the 19th century, Charles Babbage (famous English mathematician and engineer) hired "the crowd" to assist in computing astronomical tables.

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Why is there a crowdsourcing hype now?

Crowdsourcing in the online world

- Crowdsourcing does not necessarily need ICT.
- However: ICT is an enabler!
- IT is leveraged to interconnect people, and to activate, coordinate, and bundle their collective capabilities to gain synergies.

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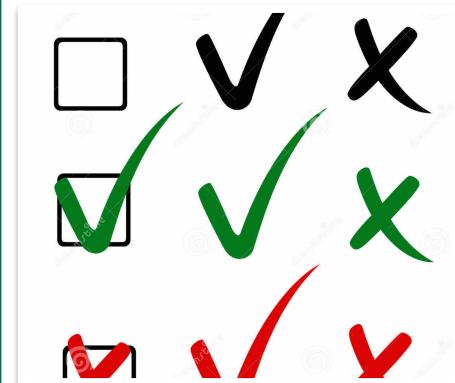
Location-based Crowdsourcing (LBCS)

- Being at the right location is often necessary for fulfilling a task.

- Combining the online and the physical world:
  - Collaborating with a crowd that are required to be situated at a certain location
    → "location-based crowdsourcing" (LBCS)

Still, there is only limited knowledge on location-based crowdsourcing.

Typology for collaborative Location-based Crowdsourcing

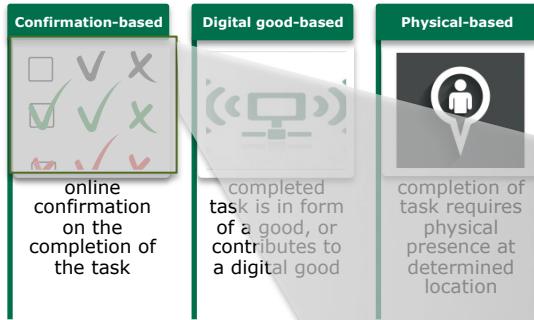| **Confirmation-based**	**Digital good-based**	**Physical-based**
online confirmation on the completion of the task	completed task is in form of a good, or contributes to a digital good	completion of task requires physical presence at determined location

Confirmation-based

"Take some physical good from A to B under time constraints."

WeGoLook.com
Localmind.com
TaskRabbit.com

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Confirmation-based

online confirmation on the completion of the task

Digital good-based

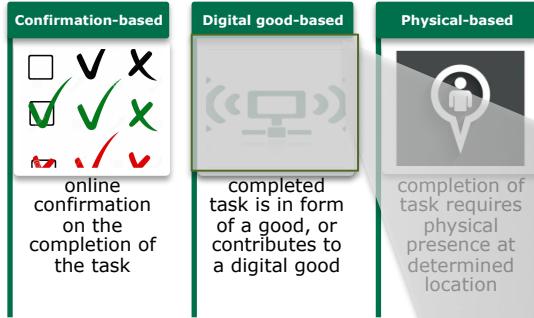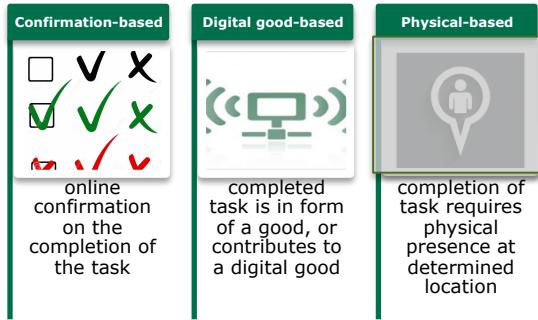completed task is in form of a good, or contributes to a digital good

Physical-based

completion of task requires physical presence at determined location

Digital-based

"Take a picture of a certain place in town and submit the digital picture to the crowdsourcer."

iReport.cnn.com
Tackable.com

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Confirmation-based

online confirmation on the completion of the task

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Physical-based

completion of task requires physical presence at determined location

Physical-based

"Collect some goods that are only available at a certain location and ship it to the crowdsourcer."

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The physical element of Location-based Crowdsourcing poses some restrictions compared to fully ICT-reliant crowdsourcing in the digital world.

The crowd versus one Person

- Noticeable difference, whether the crowd is supposed to do a certain task or an individual person carries out some task:

    - If a crowd is taking pictures and one out of a few is good, than then the task is fulfilled.

    - If an individual carries out the task, there are high expectations on this individual to deliver a high quality product quickly.

        - Frequently occurs with physical-based LBCS.

Quality assurance

- If certain information is provided incorrectly or a picture is uploaded by mistake, the crowdsourcer may not be aware of the error.

  - If a crowd is taking pictures and one out of a few is good, than then the task may be fulfilled.

  - But how identifying the error(s)?

Damaged good

- If certain information is provided incorrectly or a picture is uploaded by mistake, the crowdsourcer may not be aware of the error.

  - What are the consequences?

- What happens if a physical good is damaged (e.g., when transporting the good from one place to another)?
  - Critical issues:
    - damage liabilities and compensation
    - security, safety, and privacy aspects

Take away messages

Being at the right location is often necessary for fulfilling a task.

Location-based Crowdsourcing represents one out of numerous alternatives to create value by collaboration.

Three basic types are identified:
- confirmation-based
- digital good-based
- physical-based

Different challenges to overcome depending on the type.

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Additional Information

Typology for Collaborative Location-based Crowdsourcing

LBCS-Type	Characteristic of Collaborative Task	Exemplary Task	Exemplary Applications
Confirmation-based	online confirmation on the completion of the task	"Take some physical good from A to B under time constraints."	WeGoLook.com Localmind.com TaskRabbit.com
Digital good-based	completed task is in form of or contributes to a digital good	"Take a picture of a certain place in town and submit the digital picture to the crowdsourcer."	iReport.cnn.com Tackable.com
Physical-based	completion of task requires physical presence at determined location	"Collect some goods that are only available at a certain location and ship it to the crowdsourcer."	WeGoLook.com TaskRabbit.com

Challenges of Crowdsourcing Projects

- Number of tasks and number of users are strong drivers:
  - Full functionality and popularity only with an increasing number of users
- Online-traffic increases with popularity and quality of the platform; and, vice versa, ample online-traffic influences the popularity and quality of the platform positively.

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Publications

Publications available at:

- https://www.researchgate.net/profile/Christine_Bauer
- http://bach.wu.ac.at/bachapp/cgi-bin/fides/fides.aspx/fides.aspx?search=true;person=true;show=pub;tid=9856;lang=EN

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