

CROWDSOURCING IN NEW PRODUCT DEVELOPMENT

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Personal Introduction



Assoc.-Prof. Dr. Rita Faillant

Director of M/O/T Management School at University of Klagenfurt, since 2020

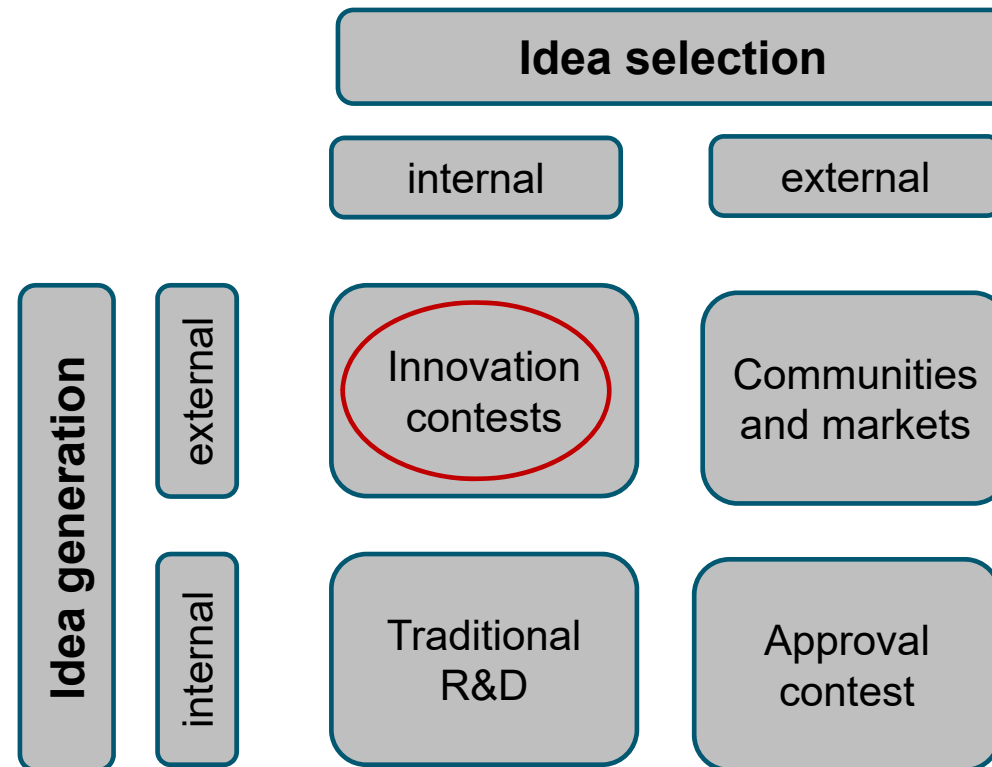
- 2006 PhD in Marketing
- 2014 Habilitation in Business Administration
- 2012 Research fellow at DTU Copenhagen
- 2014 – 2020 Prof. at University of Southern Denmark/DK
- Personal Research Interests:
 - Digital innovation & technology management
 - Organizational innovativeness
 - User-centred Innovation – Crowdsourcing
 - Creativity
- Rita Faillant has co-authored more than 70 scientific publications (> 2600 Google Scholar citations) and is involved in numerous university and industry collaborations.
- Contact: rita.faillant@aau.at

Use of informal relationships - Crowdsourcing



“...represents the act of a company or institution taking a function once performed by employees and outsourcing it to an *undefined* (and generally large) network of people in the form of an open call.” (Howe 2008)

Types and functions of Crowdsourcing

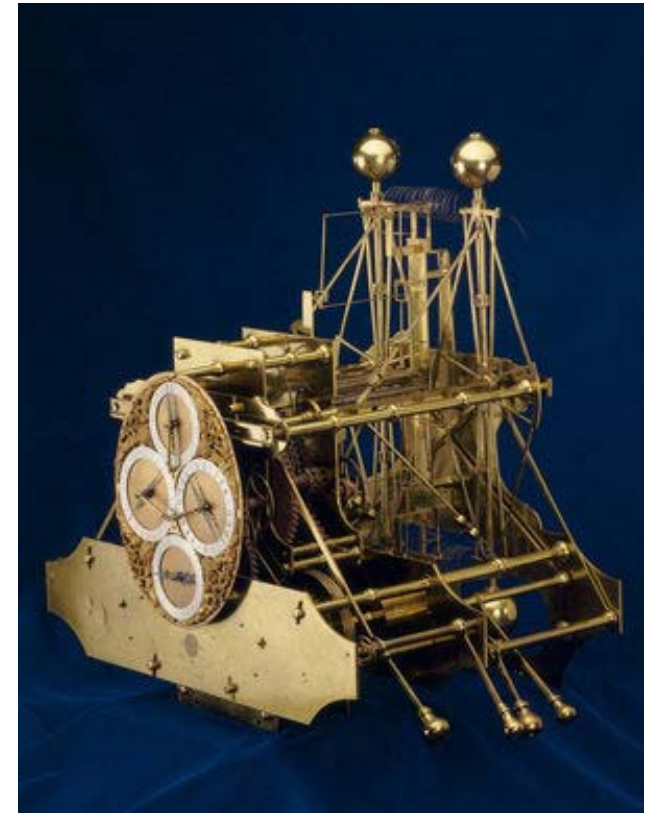


King & Lakhani, HBR 2013

Innovation Contests





An early example:

- 1714 British Parliament launched the Longitude Act, searching for a method to determine longitude at sea
- Financial reward: £ 20.000



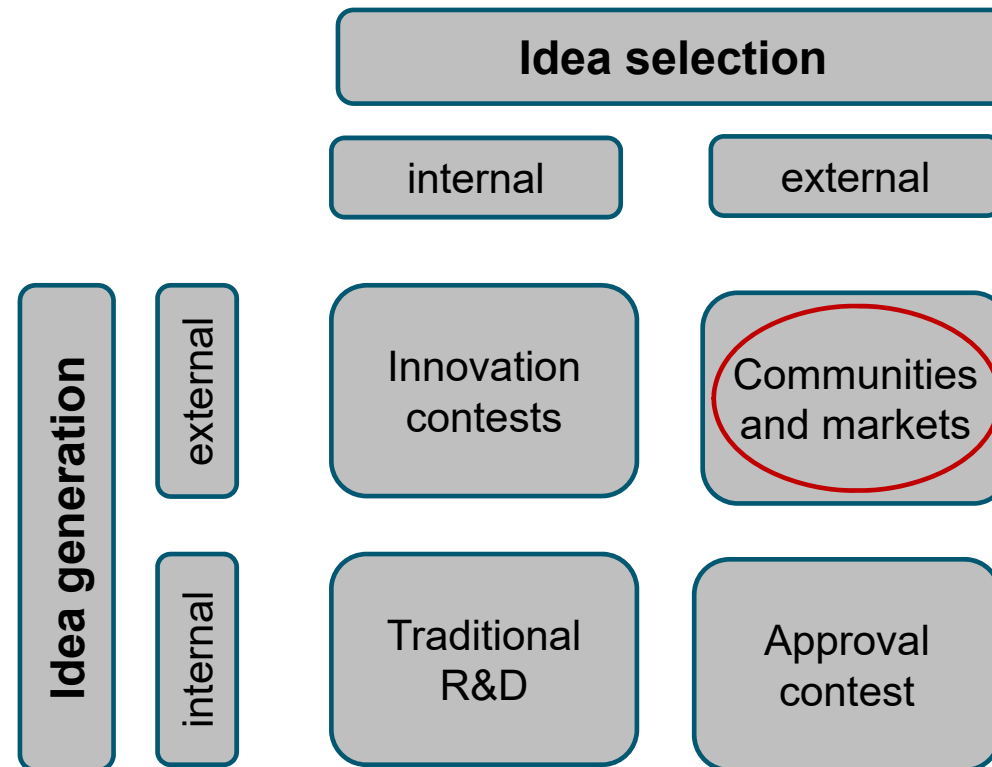
John Harrison's marine chronometer, source Google pictures

Problem broadcasting at Innocentive

			
Innovative Mercury Removal System for A2A's Waste-to-...	NavalX Tech Bridge Challenge: Designs for an Ocean Floor...	Detection of Inflow and Infiltration (I&I) in sewer networks	New Methods to Identify Illegal Seafood
Open until 23rd May 2022 Award: Collaboration with...	Open until 26th May 2022 Award: Up to \$90,000 in...	Open until 31st May 2022 Award: Collaboration and...	Open until 31st May 2022 Award: \$15000
View Challenge →	View Challenge →	View Challenge →	View Challenge →

- > 500.000 registered problem solvers
- Problems in technique, medicine, bio-tech, chemistry, physics, business and finance
- Prizes: \$ 5.000 - \$ 1Mio. | Total amount so far: \$60 Mio.
- Success rate of premium challenges: 80%

Types and functions of Crowdsourcing



King & Lakhani, HBR 2013

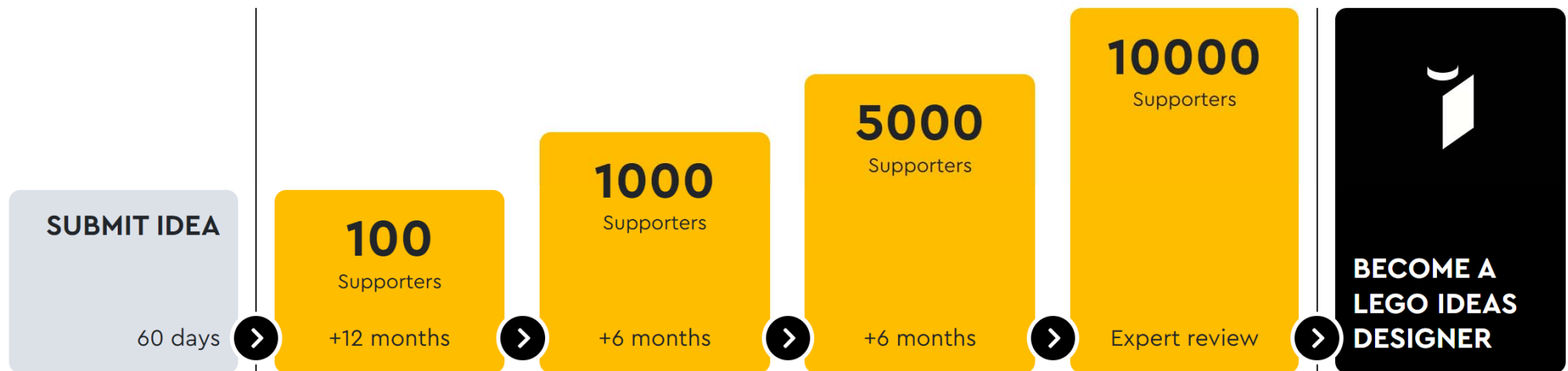
LEGO

- LEGO Group is a privately held, family-owned company with headquarters in Billund, Denmark,
- Founded in 1932
- Revenues 2021: ~ 7,4 Mrd. €
- Profit margin b.taxes: >30%
- Employees: 24.000
- Community: > 1.000.000 members

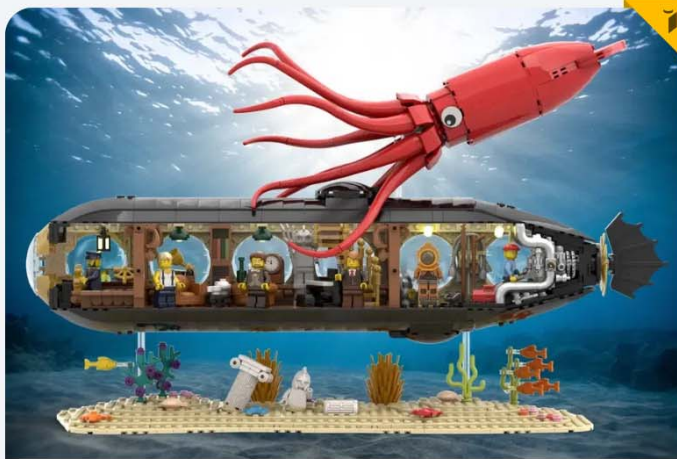


Lego visitor centre in Billund

LEGO ideas



Submit a project



JULES VERNE'S NAUTILUS



By Seb_E
Feb 16, 2022

IN REVIEW

630



LEGO MUSHROOM HOUSE



By JonasKramm
May 09, 2022

7306
Supporters

776
days left

358



WITCH HOUSE



By Castor-Troy
May 18, 2022

1878
Supporters

603
days left

352

CROWDSOURCING-BASED BUSINESS MODELS

Threadless

- 100 employees
- Crowd: 2.4 mio
- ~1000 designs/week
- 7-10 designs produced
- Prizes: ~\$ 2.500
- Revenue: >\$40 mio.



topcoder



- Highly specialized & customized IT solutions
- Faster, cheaper, flexible
- Community of >1.200.000 members
- Competitions in all stages of software conception & development
- Subscription-based model (monthly fee for access to the platform)



Management Challenges in Crowdsourcing

Central features of many crowdsourcing platforms

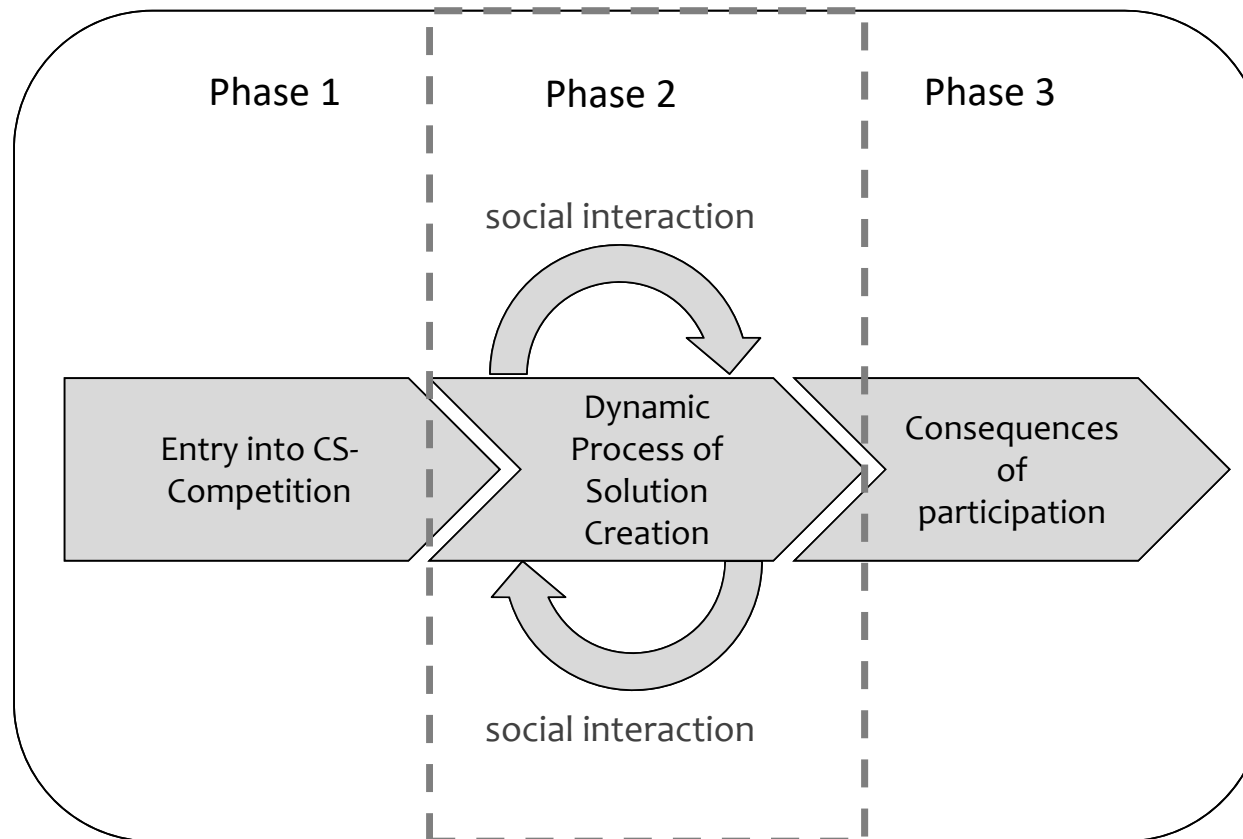
Characteristics

- **Community of solvers:** thousands of members participate with their ideas and creativity
- **Interaction between solvers:** platform members interact with each other, chat, give comments, and likes
- **Competition-based:** the best available solution will be chosen

Effects

- **Widened solution space:** Companies receive many good/ heterogeneous ideas for little money (Malone et al. 2010, Boudreau et al. 2011).
- **Solvers build on others ideas, solutions are improved** (Füller et al. 2011)
- **Members try harder,** increase quantity and quality of solutions (Afuah & Tucci 2012)

Phases in the process



Phase 1: Entry decision – Challenge to attract a crucial number of participants

- Motivation of potential participants is crucial:
 - Monetary rewards (Brabham, 2010; Leimeister et al., 2009; Zheng et al, 2011;)
 - Recognition by firm (Jeppesen and Frederiksen 2006; Zheng et al. 2011)
 - Recognition in the community (Jeppesen & Laursen 2009)
 - Community spirit
 - Learning opportunity (Raasch & Von Hippel, 2013; Kosonen et al. 2013, 2014)
- Trait competitiveness and Openness for Experience (Faullant et al. 2016)
- Brand strength, brand attachment and trust (Faullant & Hanie 2018)

Phase 2: Social interaction – Challenge to keep participants engaged on the platform

- Rankings of winners and contributors
- System of collecting points for community status
- Promoting likes, comments and peer-interaction

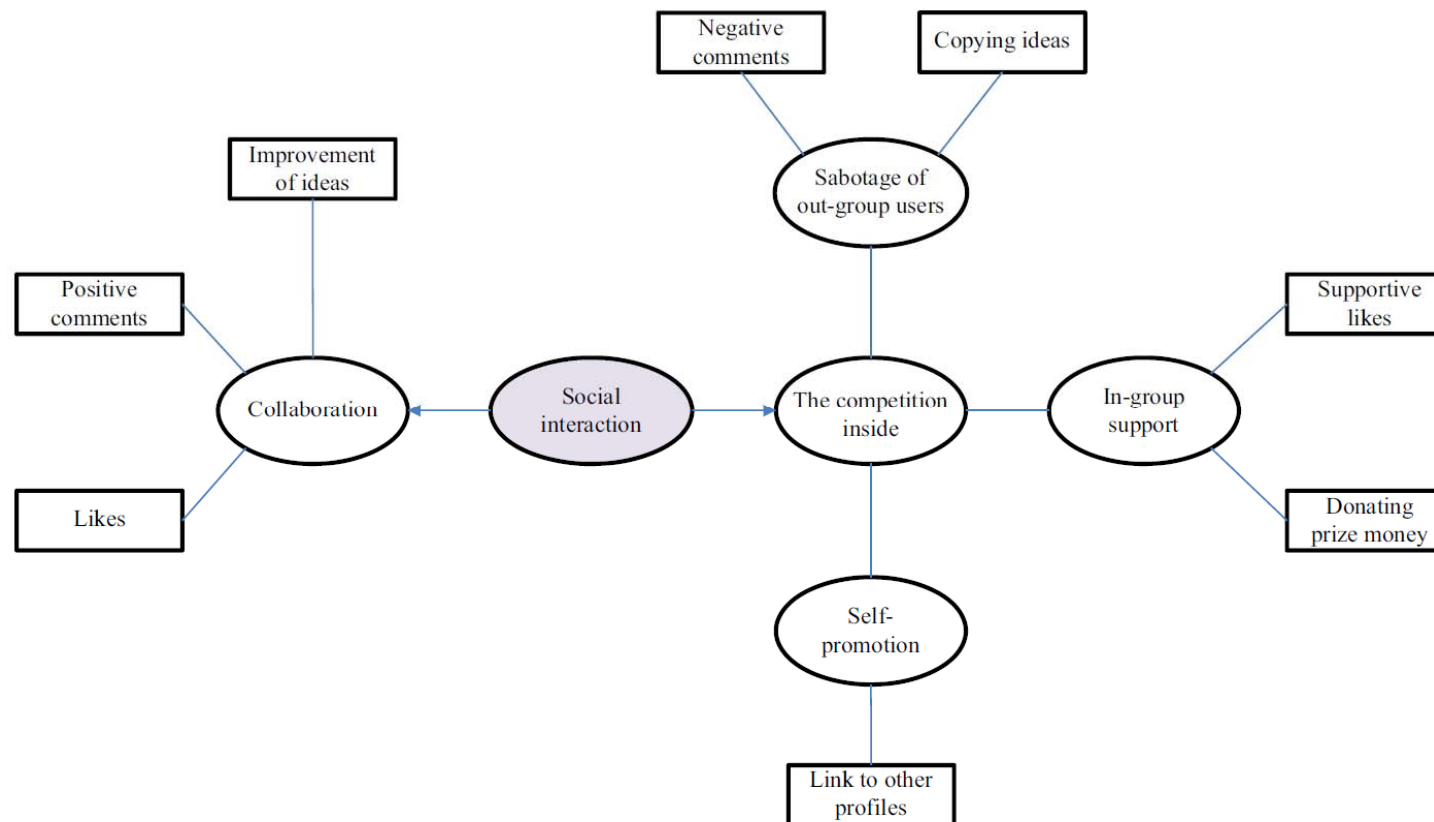
Problem:

- Lots of lukers (inactive)
- Negative dynamics scare off users (Faillant et al. 2019)



Your Idea has nothing to do with the topic – it's related to telecommunication but senseless for banking industry [...]. Your idea is just rubbish.

Patterns of social interactions (Faullant & Dolfus, 2017)



Overview of comments (20.152)

Neutral	<i>„Yeah, you‘re right ;-)” (User 32927)</i>	46%
Negative	<i>„Don‘t like that. All the time you are talking about fat kids, The sportive performance has no more relevance“ (User 21211)</i>	5%
Positive	<i>„Super idea, with fun factor!!“ (User 32691)</i>	15%
Personal attack	Your Idea has nothing to do with the topic [...] Your idea is just rubbish.“ (User 24228)	1%
Suggestion for improvements	<i>„another suggestion: make a poster with the „harmonie“ and the corresponding „Harmonie-Hairstyle“[...]“ (User 2379)</i>	22%
Copy	<i>„see idea #10“ (User 15819)</i>	11%

The downside of competition

- Winning chances are often below 5% or 1% - crowdsourcing produces „social waste“ (Di Fiore et al. 2017)
- Low winning chances increase competition
- Ranking of most creative/active solvers additionally stimulates competition (Faullant & Dolfus 2017)
- Some submit close to the deadline to avoid shirking (Bullinger et al. 2010)
- Idea cs without competition stimulate more comments (Bretschneider et al. 2012), foster knowledge sharing among members (Pirkkalainen 2018).

Phase 3 – Consequences of participation (Faullant et al. 2017)

Positive:

- Future intentions to participate
- Evoked product interest
- Loyalty towards the company
- **Fairness** is a dominant and asymmetric factor (Franke et al. 2013, Faullant et al. 2017)
 - Distributive justice: amount of reward, structure of reward
 - Procedural fairness: unbiased, transparent, and rule-consistent jury process
 - Interactional fairness: dealing with members in an honest and sincere way



“Honestly, I felt very frustrated about the contest. How is it possible that the first prize for second part is a not developed idea of the first part? It is a fraud for all the other participants that tried to improve their ideas!”

Thank you!

Time for discussion!