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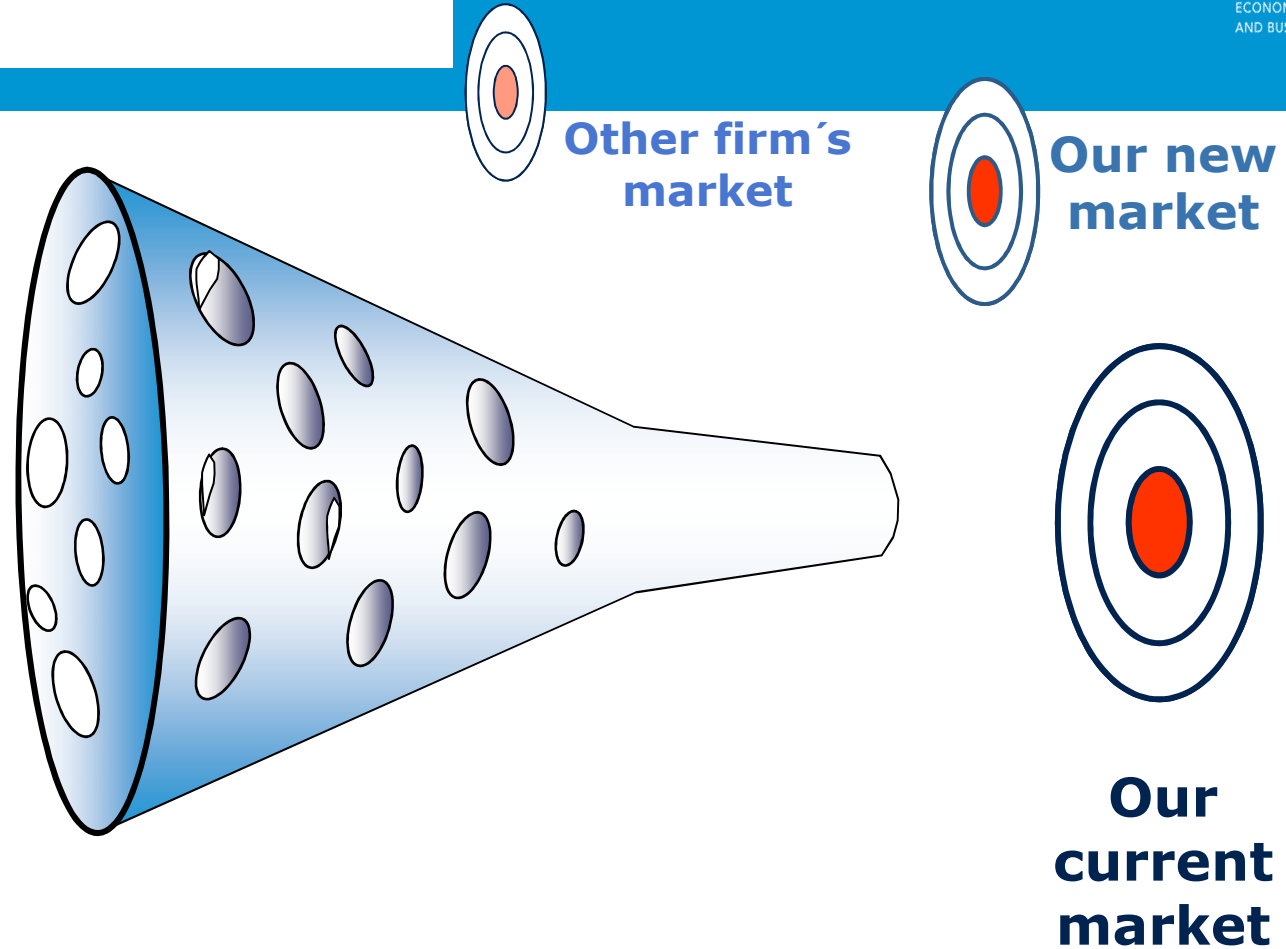
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Open Innovation in the Tension of Value Creation and Value Capture

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Open Innovation



Selective Revealing as one manifestation of Inside-Out OI

- **Definition:** Selective revealing is the *"voluntary, purposeful, and irrevocable disclosure of specifically selected resources, usually knowledge based, which the firm could have otherwise kept proprietary, so that they become available to a large share or even all of the general public, including competitors."*

(Alexy et al., 2013, p. 272)

- **Some potential benefits:**

- Mobilize resources and support (Henkel, 2006)
- Identification of potential (distant) collaborators via self-selection (Alexy et al., 2013)
- Gaining legitimacy from external environment (Nuvolari, 2004)
- Creation of innovation network (Alexy et al., 2013)
- Foster cumulative innovation (Murray and O'Mahoney, 2007; Scotchmer, 1991)

Example: Open lab of GlaxoSmithKline at Tres Cantos, Spain

"The most urgent need in the fight against neglected tropical disease is in even newer and better medicines and vaccines. And for that we need to think differently about how we do R&D." (Witty, CEO GSK, 2010)



- Establishment of **"open lab"** facility in **Tres Cantos, Spain** in 2010 with **initial seed funding of \$8m** and capacity for **60 scientists**¹
- **13,500 malaria compounds made freely available**¹
- **Access for outside researchers** to pursue own projects related to tropical diseases
- **Results** after **less than 4 years**: more than **150 grant applications, 42 approved projects, involving 37 different organisations** in 14 countries.²

"While it's still too early to evaluate the success of the Tres Cantos Open Lab in terms of drug approvals, it's safe to say the Open Lab approach has been an unprecedented success in encouraging research in to diseases of the developing world and in creating an energy and excitement in this field that was previously lacking." (Borysiewicz, Vice-Chancellor University of Cambridge, 2014)

Joy's Law



Bill Joy, Co-Founder, Sun Microsystems

"Most of the bright people do not work for you – no matter who you are. [So] you need a strategy for innovation to occur elsewhere."

Four Types to leverage external actors

(Manifestations of Outside-In OI)

Innovation Contest	Innovation Community	PARTICIPATION	Open
Elite Circle	Consortium		Closed
GOVERNANCE			
Hierarchical	Flat		

Article in New YORK TIMES

New York Times

If You Have a Problem, Ask Everyone

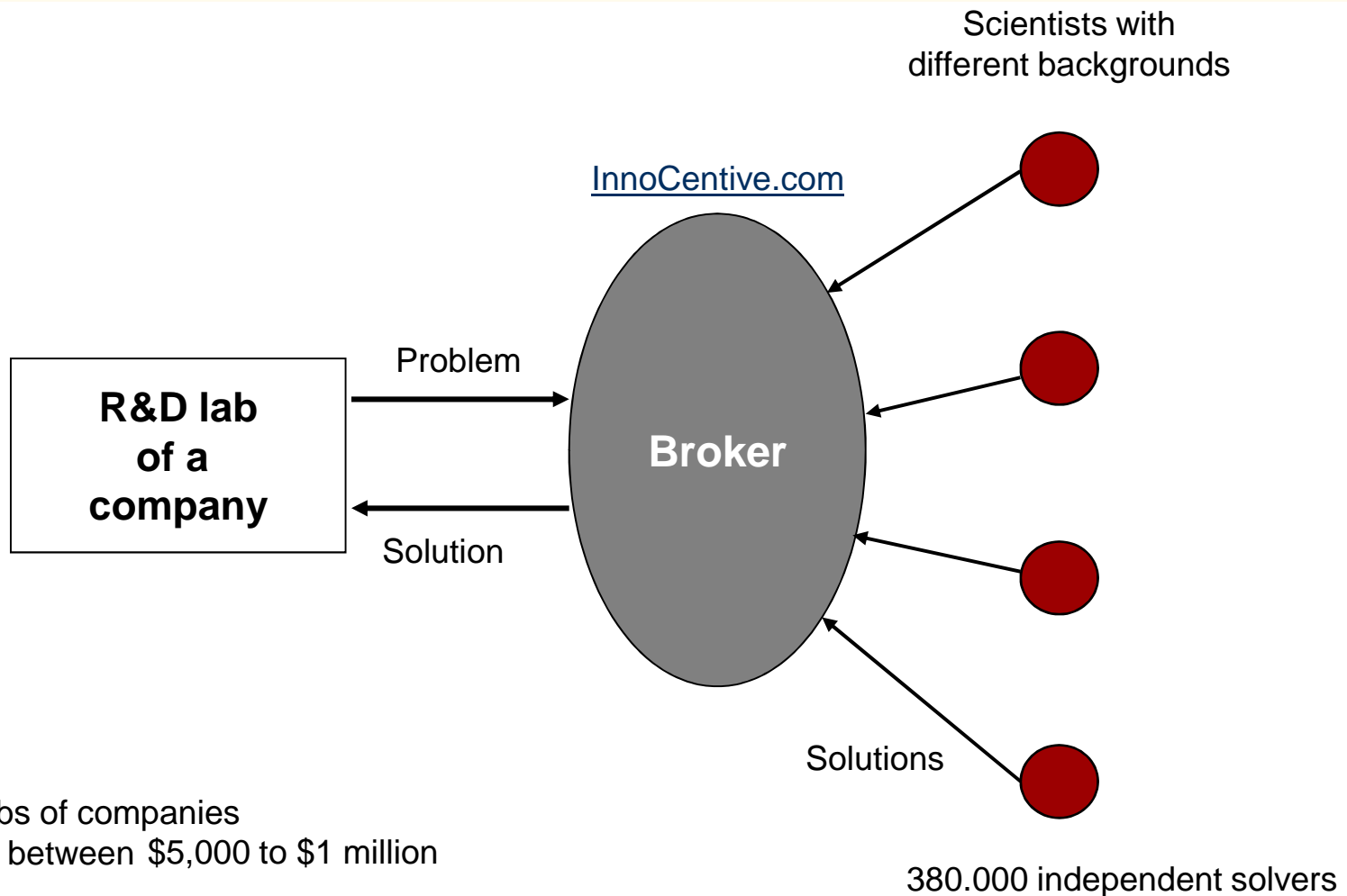
By [CORNELIA DEAN](#)

Published: July 22, 2008

The Case

INNOCENTIVE.COM

The Platform



R&D-labs of companies
Awards between \$5,000 to \$1 million

How effective is crowdsourcing at InnoCentive?

- ▶ 49 of 166 problems (29.5%) were solved (June 2001-December 2004)
- ▶ 75 awards

- ▶ Companies invest from 6 month to 2 years into the problem solving process

- ▶ Ø \$30.000 for an award-winning solution

- ▶ Given duration for the solution process appr. 6 month
 - ▶ Ø 240 individuals survey a specific problem
 - ▶ Ø 10 submissions per problem
 - ▶ Ø invested time: ~ 74 hours by a winner
~ 36 hours by a non-winner

Is crowdsourcing at Innocentive efficient?

Sometimes the solution is build on previous work.

Was your submission to this challenge based on:

A. A solution you had already developed in your own work with:

1 - No modifications, 4 - Minor modifications, 7 - Major modifications;

NA - This was not based on any of my previous work

B. An existing solution that you knew about that could solve the challenge with:

1 - No modifications, 4 - Minor modifications, 7 - Major modifications;

NA - This was not based on anyone else's work

Source of solution-information

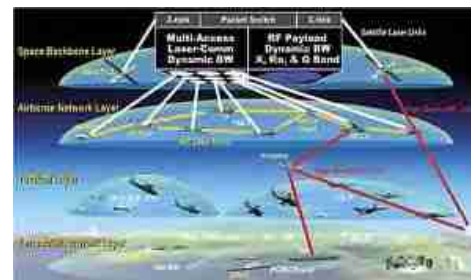
Did not use previously developed solution	27.5 %
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Used previously developed solution	72.5%
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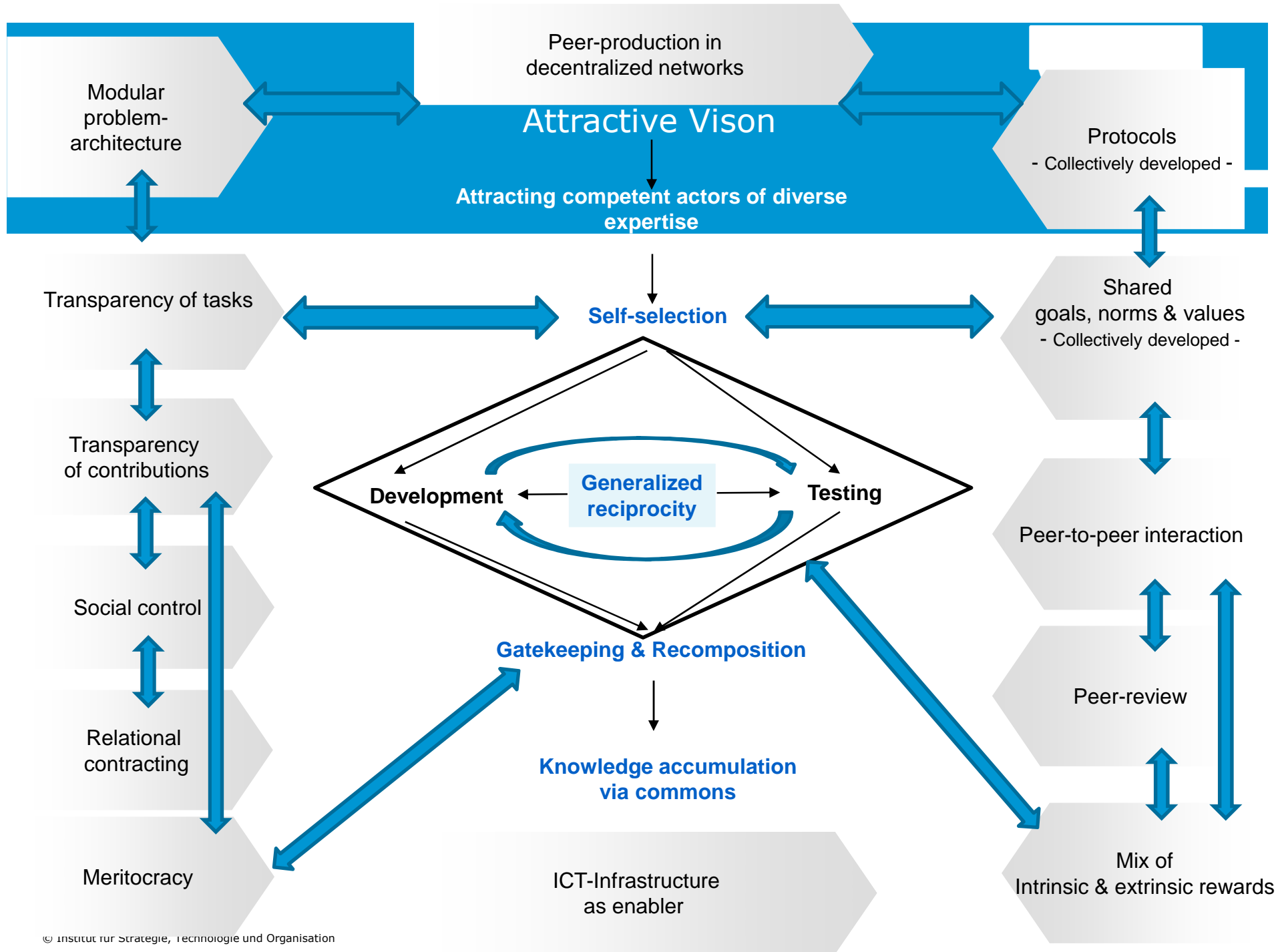
n=40 winning solvers

Innovation Communities

Such communities can take many different forms.



threadless **SHOP PARTICIPATE SERVICE**
 No More **Score Designs Submit Ideas** **PHOTOS** **TIAM BLOG FORUM**
Submit an idea for a chance at fame, friends & TWO THOUSAND DOLLARS!
 That's \$1,500 cash, a \$200 12 Club **Two thousand dollars** and a \$300 Threadless Gift Certificate!



The Mindstorms Experience



Mindstorms robot kit

The brain

- Computer “brain” within Lego brick

Movement

- 3 stepper motors

Sensors

- Light
- Touch
- Temperature

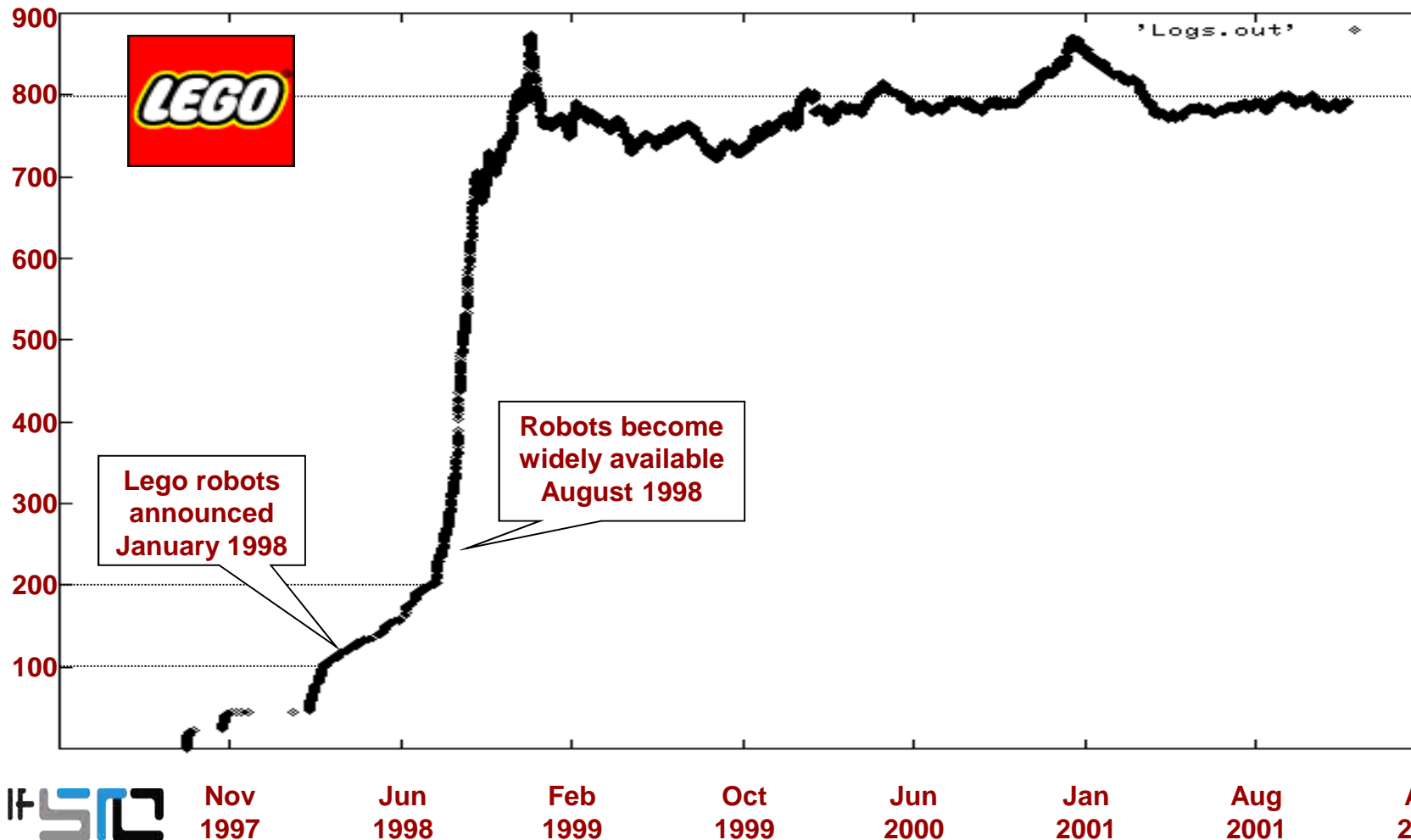
Teaching

- Kid-friendly, graphical programming environment
- Programs downloaded from PC via infrared

Price ~ \$200

LEGO Mindstorms user community grew rapidly - without company involvement -

Members



LEGO was not sure how to respond - for several years -

“There was almost a full year without a word from Lego: Neither acknowledgement of what was going on nor threats towards the hackers.”

David Baum, Lego hacker

“Lego executives simply didn’t know what to do ...”

Internal Lego executive

Today, LEGO is creating many links to innovating users

LEAD USERS from
“Adult Fans of Lego”
participate in LEGO product
development teams



For NXT Mindstorms Robot product line:

- Lego adopts key existing AFOL innovations
- Lego asks a few AFOL members to join R&D team

“LEGO Ideas”
Website links fans who want
to share their designs



LEGO HOME PRODUCTS CLUB SHOP LEGOLAND SEARCH GO! club SIGN IN

FACTORY BUILDING YOUR WAY HOME DESIGN GALLERY PRODUCTS HELP Sign In

CREATE **SHARE** **BUY**

CREATE YOUR 3D MODEL IN LEGO DIGITAL DESIGNER

SHARE YOUR MODEL WITH OTHER LEGO FANS IN THE ONLINE GALLERY

BUY THE BRICKS NEEDED FOR YOU TO BUILD YOUR MODEL

News!
New versions of LEGO Digital Designer enables you to build your way customizing your own product, or share your models with other LEGO fans in the online gallery

Read about the LEGO fans whose designs became real LEGO Products!
[See the Design Winners](#)

New LEGO sets designed by LEGO fans:
[See the Products](#)

NEW
LEGO DIGITAL DESIGNER
NOW FOR BOTH PC AND MAC
Download the new version of LEGO Digital Designer
[Click here to Download](#)

SpineConnect

Innovation communities also exist in high-tech markets.

- International community of leading spine surgeons
- Exchange and collaborate on difficult and unusual cases – and new treatments
- Growing case knowledgebase of over **1,600 cases** and **6,000 reviews**.



The SpineConnect Solution

Connect with Peer Spine Surgeons.
Streamline Case Consultation.
Connect to Business Processes.

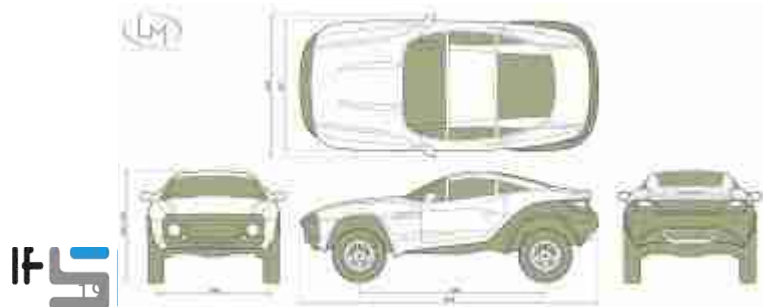
LEARN MORE ➔

Local Motors

*International community of enthusiasts,
designers, engineers, fabricators and experts.*



- 62 employees
- over 38.2k community members
- collaborating on 5.1k designs and 1.6k ideas
- across 500 projects.
- Crowdsourcing and Open Source



Why do innovation communities exist?

Lerner/Tirole (2000):

„Why should thousands of top-notch programmers contribute freely to the provision of a public good?“

...because private benefits arise when producing the public good:

Intrinsic Motivation

- ▶ Fun
- ▶ Intellectual challenge

Prosocial Motivation

- ▶ Community citizenship
- ▶ Feeling of belonging
- ▶ Feeling of fairness
- ▶ Feeling of solidarity

Extrinsic Motivation

- ▶ Learning
- ▶ Reputation
- ▶ Signaling (Employers, VC)
- ▶ Better solution
- ▶ Faster diffusion
- ▶ Generalized reciprocity

Summary and Conclusions

- Innovation is becoming more and more democratized.
- This shift creates various tensions between value creation and value capture.
- Value capture needs to be re-thought (many different non-monetary values).
- Fairness becomes a crucial issue.