



# PEOPLE-LED INNOVATION

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BETH SIMONE **NOVECK**

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Prior Art Forwarded  
to USPTO

Add research to claims

”

For certain types of problems, crowds can outperform your company. You just need to know when — and how — to use them.

**BY KEVIN J. BOUDREAU AND KARIM R. LAKHANI**

”

[We] “simply do not have enough genes to program the brain fully in advance,” we must work together, extending and supporting our own intelligence with “social prosthetic” systems that make up for our missing cognitive and emotional capacities: “Evolution has allowed our brains to be configured during development so that we are ‘plug compatible’ with other humans, so that others can help us extend ourselves.

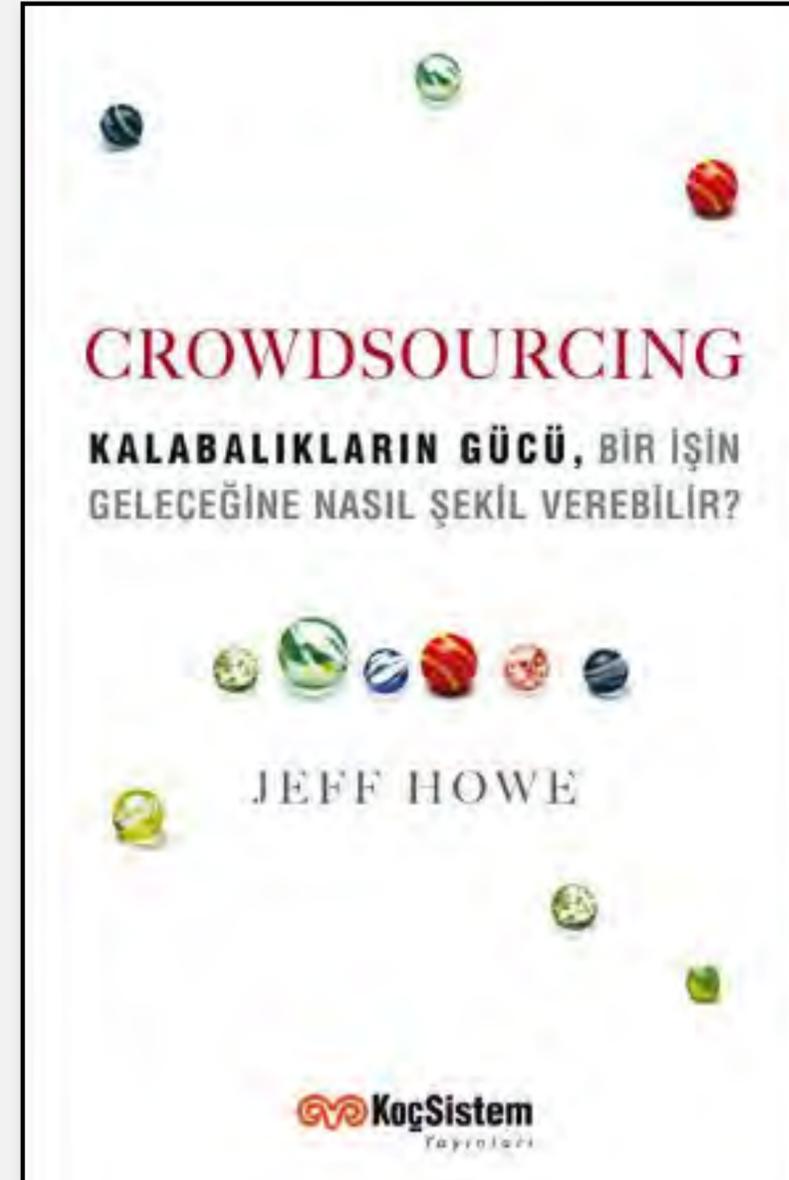
**HARVARD GROUP BRAIN PROJECT**

# AGENDA

Despite myriad success stories, few organizations use crowdsourcing or know how to do so well. Today we want to:

1. Understand what is crowdsourcing and why it matters
2. What makes for successful crowdsourcing
3. When to use and not to use crowdsourcing
4. How to design a crowdsourcing process
5. How to design a “smarter crowdsourcing process”
6. How to overcome challenges from cultural conservatism to intellectual property nightmares
7. People.gov

What is Crowdsourcing  
**DEMOCRATIZED INNOVATION**



”

[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.

**JEFF HOWE**

# CROWDSOURCING SUCCESSES



# CROWDSOURCING SUCCESSES





# TOPCODER IMMUNOGENOMICS CHALLENGE



- TopCoder has 400,000 members
- 2 week challenge, \$6000 prize
- Yielded 733 participants, 17% of whom from 69 countries submitted 89 novel computational approaches to the problem.
- Thirty submissions exceeded the benchmark performance of the US National Institutes of Health.
- None were academic or industrial computational biologists, and only five described themselves as coming from either R&D or life sciences in any capacity.

# THE BENEFITS OF CROWDSOURCING

# THE BENEFITS OF CROWDSOURCING

- Identify a hard problem
- Solve a hard problem
- Make ambitious breakthroughs
- Access a variety of individuals
- Access people with diverse skills
- Learn diverse perspectives
- Learn new ways of doing things
- Shine light on a problem
- More hands on deck: scale and spread
- With more eyeballs all bugs are shallow
- May decrease costs of innovation
- May create a market
- Has the potential to create buy-in and loyalty
- Generate excitement

# BENEFITS MAY BE INCREMENTAL OR RADICAL

- Shine a light on a neglected issue or problem
- Encourage other people to invest in solving a problem or making advances
- Bring new products and services to market
- Prompt new collaborations and partnerships
- Gather new information and data on an issue
- Identify great ideas
- Identify great practice
- Build the capacity of new innovators and support their entry into the market (Nesta)

# WHEN TO USE CROWDSOURCING

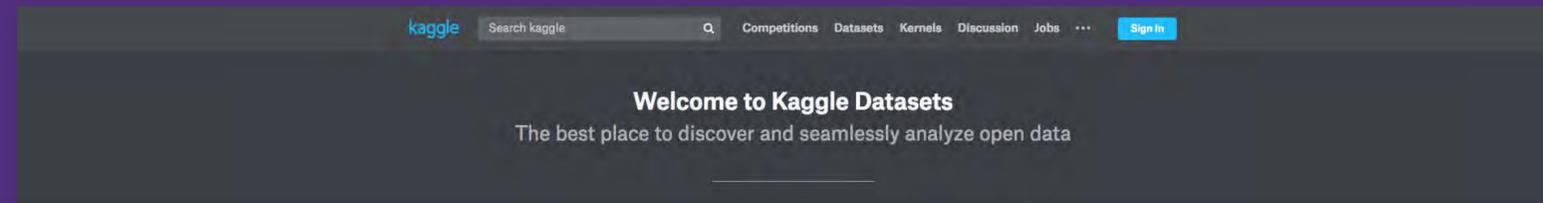
# STYLES OF CROWDSOURCING

**CHALLENGES AND CONTESTS** Identify a problem, solicit many solutions and pick a winner. Contests work well when it's not obvious what combination of skills or even which technical approach will lead to the best solution for a problem.

**COLLABORATION** Define a shared product and invite collaboration on a common project. Collaboration works well when a community can be marshaled with a common vision. Obtain many hands on deck .

**CO-CREATION** Identify a problem to which many, additive solutions are needed.

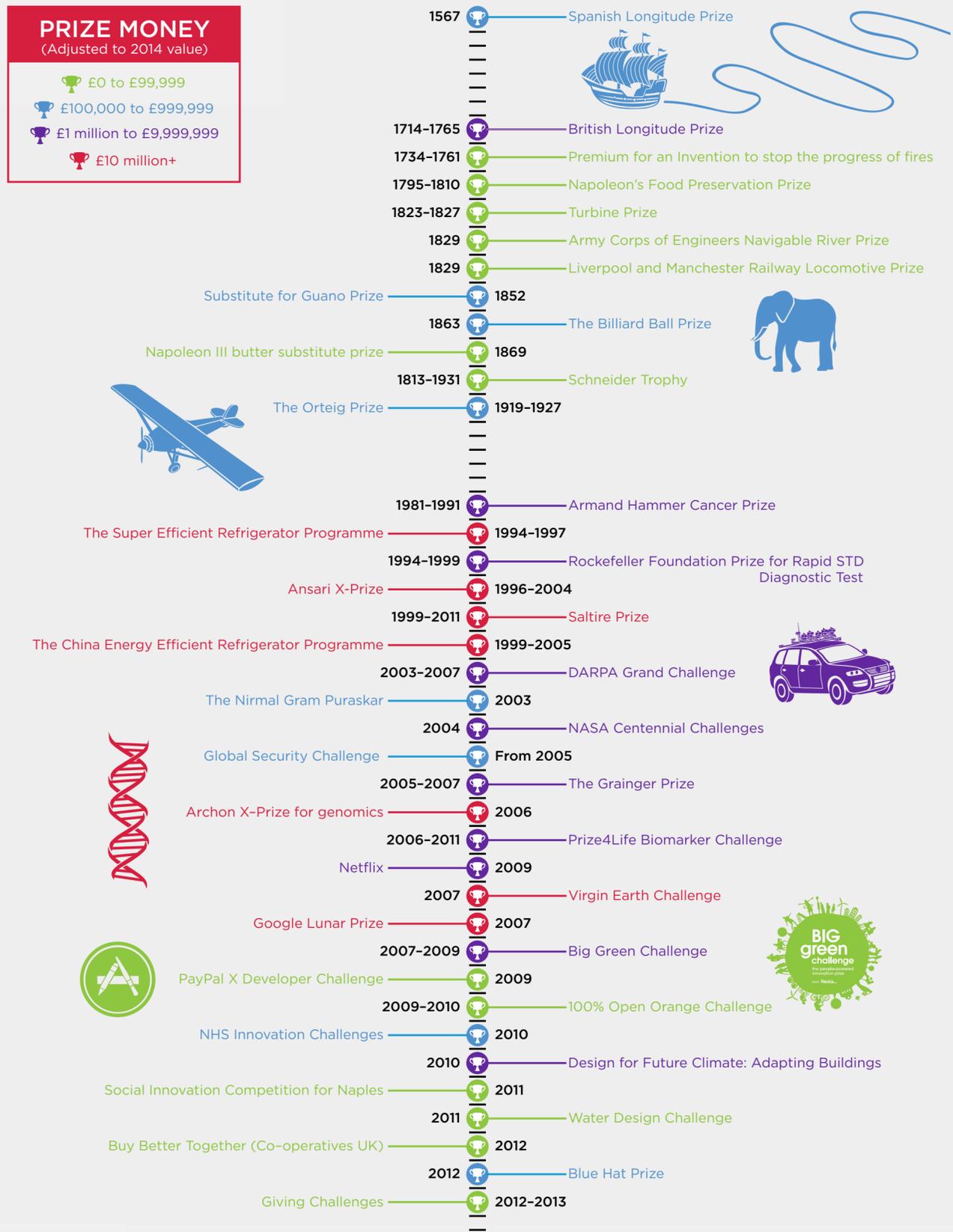
# CONTESTS



**TO BUILD A BRIDGE TO  
ABUNDANCE FOR ALL**

**PRIZE MONEY**  
(Adjusted to 2014 value)

- £0 to £99,999
- £100,000 to £999,999
- £1 million to £9,999,999
- £10 million+





SysBorg<sup>2.0</sup>

OSDD Chem

Sysborg 2.0 is OSDD's cyber infrastructure for collaborative research. Sysborg has over 7900 participants from 130 countries across the world. Join Sysborg 2.0 in order to know more about the ongoing activities of OSDD, view results of experiments and participate in research projects.

OSDDChem is the web interface for large scale synthesis of diverse chemical compounds to screen them against TB and Malaria. Log into OSDDChem and you can submit molecules and project proposals.

TATA CSIR OSDD  
Fellowship

# COLLABORATION

Register

Login

Login

## Current Events and Updates

**Temporary Program ManagerFellow-Result** Result of project of TATA CSIR-OSDD Fellowships for the post of Temporary Program Manager FellowInterview was on 29<sup>th</sup> May 2015**Selected:**Dr. S. Janardhan**Waiting list:**1 ...

Posted Jun 12, 2015, 4:36 AM by OSDD Info

Showing posts **1 - 1** of **15**. [View more »](#)

## News Updates

**OSDD Annual Report and Foundation Day Report** CSIR-OSDD during 2013-14 has been engaged in a large number of activities in the area of drug discovery. In addition during 15th-17th September 2014, as a part ...  
Posted Apr 6, 2015, 9:38 PM by OSDD Info

Showing posts **1 - 1** of **10**. [View more »](#)



CO-CREATION

# HOW TO DESIGN FOR SUCCESS

IF WE BUILD IT, WILL THEY COME

Designing an effective crowdsourcing strategy

”

Diverse social networks require more choreography and exertion to manage

**RAINIE AND WELLMAN**

# INITIAL QUESTIONS

- Can you articulate your goal?
- Can you do so with precision?
- Will the best solutions come from collaboration with a wider audience? Do you want one solution? Many solutions? Many hands on deck?
- Since crowdsourcing shifts the costs to the idea generator, is it likely to work in your case?
- Can you identify the desired audience? Can you reach them?
- Can you define the task?

# DESIGN CHECKLIST

- Define the problem to be solved
- Create metrics to measure success -
- Create a plan with well-defined milestones
- Determine the institutional resources (e.g. team composition) required to implement a successful crowdsourcing initiative and how to design the team to support
- Define and chunk the tasks the crowd should perform (e.g. design a product, tag photos, classify information, analyze information, collect and share data, supply opinions, generate new ideas, contribute funds)
- Decide who can participate and determine eligibility criteria

# DESIGN CHECKLIST

- Target the crowd to participate (e.g. employees, general public, informed experts, participants with a particular skill)
- Develop a marketing strategy for launch and throughout
- Assess the potential time and resources required from the crowd in order to participate
- Decide whether to use financial or non-financial (e.g. gamification) incentives (or a mix of incentives) and at what level
- Decide who judges: you or the crowd
- Determine ownership and copyright of crowd contributions
- Write directions and tutorials clearly explaining goals, tasks, judging, outcomes

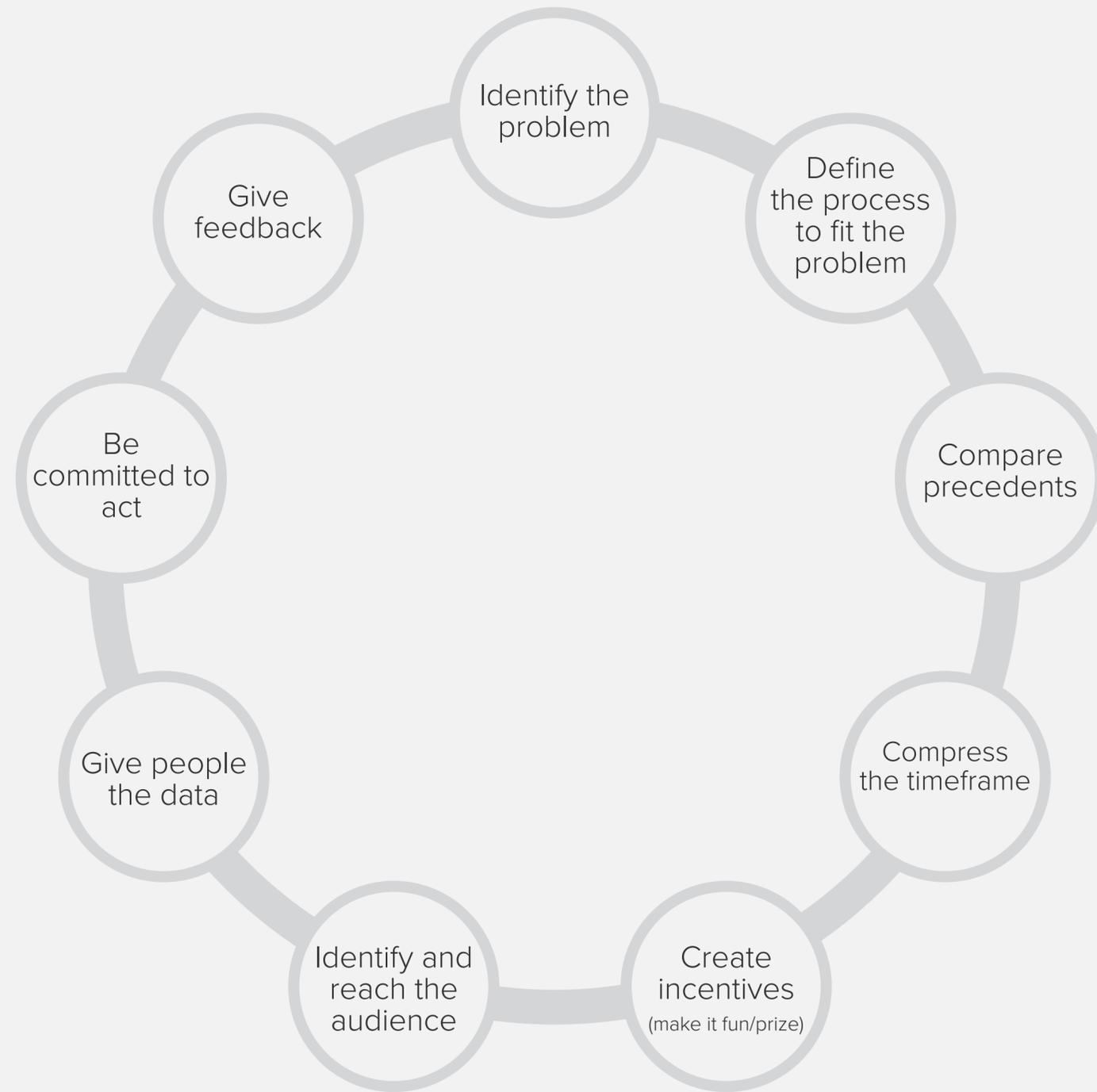
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With regard to task-oriented outcomes, the crowdsourcing literature shows that when average participants are asked to perform technical tasks with specific instructions and detailed job classifications, their performance is equal to or better than the performance of experts

**BEHREND ET AL. 2011; SEE ET AL. 2013**

# DESIGN CHECKLIST

- Choose a platform to meet needs. Choose a contractor to support implementation
- Improve quality of contributions with good design
- Leverage reputation systems to evaluate crowd contributions (through voting, rating or peer-review)
- Coach and mentor participants and winners
- Develop an implementation strategy



# A NOTE ON DEFINING THE PROBLEM

”

If I had an hour to save the world, I would spend 59 minutes defining the problem and one minute finding solutions

**ALBERT EINSTEIN**

# A NOTE ON DEFINING THE PROBLEM

The essence of innovation is problem definition. Done right, carefully defining problem enables actionable solutions. Attention to identifying and making implicit assumptions about the problem explicit allows for:

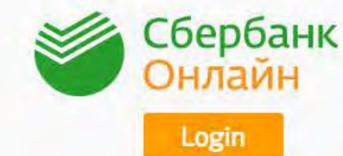
- Crystallizing opportunities where progress can be made;
- Developing solutions that are narrowly tailored to address a problem;
- More informed brainstorming about solutions that are feasible and relevant
- Above all, creating the shared understanding necessary for collaboration, and crowdsourcing

# A NOTE ON INCENTIVES

- Knowledge Building – contributing to a specific field of knowledge
- Skill Development – building a portfolio of skills
- Community Building – contributing to a large project of common interest
- Civic Responsibility – benefiting the community and fellow citizens
- Financial Incentives – earning money
- Public Recognition – socializing and being publicly acknowledged
- Competition – being challenged with a tough problem
- Making a difference - having one's work be implemented



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Recommended for you:

Online deposits

Higher interest rate when opening a similar deposit online.

# A NOTE ON EMPLOYEE CROWDSOURCING

Learn more >



Payments and Transfers

Learn about payment and transfer options



Improve your financial position

Refinance loans from other banks



Spasibo by Sberbank

Learn more about the bonus programme



Online Deposits

A higher interest rate than when opening a similar deposit at an office

# OVERCOMING CHALLENGES

# CROWDSOURCING CHALLENGES

- Imprecise problem definition
- Uncertain how to reach people
- Uncertain how to motivate people
- Badly designed process leads to useless answers
- Balancing specificity with intellectual property
- We built it, they came and we didn't know what to do. Coordinating and implementing responses

# SOMETIMES THE CROWD ISN'T SO WISE

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## Bombings Trip Up Reddit in Its Turn in Spotlight



Log in to see what your friends are sharing Log In With Facebook on nytimes.com. Privacy Policy | What's This?

### What's Popular Now

Some Say Spelling of a Winning Word Wasn't Kosher

Police Retreat in Istanbul as Protests Expand Through Turkey



TELECOM ITALIA GROUP

Chester Hggne Jr./The New York Times  
Erik Marlin, general manager of Reddit, said in an apology that some activity on the site had "fueled online witch hunts."

A black and white photograph of a man singing into a professional microphone. The microphone is mounted on a stand and has a pop filter in front of it. The man is shown in profile, with his eyes closed and mouth open as if in the middle of a performance. A semi-transparent purple banner is overlaid across the middle of the image, containing the title text.

# THE CHALLENGE OF THE OPEN CALL

”

Studies show mixed results when participants are asked to generate innovative ideas through open calls

**NISHIKAWA, SCHREIER, AND OGAWA 2013; POETZ AND SCHREIER 2012**



# FROM CROWDSOURCING TO SMARTER CROWDSOURCING





*It's a Match!*

**MATCHING DEMAND TO SUPPLY**

# SEGMENTING AND TARGETING YOUR AUDIENCE

General wisdom is that self-selection is the essence of crowdsourcing but curation can help to match the demand for expertise to the supply of it.

- Contact & Basic Info**
- Specialization, Skills & Languages
- Work History
- Project Experience
- Education & Learning
- Publications & Documents
- About Magda
- References

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- [Approve External Bio](#)
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## WBG Staff |

**Senior Knowledge Management Officer** | Current Unit & Official Unit: |

WASHINGTON, DC (IFC) | [Local Time](#) | IVP (IFC Executive Vice President)

[Download CV](#)

Work Phone		Mobile	
Room No	F 3K-234	Alternate Email	
Email		LinkedIn	<a href="#">Linked in</a>
		Professional Mapping	Knowledge Management
<a href="#">View More</a>			

### Specialization, Skills & Languages

SKILLFINDER

I work on Collaboration, Spark, C4D, SkillFinder, iPortal, Enterprise Search, Intranet, Communities of Practice

#### PRIMARY SPECIALIZATION

[Advisory Services](#) 0

[Knowledge and Learning](#) 1

[IT Program Management](#) 2



## SMARTER CROWDSOURCING

### SMARTER CROWDSOURCING

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### ANTI-CORRUPTION

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### ZIKA

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### COTOPAXI

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Be committed to act

## **CROWDSOURCING QUESTIONS NOT JUST ANSWERS**

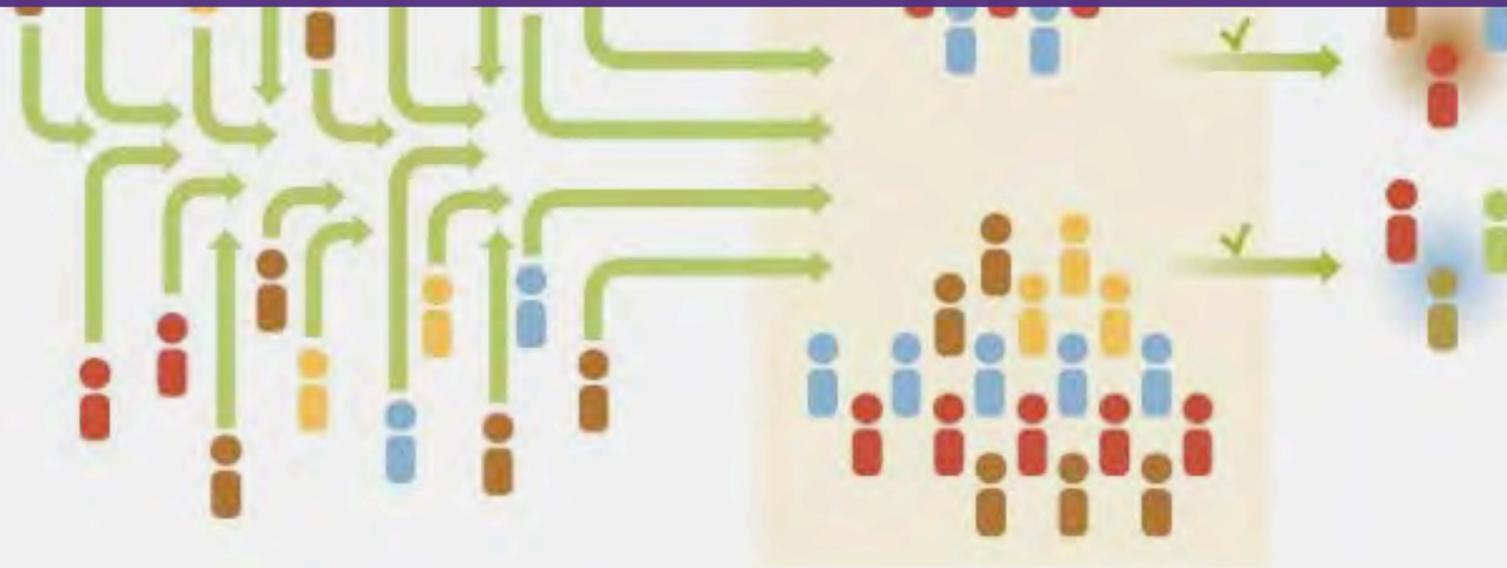
*Harvard Type 1 Diabetes Challenge*

### THE TWO STAGE CHALLENGE

*Enable many more individuals  
to propose ideas*

*Increase number and  
diversity of evaluators*

*Match selected  
ideas to new,  
diverse research*



People.gov

A photograph of a desk with a typewriter, a rotary phone, and a lamp. The typewriter is a cream-colored FACIT 1620. The rotary phone is green. The lamp is white and adjustable. The desk is dark wood. The background is dark wood.

# GIVING A CLEVER MAN A DESK IS OUTDATED

The Need for Institutional Innovation

780 Competitions Found

**Heating & Cooling with Thermal Storage**



**\$5,000 in prizes**

Seeking ideas on heating and cooling of buildings using thermal storage.

Open Until **Aug 10, 2017**

Posted by:  
**Department of Energy**

**Long-Term Corrosion Protection of**

**Passenger Screening Algorithm Challenge**



**\$1,500,000 in prizes**

Can you locate hidden objects?

Open Until **Dec 15, 2017**

Posted by:  
**Department of Homeland Security**

**DataApp: A Mobile App Framework for**

**The 2017 "\$100,000 for Start a SUD Startup" Challenge**



**National Institute on Drug Abuse**

**\$100,000 in prizes**

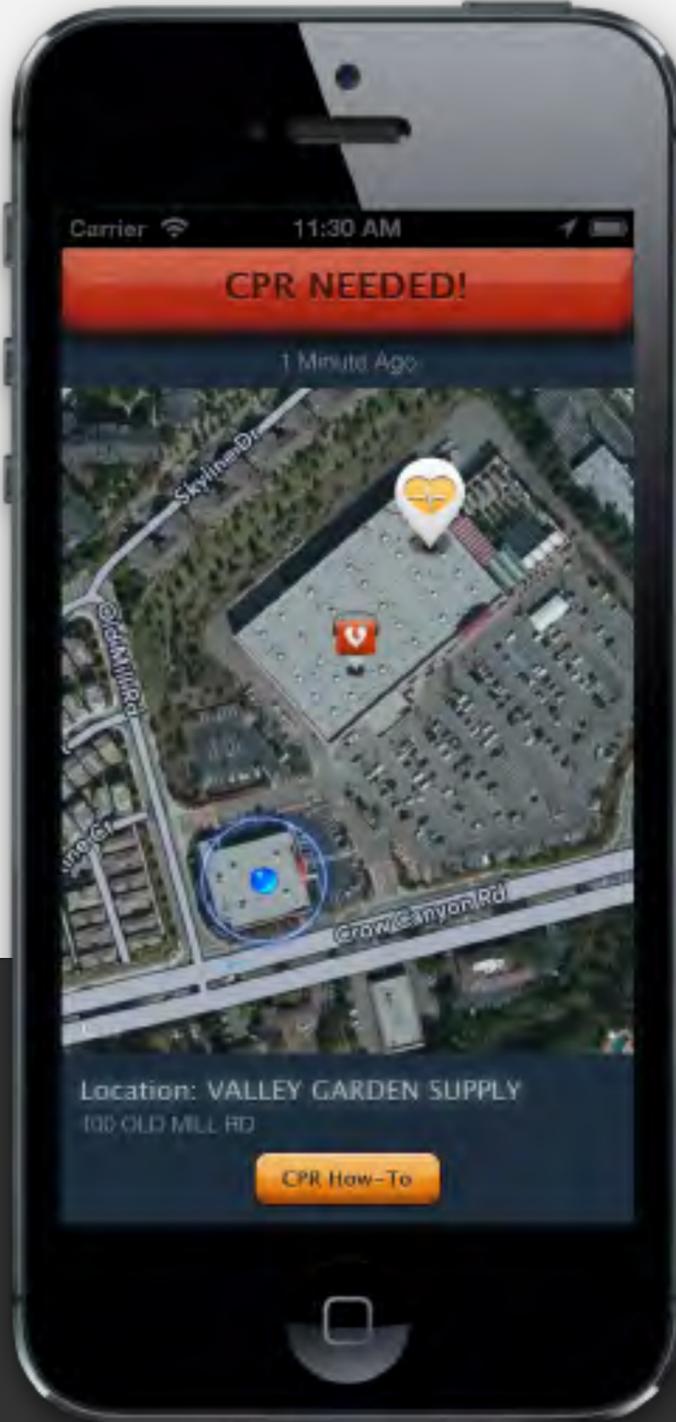
Can your research idea can be fostered into a biotech startup

Open Until **Dec 08, 2017**

Posted by:  
**National Institutes of Health**

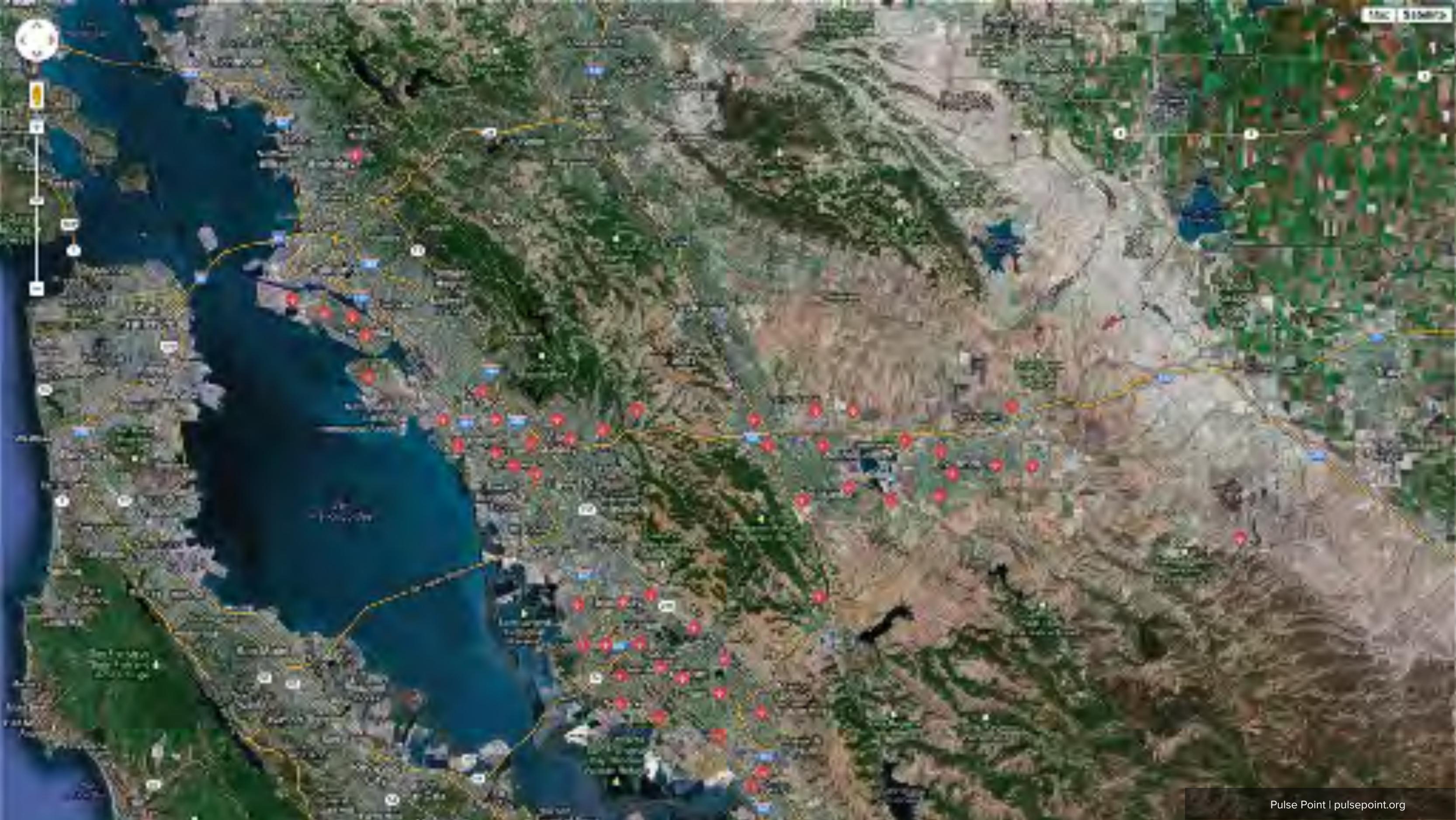
**2017 Excellence in AmeriCorps**

# PULSE POINT





**PulsePoint**  
**CPR NEEDED!**  
3 citizens alerted  
Summit Financial  
Building  
Front Office





THANK YOU

