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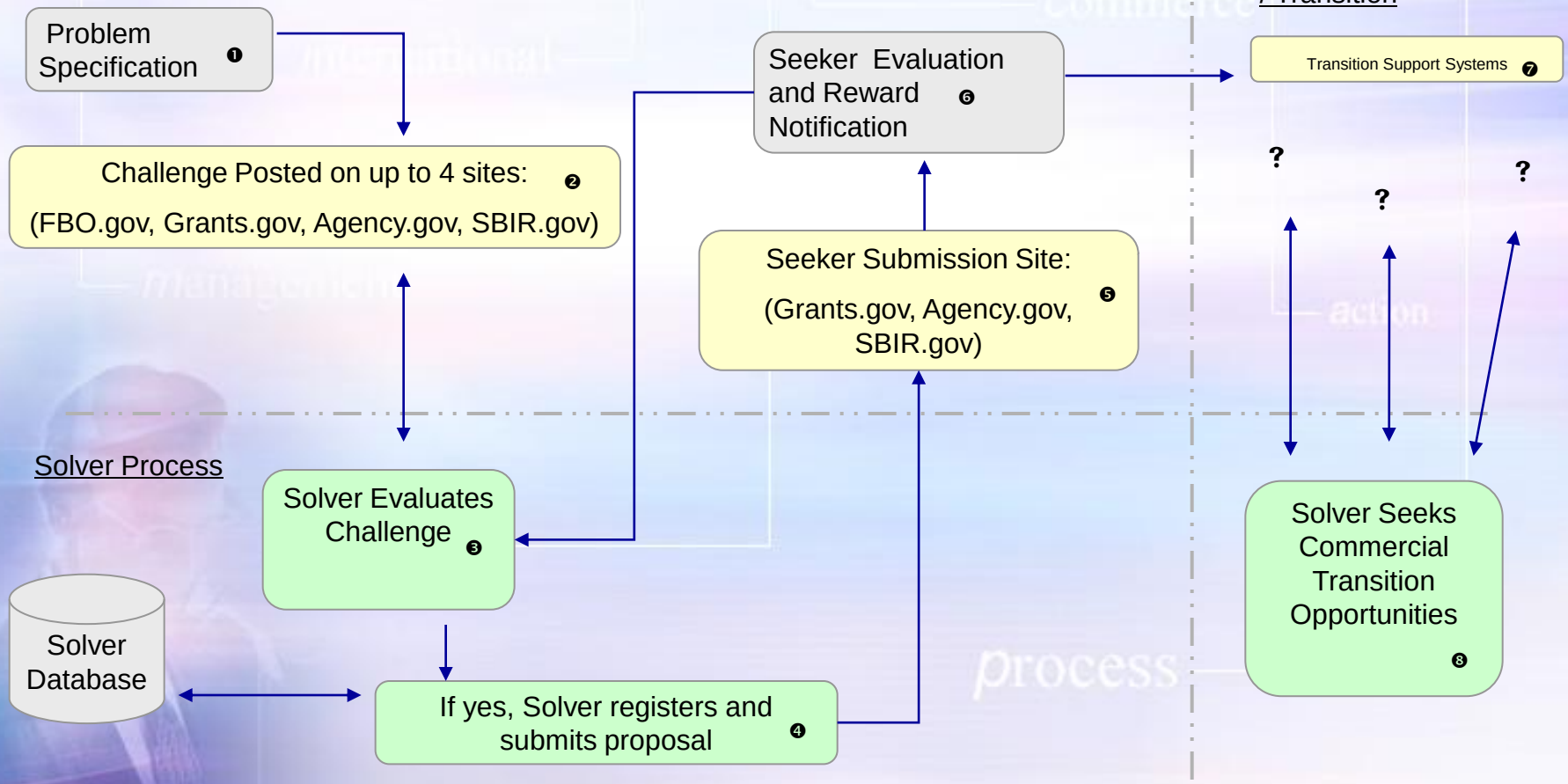
InnoCrowding

May 16, 2010

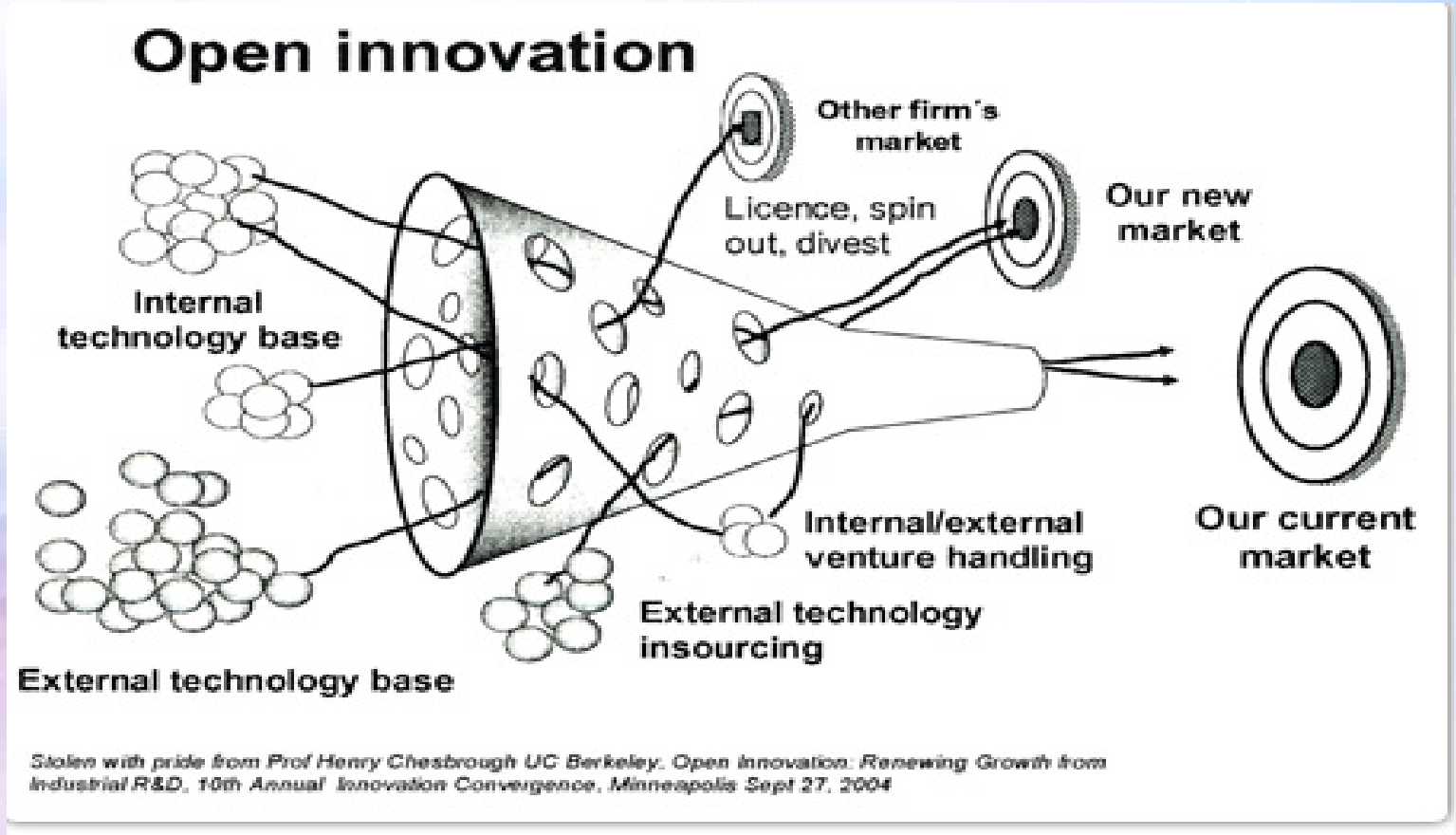
InnoCrowding™
Innovation Crowdsourced

AGENDA

- Overview on methodology
- InnoCrowding
- Deployments
- Innovation Management
- Q & A


Seeker Process
Pre-reward Phase
Post-reward Phase / Transition
Problem Specification ❶
Challenge Posted on up to 4 sites: ❷
(FBO.gov, Grants.gov, Agency.gov, SBIR.gov)
Seeker Evaluation and Reward Notification ❻
Seeker Submission Site: ❺
(Grants.gov, Agency.gov, SBIR.gov)
Transition Support Systems ❼
? ? ?
Solver Process
Solver Evaluates Challenge ❸
Solver Database
If yes, Solver registers and submits proposal ❹
Solver Seeks Commercial Transition Opportunities ❽

Open Innovation



The Logic of “Open Innovation”

- **Not all of the smart people in the world work for us.**
- Good ideas are widely distributed today.
- Financial managers must play poker, as well as chess, to capture the value in false negatives.
- We must manage IP in order to manage research:
  - need to access external IP to fuel our business model
  - need to profit from our own IP in others’ business model

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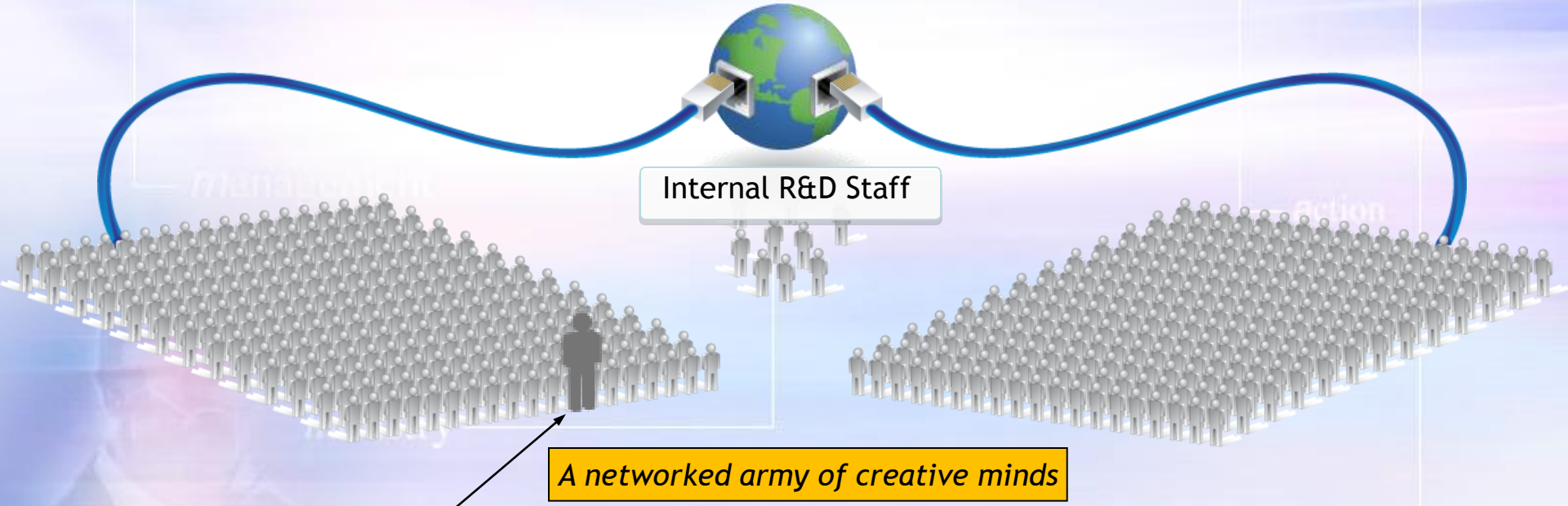
Prize Based Approach to Open Innovation

Prize Based Innovation taps the worlds vast pool of intellectual capacity, creativity, and ingenuity



The Best Solution is Awarded a Cash Prize

You Only Pay if Someone Provides a Solution

Prize Based Innovation

- Why Now? The Perfect Storm! (Don Tapscott)
  - Technology Revolution
  - Demographic Revolution
  - Social Revolution
  - Economic Revolution
- What Needs to Change?

  A corporate paradigm shift from:

  NIH – “Not Invented Here” to,

  PFE – “Proudly Found Elsewhere”

Prize Based Innovation has a Long History

Longitude Prize

- Offered by the British government through an Act of Parliament in 1714 for a simple and practical method for the precise determination of a ship's longitude.
- In total, over £100,000 was given in the form of encouragements and awards, the significant winner was John Harrison who received £14,315 for his work on chronometers from 1737 to 1764.

John Harrison's Chronometer H5

Orteig Prize

- $25,000 reward offered in 1919 by hotel owner Raymond Orteig to the first allied aviator(s) to fly non-stop from New York City to Paris or vice-versa. By1924, aviation technology had advanced to the point that numerous competitors vied for the prize.
- Relative-unknown Charles Lindbergh won the prize in 1927 in his aircraft Spirit of St. Louis.
- Lindbergh was both the first solo pilot and the first American to cross the Atlantic non-stop in a fixed-wing aircraft (rather than an airship), and he promptly became a national hero.

Charles Lindbergh and Raymond Orteig

Source: Wikipedia

Prize Based Innovation has a Long History

Ansari X Prize

- X PRIZE was a space competition in which the X PRIZE Foundation offered a US$10,000,000 prize for the first non-government organization to launch a reusable manned spacecraft into space twice within two weeks.
- The prize was won on October 4, 2004, by the Tier One project designed by Burt Rutan and financed by Microsoft co-founder Paul Allen, using the experimental spaceplane SpaceShipOne.
- $10 million was awarded to the winner, but more than $100 million was invested in new technologies in pursuit of the prize.

X Prize Award Ceremony

DARPA Grand Challenge

- The DARPA Grand Challenge is a prize competition for driverless cars, sponsored by the Defense Advanced Research Projects Agency.
- Congress has authorized DARPA to award cash prizes to further DARPA's mission to sponsor revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their use for national security.
- The first, second and third places in the 2007 Urban Challenge received US$2 million, US$1 million, and US$500,000, respectively.

Vehicle in development for 2007 challenge

Source: Wikipedia

InnoCrowding's EcoSystem

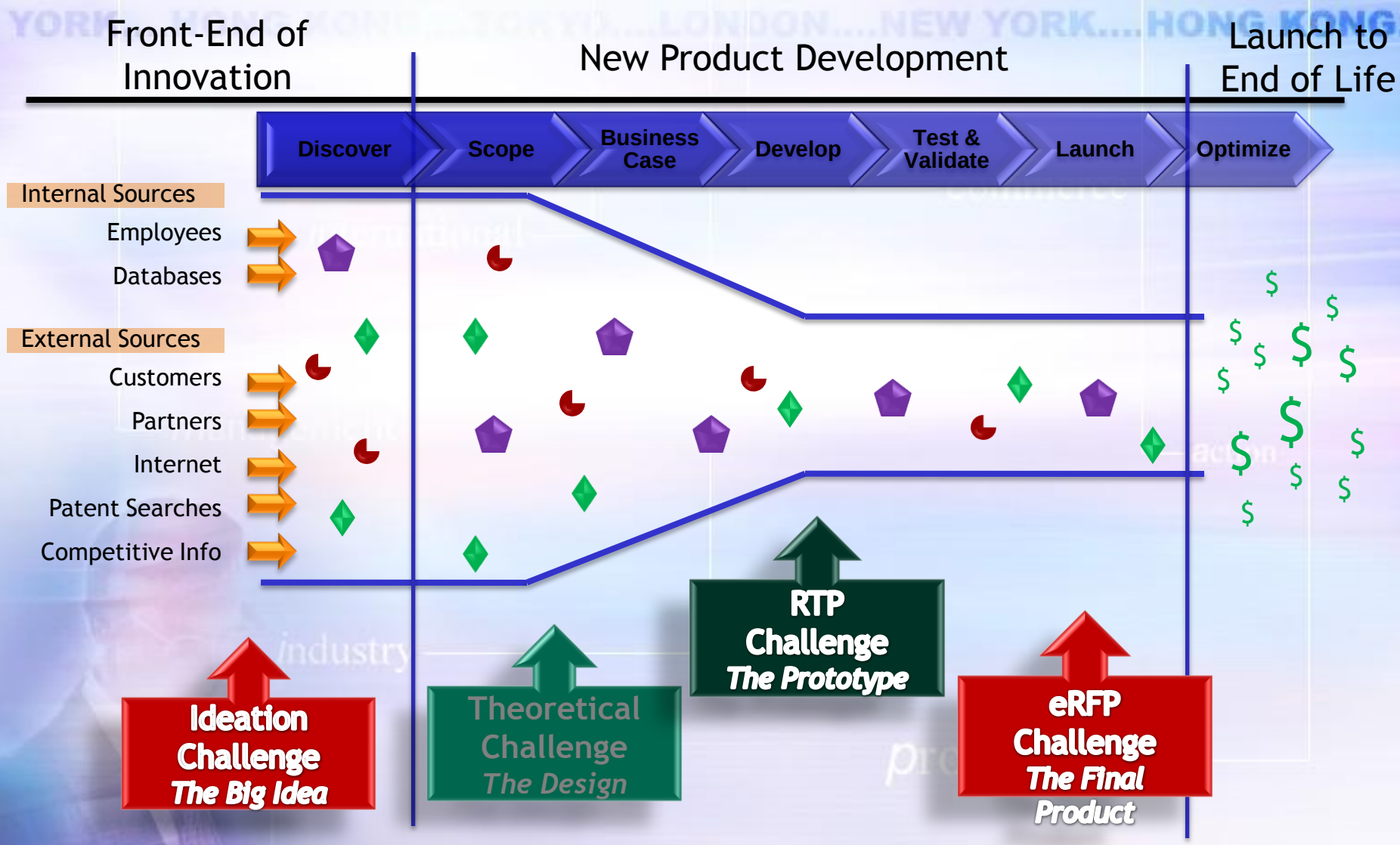
- Founded in 2007
- Preeminent Global Network
  - 429,000+ Problem Solvers and *growing*
  - Solvers in 175 Countries
  - Unprecedented diversity
  - 54,000+ postings monthly
  - +27 M Revenues
  - 72 Employees
- Successful Transfer
  - 99+% Successful transfer rate
  - IP transferred in/out of 60+ Countries
  - +9 years IP transfer yet2
- Advisory Board includes: AGFA, Bayer, DSM, DuPont, Philips, P&G, Takeda, BEA
-

InnoCrowding™ Innovation Crowdsourced

Intellectual Capital

Life Sciences	Chemistry	Physical Sciences	Engineering/Design	Math/Computer Science	Business/ Entrepreneurship
Biology	Analytical	Bio-Physics	Aerospace	Algorithms	Business Plan Development
Biomarkers & Diagnostics	Biochemistry	Formulation	Bioengineering	Applications/Programming Languages	Sales & Marketing Strategy
Food Science	Catalysis	Geology	Chemical	Artificial Intelligence	Marketing - Creative Services
Genetics/Genomics	Environmental	Materials Science	Civil	Bioinformatics	Financial Planning & Analysis
Medicine	Inorganic	Metallurgy	Electrical/Electronics	Cheminformatics	Market Research
Molecular Biology	Organic	Nanotechnology	Ergonomics	Human Interface	Business Process Engineering
Pharmacology	Physical	Physics	Mechanical	Internet/Web Technology	Mergers & Acquisitions
Physiology	Polymer	Polymer Physics	Packaging	Modeling	Physical Distribution & Logistics
Toxicology	Synthetic	Specialty Films	Process Design/Support	Statistics	IT Strategy
		Surface Science	Robotics	Systems Architecture & Integration	Distribution Channels & Business Development
					Product Development & Management

Challenge Types



Fuel Cells

Problem:

Fuel cells need very clean hydrogen, otherwise the performance goes down or lifetime is reduced.

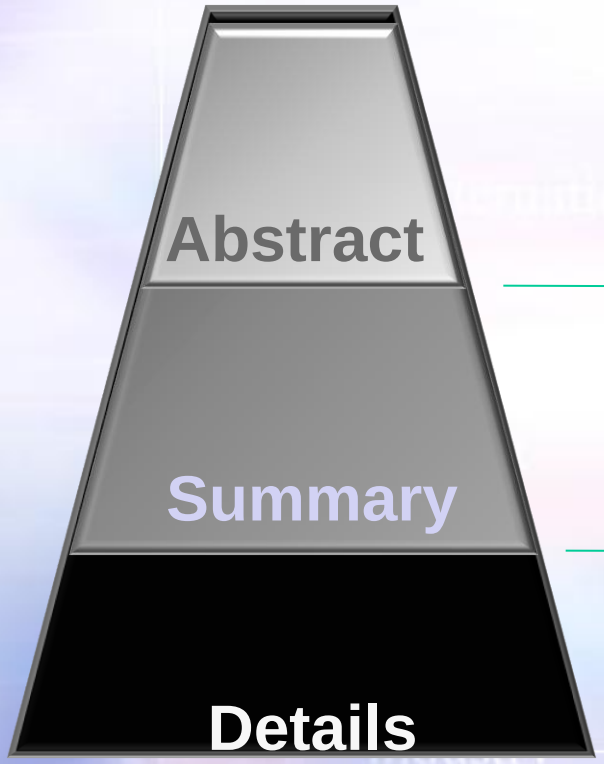
State of the art:

- State of the art is to refuel very clean hydrogen gas on a hydrogen filling station.
- But costs for very clean hydrogen are high
- Hydrogen gas quality today for fuel cells vehicles is specified according to SAE J 2719 (attached).
- When a refueling station doesn't work properly, it can emit impurities in addition caused by the filling station itself (for example oil contamination)

Technical solution needed:

- A kind of gas filter installed in the vehicle (for example in the filling line of a tank system) to hold back the impurities.
- The filter can be replaced or refreshed otherwise
- The filter should prevent impurities emitted by the refueling station in case of technical problem or allow generally a hydrogen refueling with higher impurities.

Gated Information



- Objective: attract interest
- Global scientific community
- Publicly available information

All Visitors

- Objective: Solver Self Selection
- Registered Solvers only
- Non-confidential information

All Registered Problem Solvers

- Objective: Provide the information to start working
- Solver under Confidentiality
- Confidential Challenge Details

Confidentiality Agreement Signers

IP Services

- **Technology Commercialization**
  - **Prioritization & Selection of technologies / needs**
  - **Licensing / sale of non-core corporate technologies**
    - **On-line listings; Private label site hosting**
    - **Professional services based licensing programs**
  - **Business development / partnering for technologies**
  - **Technology acquisition to drive corporate growth**
- **Patent Trading**
  - **Private sales of non-core patent portfolios**
  - **Anonymous acquisition of strategic patents**
    - **Screening of patents in specific technology areas**
    - **Negotiation and brokering for individual portfolios**

InnovaHub Technology's Classified Listings

Scratch Resistant Polymer Blends

Created: 4 month(s) ago

Language: English

This invention relates to polypropylene-based polymer blends exhibiting enhanced scratch resistance. Polypropylene-based materials such as TPO's are used in a broad range of applications, including automotive parts, appliances, and construction materials. One critical deficiency of these materials vs. more expensive engineering plastics is their poor scratch resistance.

A polymer blend having enhanced scratch resistance is disclosed comprising:

(a) A major amount of a thermoplastic component comprising (i) 50-99 parts by weight of a conventional polymer selected from the group consisting of polypropylene homopolymer, polypropylene random copolymer, polypropylene heterophasic (impact) copolymer, and mixtures thereof; and (ii) 1-50 parts by weight of a modified polypropylene homopolymer or copolymer composition exhibiting specific properties and a specific molecular architecture,

(b) A minor amount of one or more lubricant additives selected from the groups of fatty acid amides and siloxane polymers, and, optionally

(c) An impact modifier, and, optionally

(d) A mineral filler.

Patents:
US 61,118,544

Back to InnovaHub Technology's Listings Inappropriate Content

Comments (0)

Write Something...

Allowed HTML Tags: b,img,a,embed,font

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Post Comment

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Search

View: Everyone's Classifieds
Order: Recently Created

- All Innovation Depot Listings
- Invention for License
- Invention for Sale
- Technology Wanted

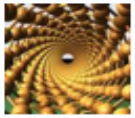
Search Criteria

Language
- English
- French
- Italian
- Spanish
- German

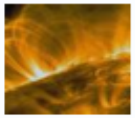
Update Results

« Last Page | viewing results 1-10 of 49 | Next Page »

Low Level Laser battery operated medical device
8 views - 0 comments - created 4 month(s) ago



Scratch Resistant Polymer Blends
7 views - 0 comments - created 4 month(s) ago



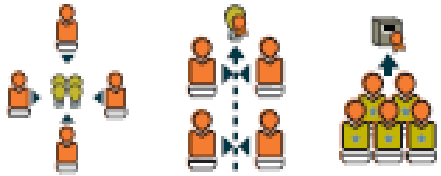
Sun Thermodynamic Power Station
10 views - 0 comments - created 4 month(s) ago

Digital Watermarking
7 views - 0 comments - created 4 month(s) ago

Mineral Wool Production Technology based on Cupola Furnace
7 views - 0 comments - created 4 month(s) ago

Quickmobilefood
2 views - 0 comments - created 4 month(s) ago

Platform



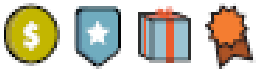
Multiple Crowdsourcing Models
Powers various methods of open innovation including idea exchanges, contests, and crowdsourced production

Dashboard and Crowd Management
Instant visibility into crowd activity with easy-to-use crowd management and analytics tools

Anti-Gaming
Monitors explicit and implicit behavior to detect highest value ideas and flag biased crowd influence or activity for intervention.

Value Mining
Automated monitoring of explicit and implicit behavior detects highest value ideas, not just highest voted ideas

Reputation Management
Rich profiling enables manual and automated weighting of members for different influence



Flexible Incentives
Sophisticated incentives model lets you rewards crowds with multiple incentives

PrivatePost

DEFINE OBJECTIVES

SET CRITERIA

IDENTIFY QUEST TYPE

ESTABLISH AWARD

DEFRAGMENTATION OF QUEST TO SPECIFIC, CONCISE PARTS

IDENTIFY/OPTIMIZE KEY WORDS

INTEGRATE SUPPORT DOCUMENTATION

FINAL APPROVAL PRIOR TO ACTIVATE QUEST

SET UP AND LAUNCH OF SECURE INTERNET FOR SOLVERS

INVITATION TO SOLVERS TO WORK ON THE QUEST

CONFIDENTIALITY AGREEMENT SIGNED

SECURE VIRTUAL PROJECT ROOM ESTABLISHED

SOLVER CAN WORK ALONE OR INVITE ADDITIONAL MEMBERS AND FORM A COLLABORATION GROUP

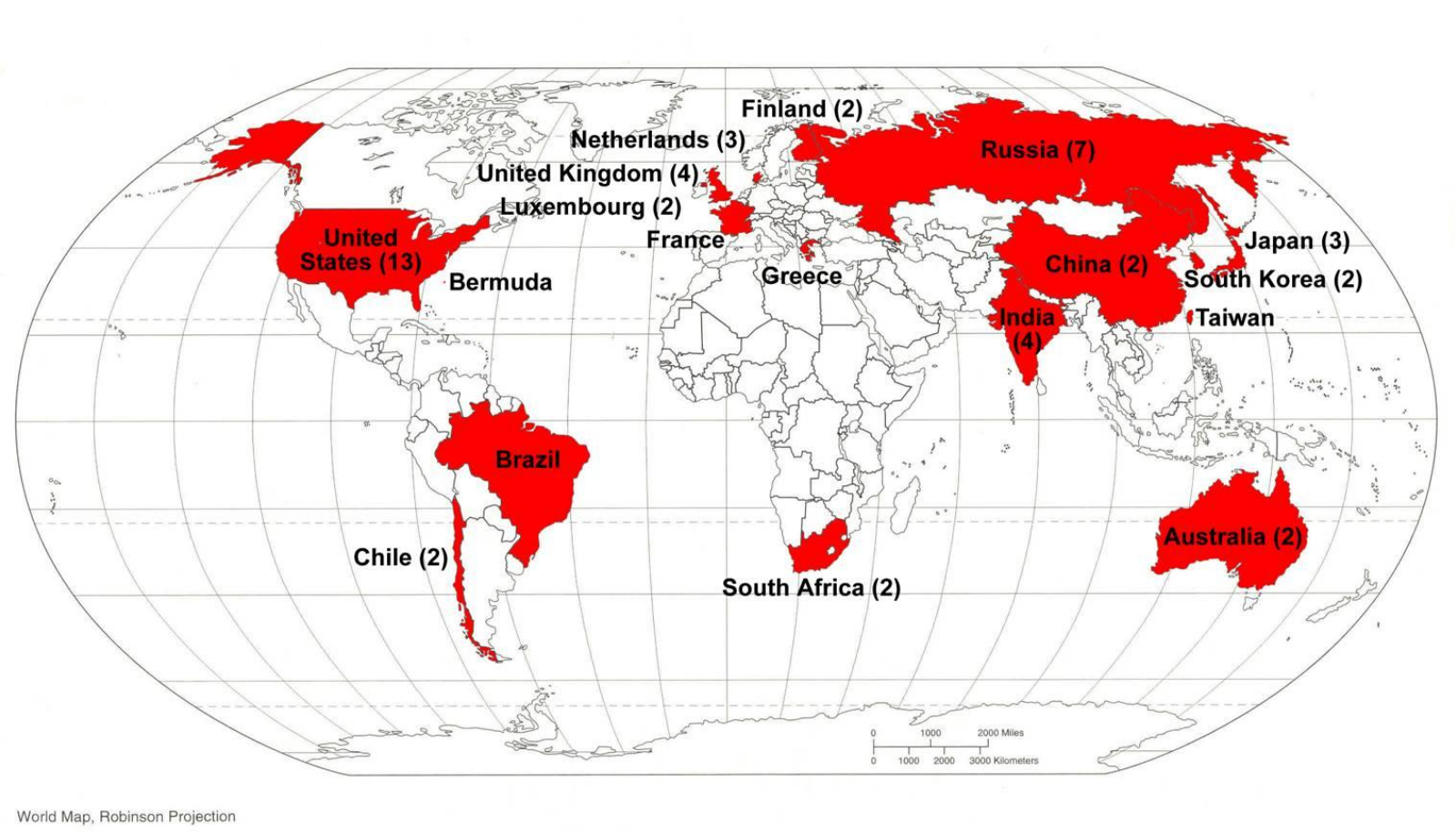
FOR GROUPS THE AWARD IS SHARED

PRESENTATION OF SOLUTIONS BY DEADLINE TO THE INNOVATION SEEKER FOR EVALUATION

SEEKER CHOOSES THE SOLUTION(S)
VERIFICATION OF SOLVER'S IDENTITY
GATHERING OF PAPERWORK
ACCEPTANCE BY SOLVER
AWARD RELEASED BY SEEKER

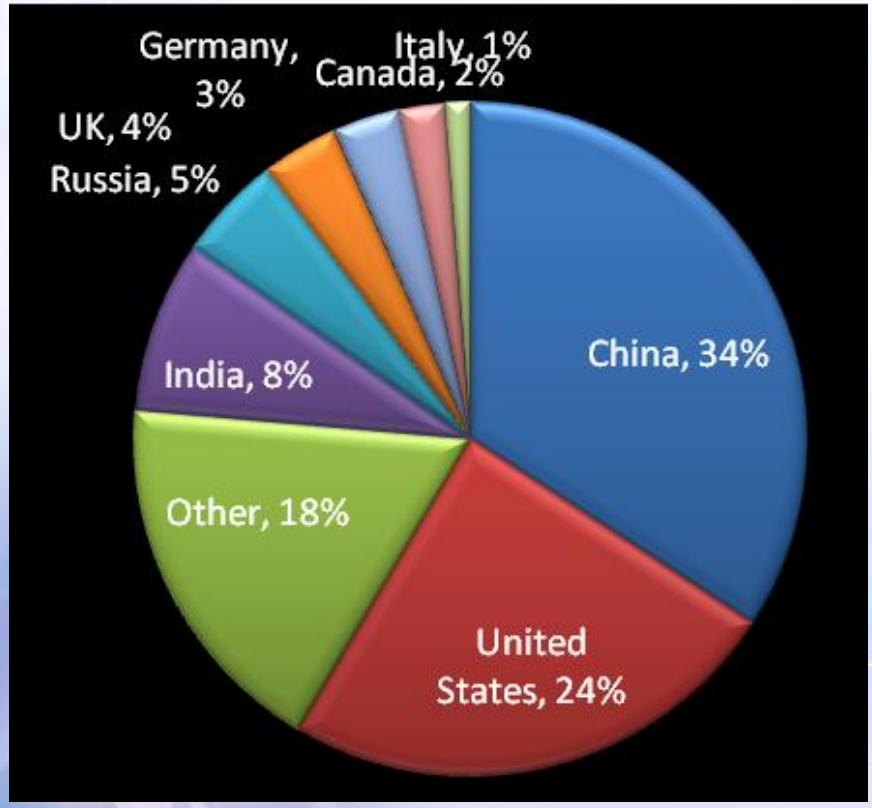
Protecting anonymity and confidentiality

Relationship-based global network

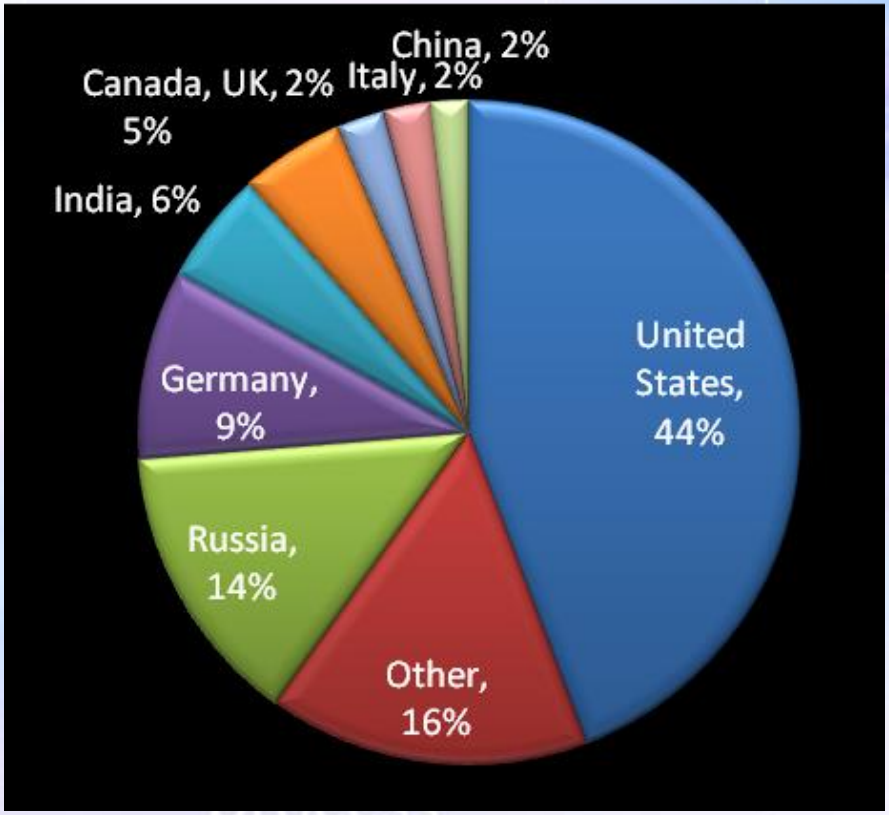


Solver Demographics by Country

Registered Solvers by Location



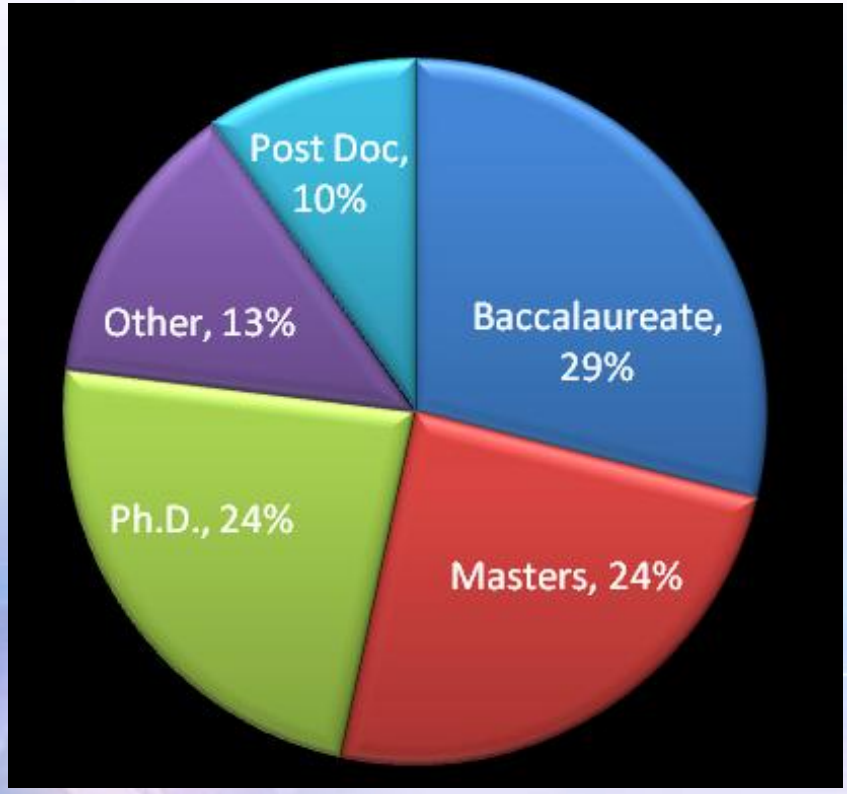
Solved Challenges by Solver Location



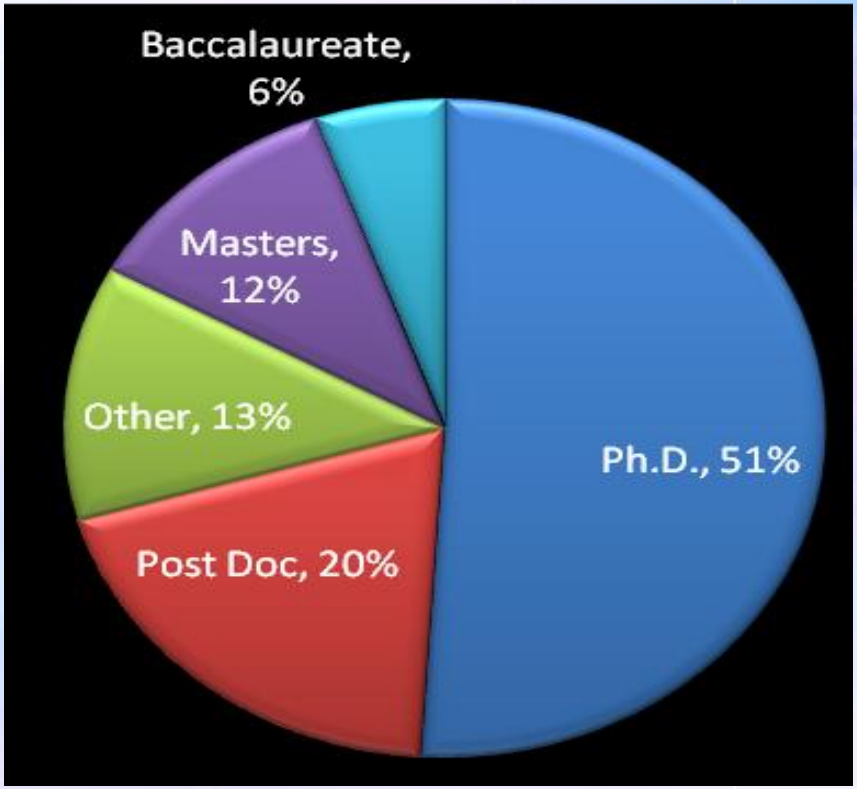
Data as of Jan 26, 2008

Solver Demographics by Education

Registered Solvers by Education



Solved Challenges by Solver Education



Data as of Jan 26, 2008

Benefits of Prize Based Open Innovation

- **Seeker Benefits**
  - Breakthrough Innovation/R&D
  - Faster Product Development cycles
  - Pay for Performance, not “trial & error”
  - World Class resources without fixed costs
  - Dramatically Improved ROI

- **Solver Benefits**
  - Economic Rewards
  - Opportunity to Practice Craft
  - Access to Important Challenges
  - Peer Engagement
  - Flexible Work/Life Arrangements

Ocean Spill

- ***Ocean Spill Recovery Institute (OSRI)***
  - Focused on recovery of oil and reduction of environmental damage related to Exxon Valdez Oil Spill
- ***Problem*** – Could not separate frozen oil from water in collection barges. (aka - Breaking Viscous Shear of Crude Oil)
- ***Solution*** – An Illinois Chemist from the Concrete Industry wrote the award winning abstract based on a technique that has been used for years to move liquid concrete.
- ***Result*** – The chemist won $20,000 and the oil industry solved a 30+ year problem within 2 months after posting in on the Web

"If this Challenge were easily solved by the people within the industry, it would have been solved earlier. The InnoCentive process allows us to step outside the box and look at more creative solutions" – Scott Pegau, OSRI

Art Restoration

Drew Buschhorn, Solver

- **Industry Problem**
  - New substance to replace an art restoration chemical that is being phased out by Environmental Protection Agency
- **Not an Industry Insider**
  - 20-year-old chemistry student at University of Indiana, Bloomington
- **Solution Existed with a Hobbyist**
  - A substance he had found years ago to help his mother preserve colors in dyed cloth

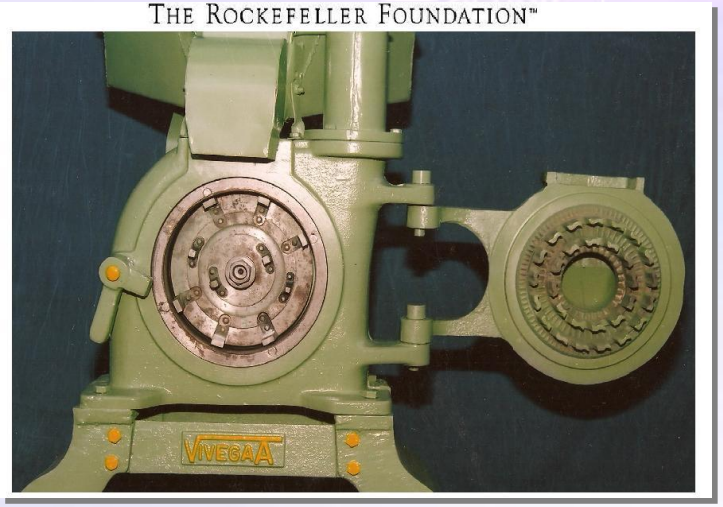
Source: *Business Week*, June 20, 2005

Improving Farmer's Lives in India

- Excerpt from winning Solver's submission document
  - At the rural level, it can be positioned as an ideal machine for grinding because it can run on single-phase power supply and can be used to grind cereals and chilies. The machine can with easily grind about 100 Kgs a day and a person earns about 12 INR per kg and can earn about 1200 INR per day. The actual profit after the electricity and labor cost if any would work out to 600 to 800 INR per day (approximately 30$ per day).

This is what Tom has in his Bio:

Product Development Engineer
(BSME, MSIA)
Ideator, Gearhead, and Entrepreneur
Founder of Gizmotech, TOH Products, & !dea Soup
Member - Union of Concerned Scientists



Top Solvers 2009

Solvers Who Won Over 3 Challenges

Nikolay Barashkov (CA, USA): Four Challenges solved in the Chemistry discipline.

Barashkov is currently the Director of Research & Development at Micro-Tracers, Inc. He is the author of six books, two granted US patents and three granted European patents and 10 US patents pending.

Ed Melcarek (Ontario, Canada): Five Challenges solved in the Engineering/Design and life sciences disciplines

A Polish Canadian with a Doctorate Degree in Engineering Science, Melcarek has a diverse technical background in Aerospace, Electronics, Particle Physics and Machinery.

Single Challenges Where Solvers earned over $50,000

Wenhui Zhang (Beijing, China): One Challenge solved in the Chemistry discipline.

Zhang is a graduate of Nankai University and the China Institute of Atomic Energy. For the past six years, his focus has been on leading a research & development team in the fields of biology, chemistry and pharmaceuticals.

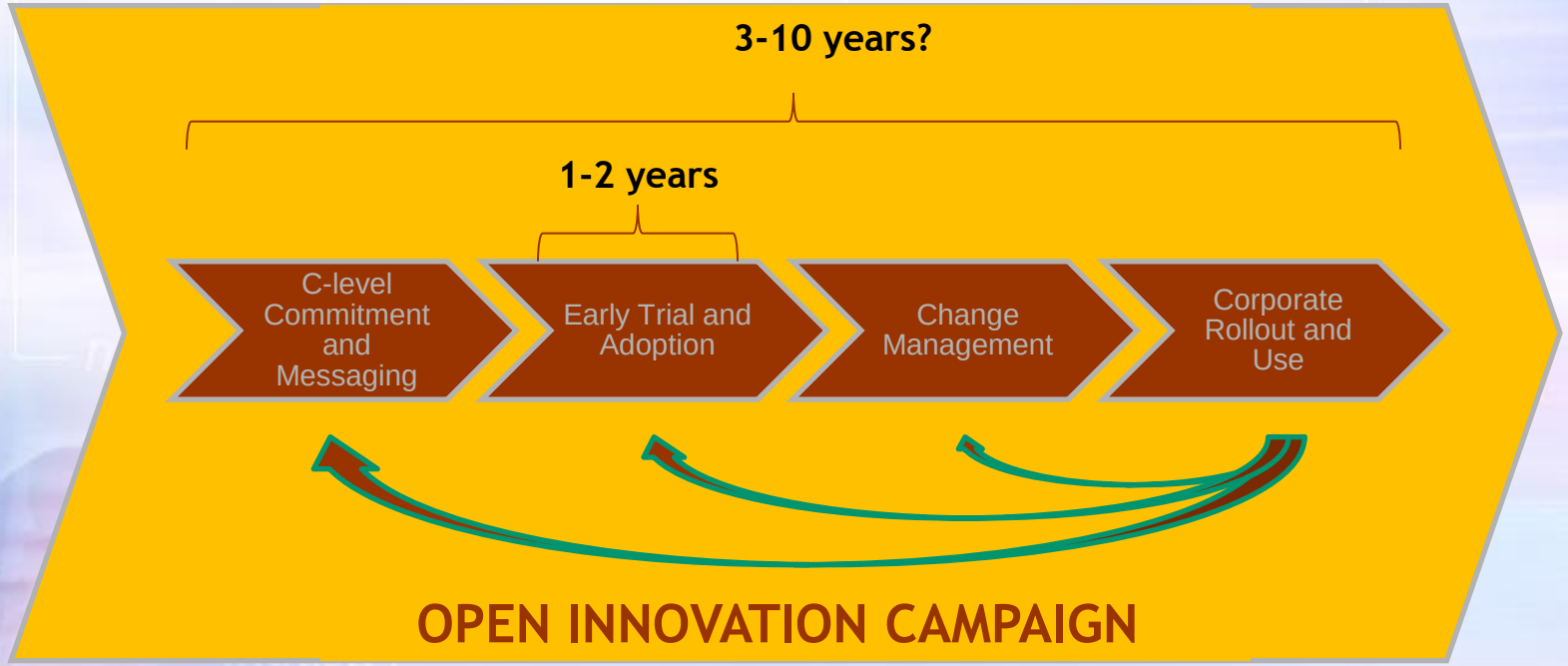
Ming Zhou (MA, USA): One Challenge solved in the Engineering/Design discipline.

Zhou is a consultant with SunMoon Materials Company. From Research & Development, project management to various US Patent applications, Zhou has one of the most diverse backgrounds of any InnoCentive Solver.

Open Innovation – Implementation Strategy

Key Learnings and Recommendations

Plan with realistic expectations and time horizons



This is a transformation, not an implementation! (remember eMail, ERP and business process outsourcing)

Recommendations

C-level Commitment and Messaging

- Commitment from the top (C-level mandate)
  - E.g., “30% of innovation will from outside within 5 years.”
  - Appoint corporate champions (“evangelists”)
- Earmark corporate resources for Trial and Learning
  - Challenge organizations to identify opportunities
  - Set-aside funds to enable units to “test and learn”
- Design internal messaging to drive buy in and excitement
  - Internal staff must feel empowered, not threatened
    - competitive advantage, not cost reduction!
    - Solution finders as well as problem solvers
  - Make heroes of early adopters and big wins
  - Open Innovation as a corporate strategy, advertise it!

Key Learnings and Recommendations

Change Management

- Open Innovation is a Paradigm shift
  - Encourage “open” behaviors and risk taking
  - Must be solution finders as well as problem solvers
  - Empower Scientists/Engineers act independently
  - Redefine roles and reward/recognition systems
- Identify “change makers” across key functions
  - **Buy in critical to successfully changing the “not invented here” culture to an “open innovation” culture**
- Address structural barriers to adoption
  - Legal, Finance, Alliances, etc.
  - Middle Management can make reality or doom to failure

Key Learnings and Recommendations

Corporate Rollout and Use

- Leverage successful internal successes as beachheads
- Repurpose evangelists and “owners” to spread open innovation through out the organization
- Cull the “passive aggressive”s and the naysayers – this is fundamental cultural change
- Build, buy, and certify “solution finders” and brand within organization as key positions
- Cross unit and cross border cultural change is difficult
  - Engage local evangelists and planners early
  - Often necessary retrial locally and re-structure/ re-implement change mgmt approach

Threats to Innovation

- Comfort in Historical Leadership Position or Reputation

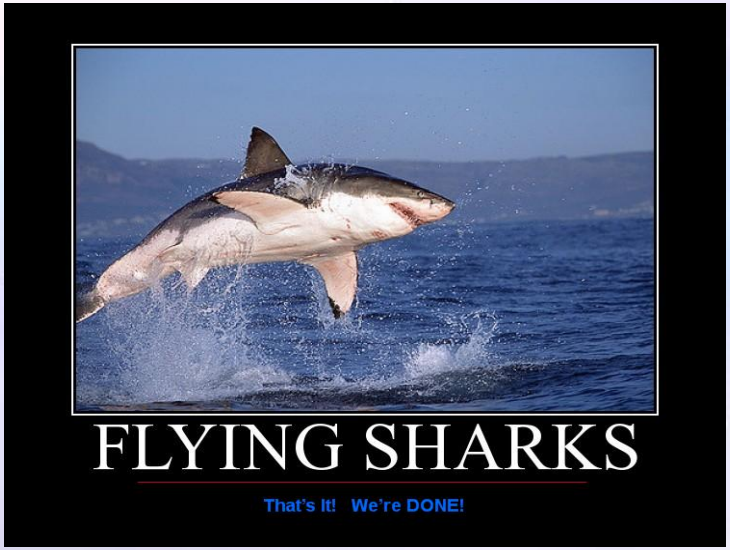
  "*If you want evolution, look inside. If you want revolution, look outside."*

- NIH (Not Invented Here)
- Exponential Change in Society and World Politics
  - 58% of doctoral degrees and 43% of all higher-ed. degrees in computer science and engineering are awarded to temporary residents educated in Universities and Colleges in the USA
  - In a post 9/11 world retaining educated graduates in the USA is threatening companies abilities to hire

"Now more than ever, economic progress depends on innovation."

Bill Gates – Testimony to House Committee on Science and Technology

Sometimes *Bad* Things Happen When *Bad* Guys Innovate



Key value add of intermediaries

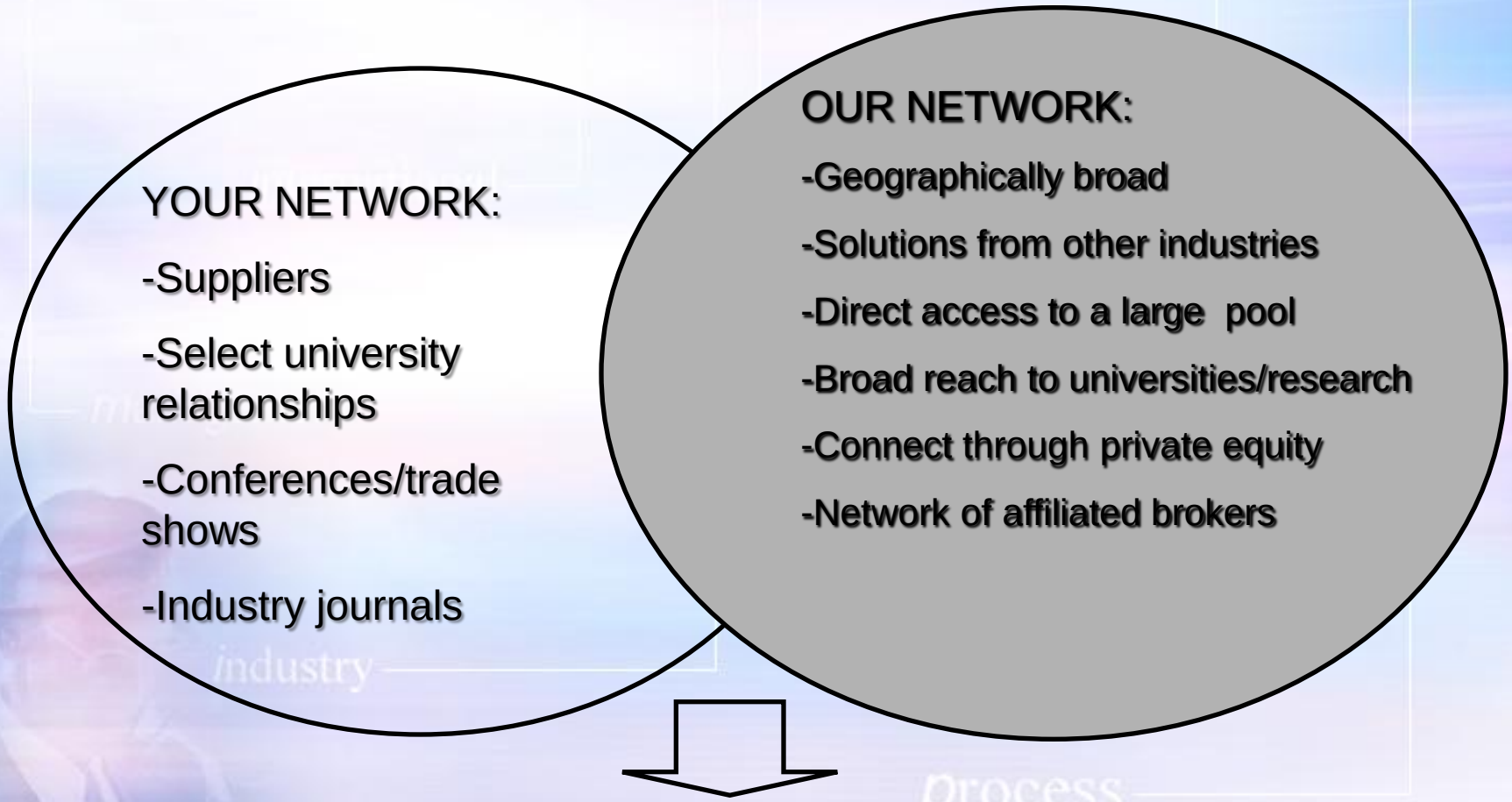
Connectivity
- Deep reach into corporate technical staffs
- Access to key gatekeepers (tech transfer & tech acquisition)
- Relationships with venture capital and SMEs

Confidentiality
- Opportunity screening and initial discussions
- Protect client name and application

Expertise
- Evaluation and communication methods
- Market and buy-side knowledge
- Business formation and commercialization skills

External perspective
- Unbiased evaluation and critical thinking

Why use InnoCrowding?



Both networks important, but will yield different responses

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