



# **15.369 Corporate Entrepreneurship**

**Professor Olenka Kacperczyk  
Professor Charlie Kiefer**

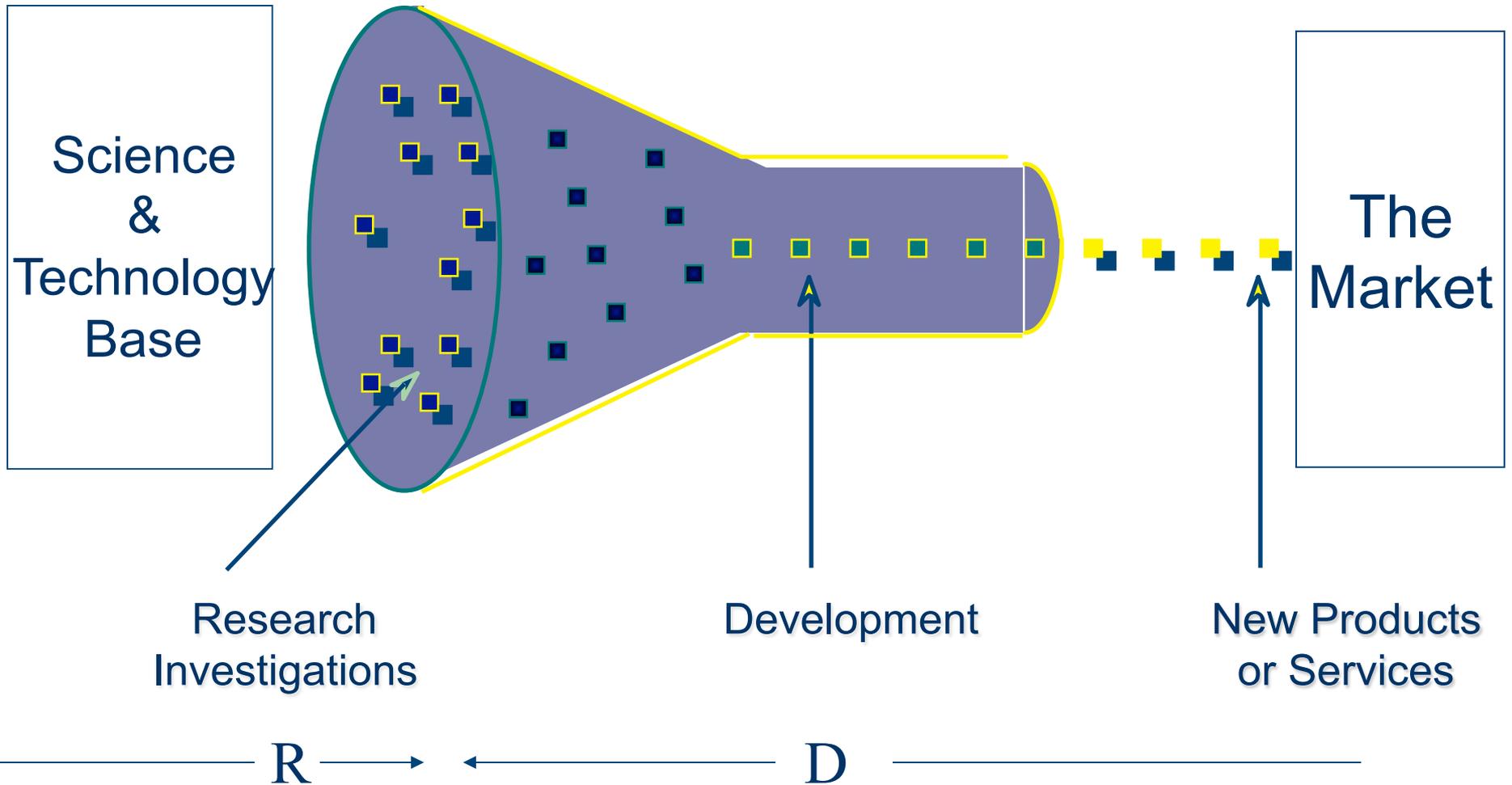
**October 2015**

# Agenda for Today



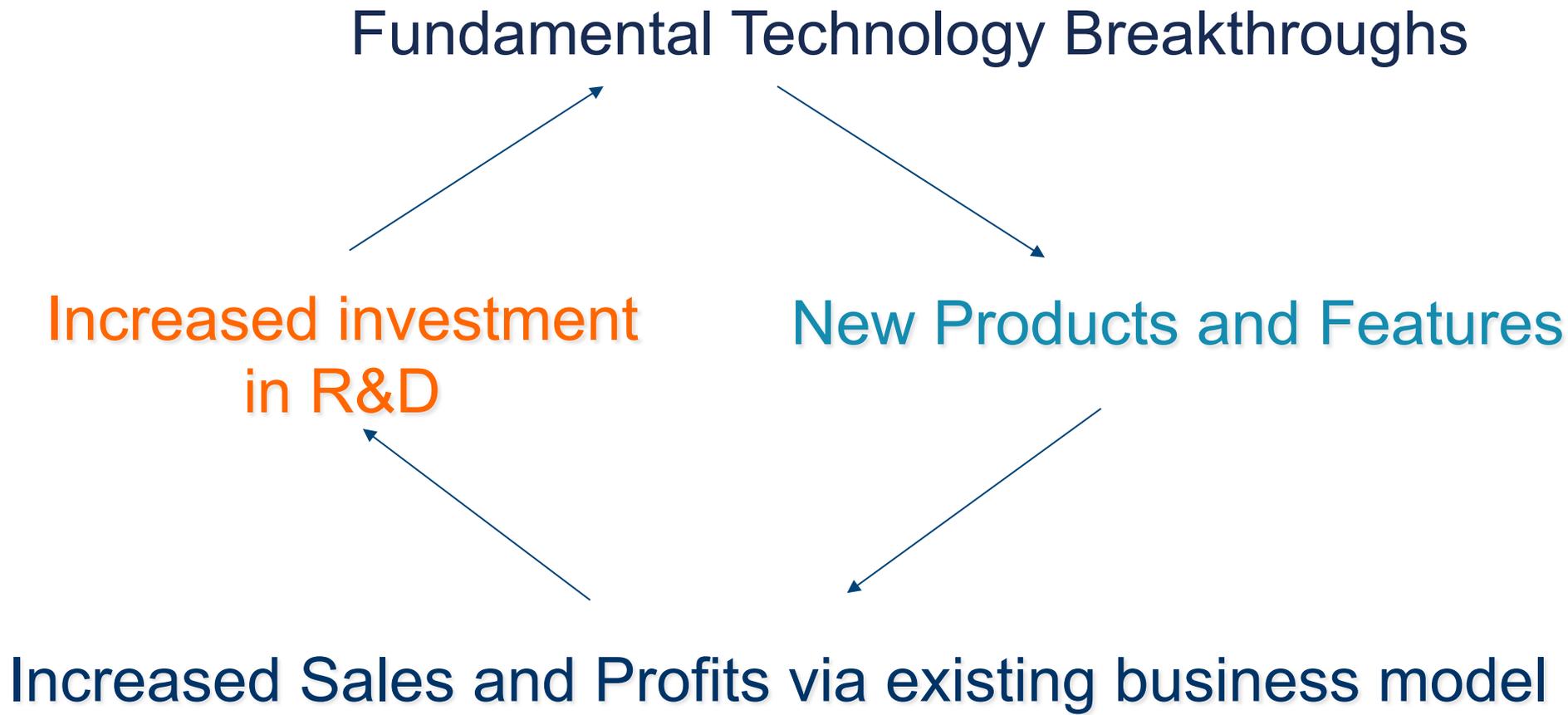
- What is Open Innovation?
- What are the tools of Open Innovation?
- Open Innovation in GE: Ecomagination Challenge
  
- Guest Speakers:
  - **Dyan Finkhousen**: Director, Open Innovation & Advanced Manufacturing geniusLink - Customer Shared Services, GE, Global Operations
  - **Steve Taub**, Senior Director, GE Ventures

# A Closed Innovation System



Source: Henry Chesbrough

# CI: The Virtuous Circle for R&D

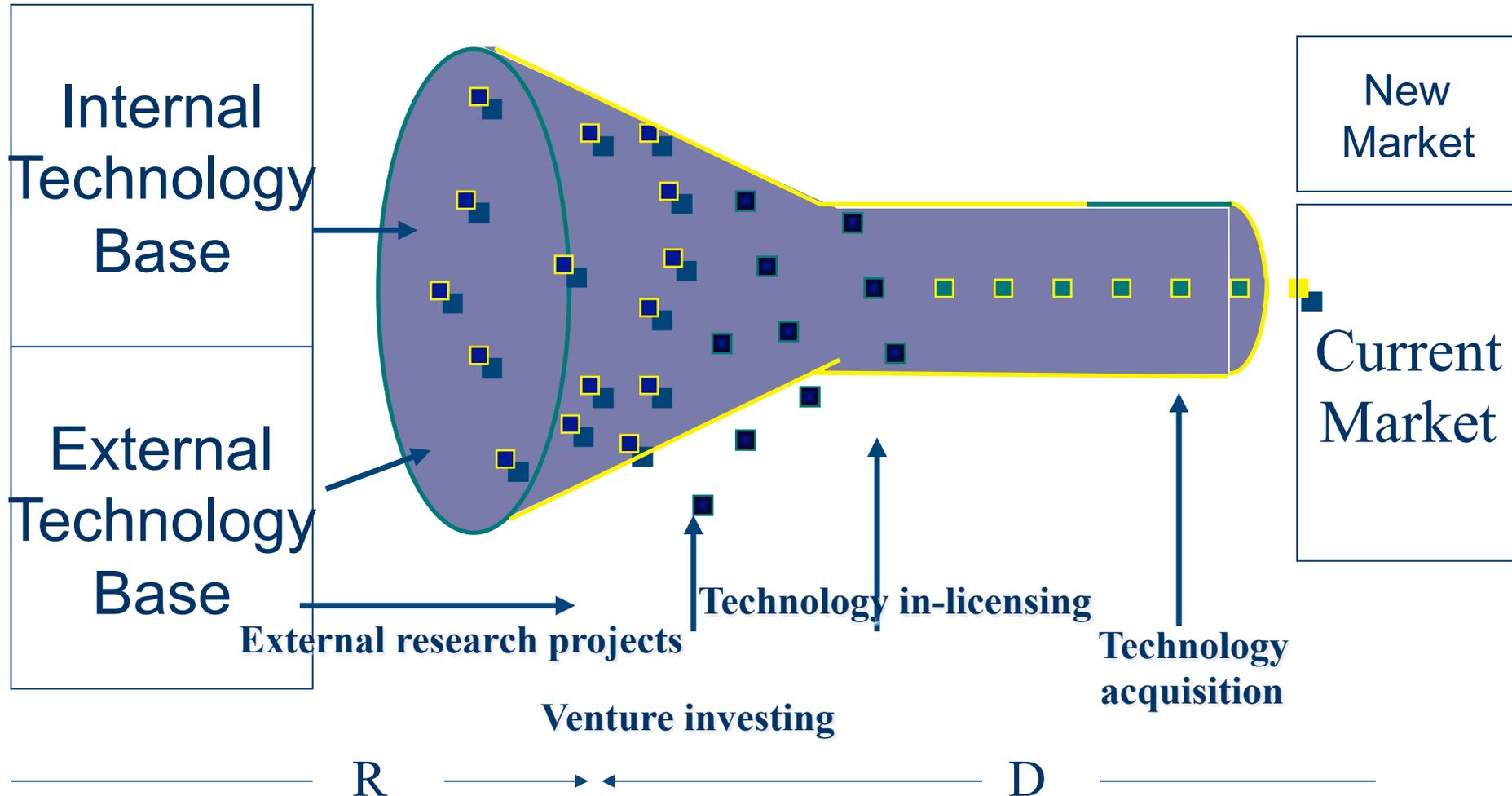


Source: Henry Chesbrough

# OI: The Virtuous Circle Broken

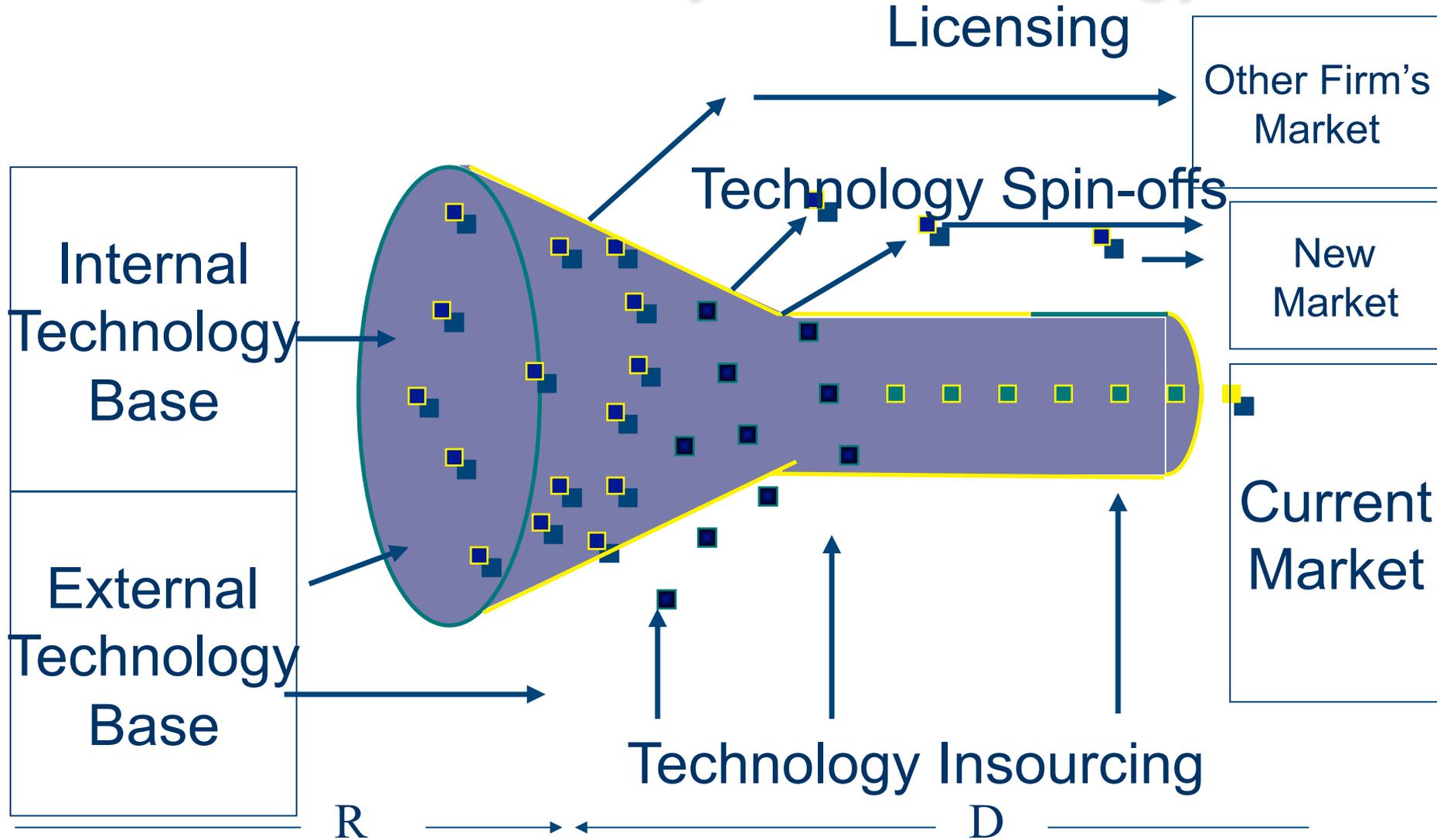


# Inbound OI: Filling gaps with external technology



<sup>6</sup> Source: H. Chesbrough

# Outbound OI: Profiting from others' use of your technology



# When Ideas Walk Out the Door...



- In 1970, the Palo Alto Research Center (PARC) is formed to move the firm from being the **leading office copier company** to being the dominant **supplier of information-intensive products**.

- PARC proves fertile, inventing such technologies as laser printing, the ethernet, the graphical user interface, and personal distributed computing.

- New York-based executives resist commercialization of new technologies.

- Value from innovations is being captured by employees who left Xerox to found companies such as Adobe Systems and 3Com.

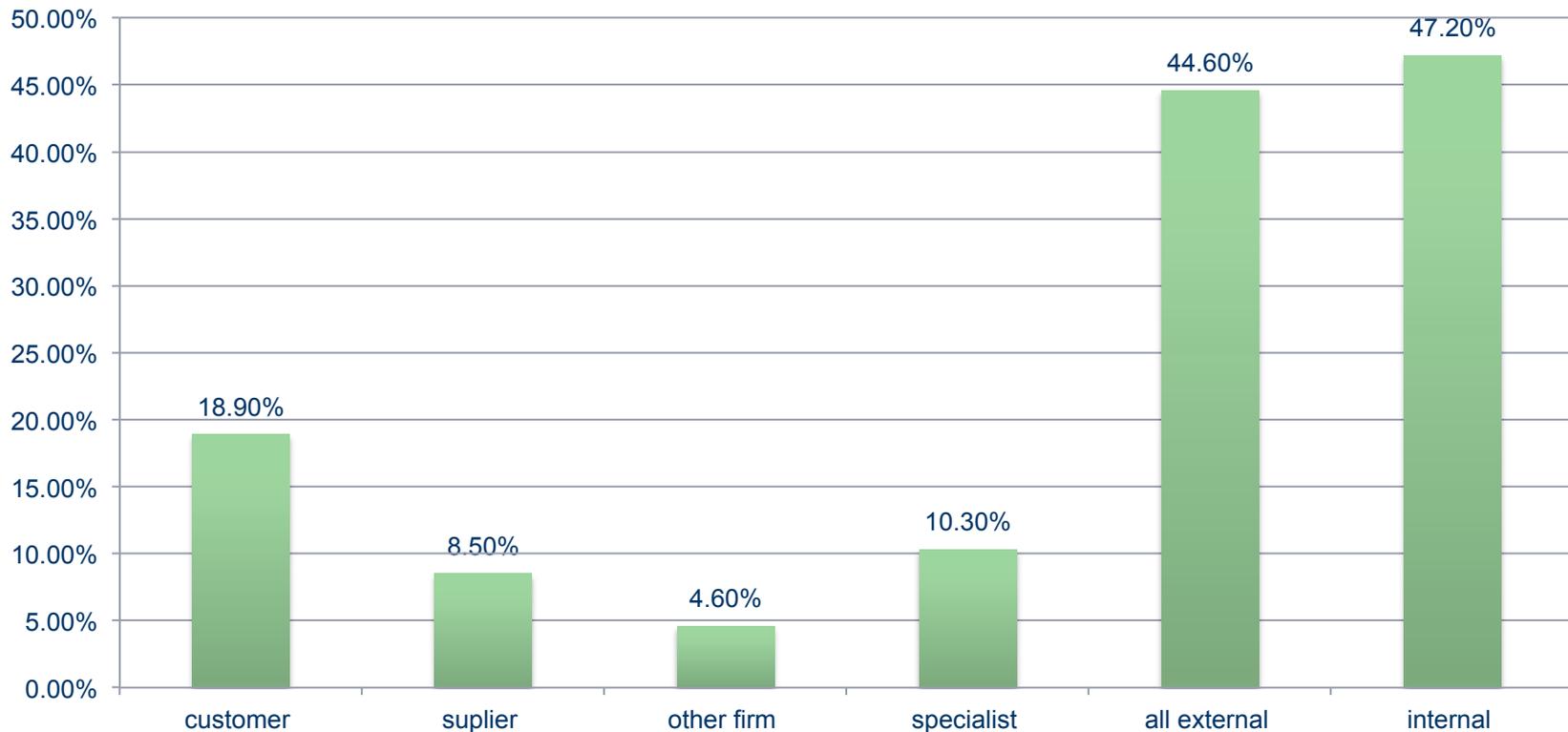
# What is Open Innovation?

“Open innovation is the use of purposive inflows and outflows of knowledge to **accelerate internal innovation, and expand the markets for external use of innovation, respectively.**”

Chesbrough, Vanhaverbeke, West  
*Open Innovation: Researching a New Paradigm* (2006)

# How prevalent is Open Innovation?

Contribution to innovation by external source



Arora, Cohen, Walsh, 2014

# A difference-maker in clean energy



**ecomagination**



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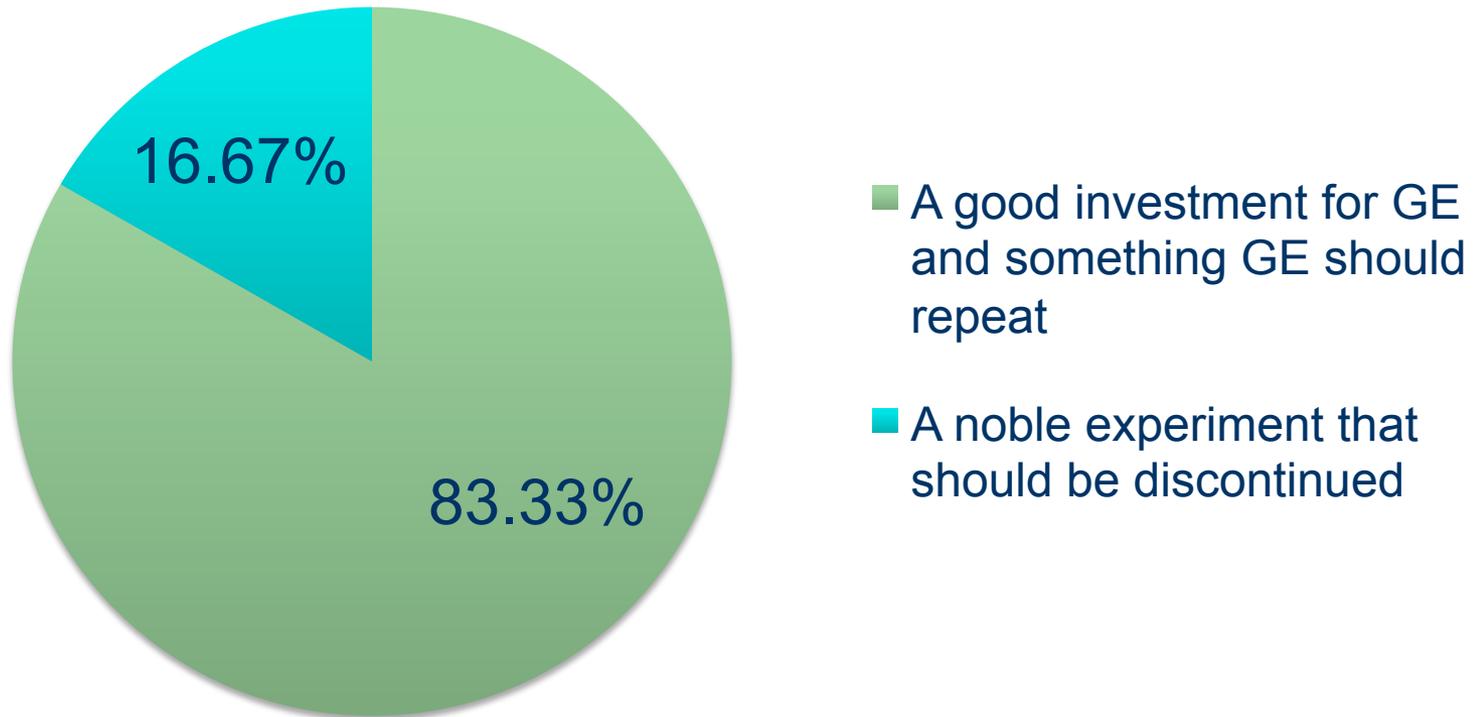


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# Beth Comstock

# Jeffrey Immelt

# What is your assessment of the results from the ecomagination challenge so far?



# What is your assessment of the results from the ecomagination challenge so far?

- Further clarification on the goals and expected impact of the challenge is needed before it is repeated, especially given the effort required (in addition to daily tasks of executives) to implement it successfully.
- It was extremely successful in a number of goals: strong support (more entries than expected); allowing GE to connect with external ideas and partners it would not have normally encountered; establishing and supporting an ecosystem for renewable energies (including VC support); and providing external visibility for the ecomagination programme as a whole. However other targets were somehow misaligned or lacked the organizational processes: identifying and investing in ideas or start ups that could be integrated with GE business lines; or serving as an investment platform.

# What is your assessment of the results from the ecomagination challenge so far?

- While I think that this could have been a good investment, I think that the way that it was structured will not ultimately pay off for GE. First, because the prompt was so broad, most of the submissions did not address problems that GE was specifically trying to solve, and most were not a good fit for GE's business model. If the challenge had been structured as a set of more precise requirements, or problems that must be solved (e.g. utility scale alternative power at costs equivalent to or less than natural gas or coal), the investment would be more integratable to GE and worth further investment.
- Also, the challenge generated ideas more than it created companies. Most of these submissions were just ideas, and were likely not going to become viable companies. Investing in later stage companies might be a better way to achieve GE's goals.

# What should Comstock recommend to Immelt? Should this experiment be repeated in the energy business? Should it be extended elsewhere? Why or why not?

- **Majority vote:**

- repeat in energy and extend to other businesses

- **Other thoughts:**

- Should wait for return on investment or until we get it right
- Not repeat but apply to other business: CSR is noble and profitable
- Set up an incubator but quantify performance
- Repeat but not invest until we understand the process

# GE ecomagination challenge

Strong global participation and engagement:

- 3,800+ ideas from 150+ countries
  - 130,000+ votes
- 81,000+ comments on open collaboration
- 69,000+ registered and engaged in active discussion online



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# Ecomagination Challenge at GE

- Clean technologies often require large amounts of capital to scale and take longer to go to market
  - GE remains committed to invest, partner and make a difference with emerging technology companies
- The Challenge have led to increased fuel efficiency for jet engines and reduced emissions by using wind power
- The effort allowed the company to create innovations and solutions that internally might not have been created
  - Developed a process to develop and integrate fresh ideas

“Every now and then, the right mix of ideas, people and passion comes together— and magic happens. New thinking comes forward, sparking real action.”



Photo of Chris Anderson courtesy of [James Duncan Davidson](#) on Flickr. License: CC BY.

Chris Anderson  
Editor-in-Chief, Wired, and  
ecomagination Challenge Advisor

# Open Innovation Best Practices

- Position the organization to build and manage key relationships
- Establish a small, central, dedicated group to drive Open Innovation
- Integrate and align the Open Innovation process with other relevant processes in order to ensure key entities are involved at critical points
- Seek compelling measures for Open Innovation

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