

## Discussion

### User Innovation and Firm Boundaries: Organizing for Innovation by Users

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## The paradigm of closed innovation systems

- Past: Innovation is best created by **centralized research and development**
  - the innovative geni was sought in separate organizational units, project management designs and incentive systems.
- One important drawback of the centralized approach is that **breakthrough innovations** do not always originate in the R&D unit of the organization (Johnson & Huff, 1998; Robinson & Stern, 1998).
- From firm boundary to mental boundaries: Breakthrough innovation are strikingly often unintended and originate in unintended loci of organizations. Management tries to stop radically new projects ...
  - **Example: AstraZeneca's** management tried to stop the development of the ulcer medication Losec, however it became one of the world's most successful prescribed medications (Fredberg, 2006)

## Presenters in Symposium (along with many others) believe that the closed innovation model is being supplemented/overtaken by an open model of innovation

- By encouraging and considering the ideas and solution knowledge of a **large number** of individuals, **new creativity** is brought into the organization.
- Weber (2004) observes in the case of **Open Source Software** that a dominant capability of its development system is to incorporate the "**wisdom of the periphery**" (Weber 2004, p. 225).
- Special focus on the role of **users (customers)**

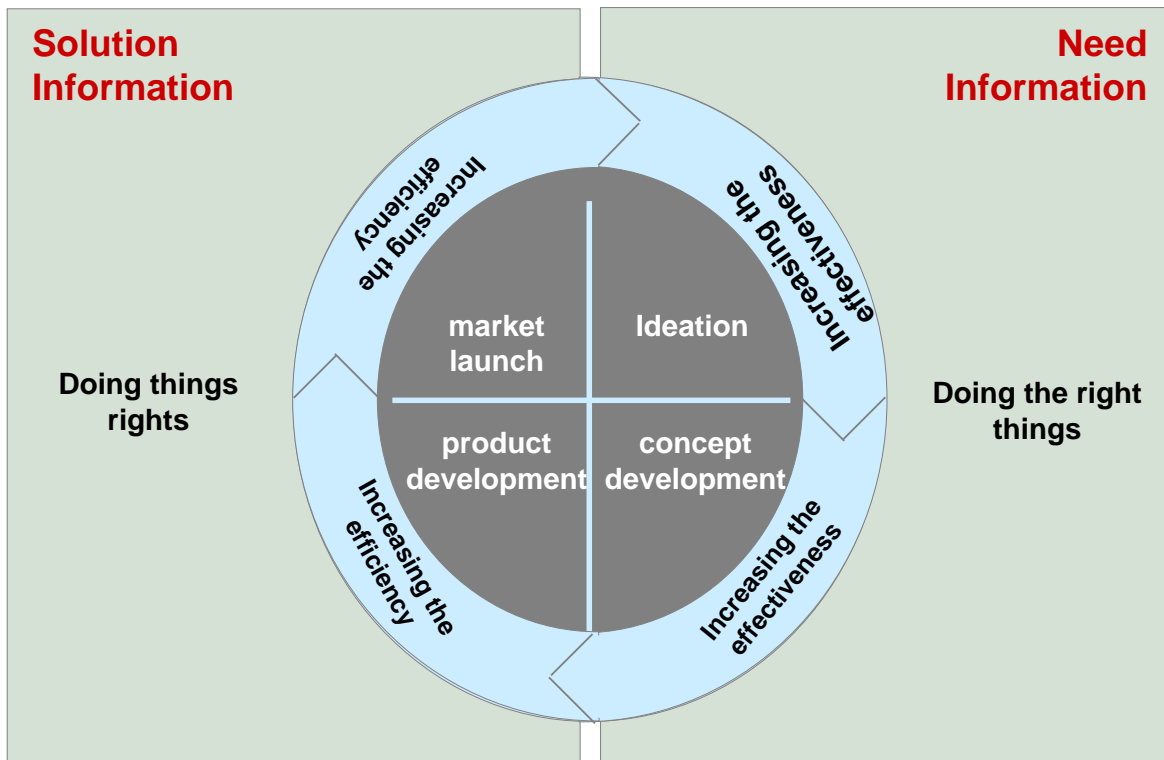
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## Development of the literature

- **Innovation networks with customers, suppliers, universities, etc.** (Brown / Eisenhardt 1995; Chesbrough 2003; Freeman / Soete 1997; Laursen / Salter 2006; Lundvall 1992; Hirsch-Kreinsen 2004; Rosenberg 1982; Tidd et al. 2000)
- **"Voice of the customer" literature** (Griffin & Hauser 1993; Katila & Ahuja 2002; Joshi & Sharma 2004 ... ): customer orientation in NPD
- **Lead users** are a "**product feedstock for manufacturers**" (von Hippel 2005); task of firm is to capture **autonomous user inventions** (e.g. Anderson & Crocca 1993; Ciborra 1991; Enos 1962; Freeman 1968; Urban & von Hippel 1988; Ramirez 1999; Rice & Rogers 1980; Rosenberg 1976; von Hippel 1976, 1982)
- **Firms can organize** the process of distributed / open user innovation (Chesbrough 2006; Chesbrough, Vanhaverbeke & West, 2006; Gassmann/Enkel 2004; Jeppesen & Molin 2003; Lakhani 2005; Ogawa & Piller 2006; Prahalad & Ramaswamy 2000, 2004; Reichwald & Piller 2006)

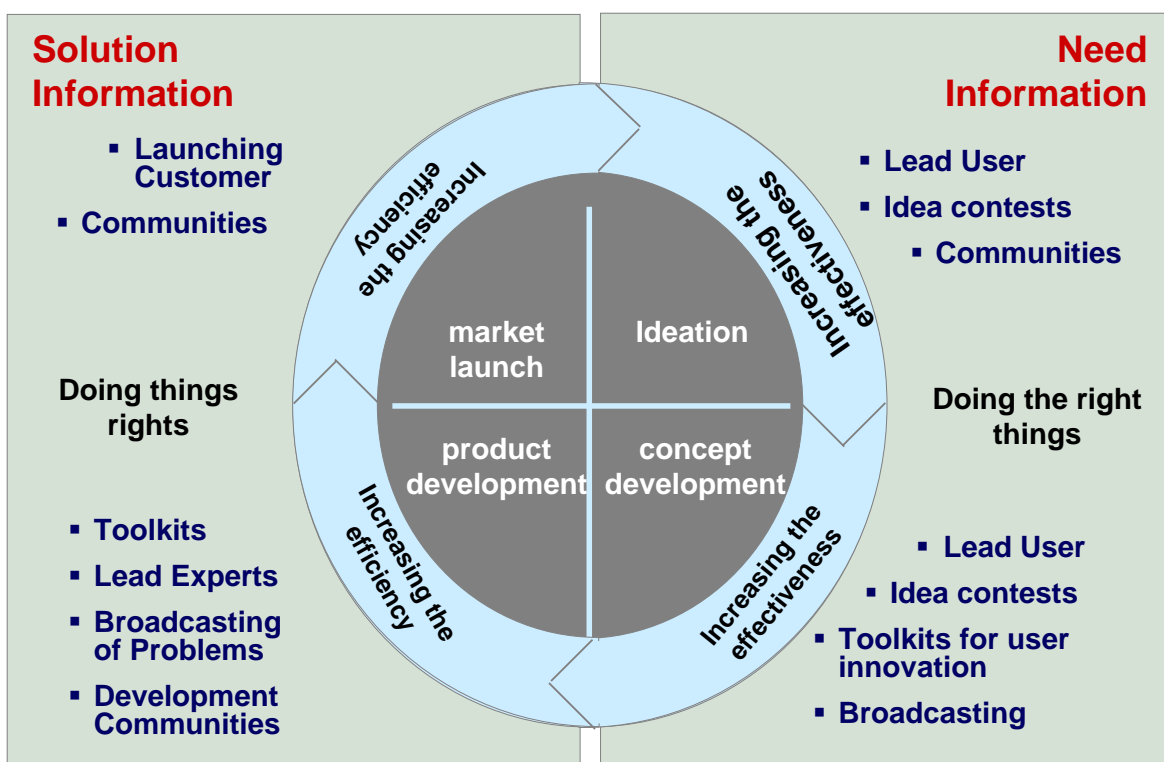
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# A (simple) framework to structure different contributions of the firm's periphery to innovation



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## Joel West: Open, Cumulative and User Innovation

- Integrating different perspectives, reminding us that users / customers are just one actor in the periphery of the firm
- Review of "cumulative innovation" framework by Suzanne Scotchmer (2004) in addition to von Hippel and Chesbrough:
  - iterations and re-combinations of knowledge from diverse sources are core of any innovation process
- Focus on ease of transferring and re-combining existing knowledge by any actor; thus going beyond the picture of autonomous actors innovating in their own domain
- This also has implications for policy makers (sketched greatly in the paper) in order to create an environment where open innovation can foster

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## Allan Afuah: A User Innovation Techn. Life Cycle Model

- Counterintuitive model: The more a technology matures, the more users innovate; Challenging both the von Hippel and the Utterback-Abernathy models
  - Different focus ("functional novel" vs. "extending" innovation; technology vs. product)
  - Source of "radical" innovation vs. source of continuous innovation (-> solution / need information)
  - Users versus **Lead** Users
- Previous research used stickiness of information as variable to explain the locus of innovation; Allen focuses on environmental factors, thus extending the recent framework
- User innovation live cycle model is contributing to picture of firms organizing for user innovation

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## Wim Vanhaverbeke: Reframing the Role of Lead Users in Radical Innovation

- Adapt the open innovation framework to understand and take advantage of the potential of lead user interaction; extending the dyadic relationship of a firm and its LU to a value network perspective
- Reframing the LU construct into a dynamic relationship between users and firms along the entire innovation process (invention only becomes innovation by adoption)
- Extensive case study in high-tech b-to-b context revealing the rich interactions between users and firms in the innovation process (*we need more of this kind of research*)
- However, still the paradox of strong and weak ties between firms and its customers

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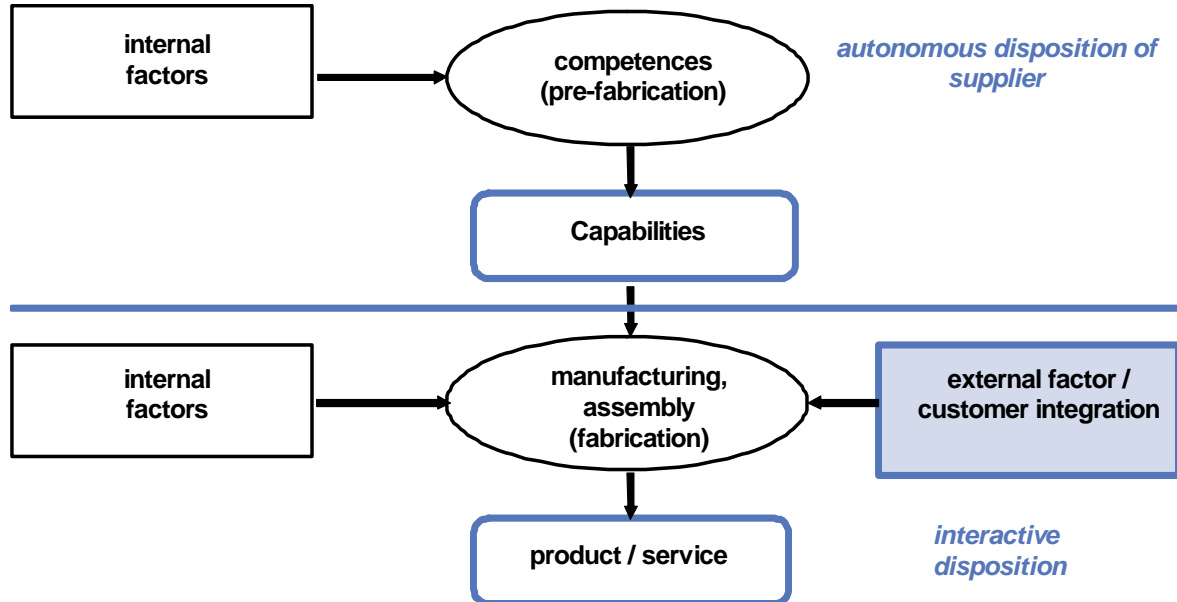
## Lars Bo Jeppesen & Kevin Boudreau: Users as Complementors

- Users act as unpaid providers of complementary goods to a firm's platform (in this case, "modding" a computer game).
- Empirical paper building on earlier research of co-development of software platforms across network of diverse actors
  - (1) Usage is stimulated by the number of user innovations (mods).
  - (2) Innovating behavior responds positively to an increase in (lagged) usage.
  - (3) Positive feedback effect in user innovation on two-sided platform models.
  - (4) A firm's investment in tools to support user innovation fosters innovative behavior.
- Paper also makes advantage of the large opportunities we have in researching user innovation as so much data is in the public domain.

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## Can service management be a role model for research on organizing user innovation?

Customers within the service (production and delivery) process are referred as **“resource”** (Lengick-Hall 1996; Wikström & Normann 1994), **“productive resource”** (Bitner et al. 1997), **“human resource”** (Schneider & Bowen 1995), or even as **“partial employee”** (Mills & Morris 1986; Bowers, Martin & Luker 1990) of the firm.



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### Final questions

Today no one needs to be convinced that user innovation is important.  
How to innovate with users is the key question.  
(Building on Peter Drucker, 1988)

Who is the user?

Capabilities and competences of innovating users  
(-> service marketing, mass customization research)

Capabilities and competences of firms to innovate openly with users  
("Absorptive Capacity 2.0")

What is happening in the interactions of users and firms  
along the innovation process?

When is there enough of a good thing? Firms start to exploit users for their  
innovation process. Do we need user innovation governance?

User entrepreneurship ... when do users start to  
organize themselves?

What is the core of an organization?

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