

Swarms of Innovation

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Charles Leadbeater



The Curitiba Model

- Design for mass self-organisation
- Where is creativity?
- What is it about?
- Who is creative?

Open Innovation Sources

- Clusters and cities: the milieu
- Networks
- Open and user-led companies
- Open source and peer-to-peer
- Community led development
- Social movements
- Mutuels, cooperatives

Common Themes

- Distributed (resources, tools intelligence, contribution)
- Co-created (users are producers, designers)
- Collaborative (peer-to-peer, team based)
- Shared platforms (commons, milieu, forums)
- Cumulative (modular, evolutionary, never complete)

The Pipeline Model

- Hire bright people
- Put them in special conditions
- Free from market pressures
- Pipeline of ideas to products
- Delivered to passive waiting consumers
- Value comes from transfer and transaction

The Pipeline Assumptions

- Knowledge is created, codified, sent and received
- Authors of inventions can define their use
- Intellectual property should be protected to create incentives
- Consumption is passive - a yes/no choice
- Design solutions are complete, users can add little
- Innovation comes from within, self-reflective process

Pipeline Organisations

- The R & D Lab: Thomas J Watson, Bell Labs
- Specialist creative activities in companies
- Professional disciplines of architecture and design
- Elite university education
- Professional public services

Swarm Organisations

- Linux and open source
- eBay
- The Sims
- The Public Human Genome Project
- The Grameen Bank
- Modern astronomy

Swarm Innovation: Generation

- Multiplying sources of ideas
- Technology costs down, experimentation is cheap
- Combining ideas in networks easier
- Skilled labour more mobile, wants to be autonomous
- End of knowledge monopolies

Swarm Innovation: Propagation

- Pro Am culture: Consumers are innovators
- Radical innovations: the users work out what innovation is for
- Disruptive innovation: passionate users innovate, producers follow
- New markets and business models start in margins
- Users as investors and contributors = increased productive resource
- Who invented the mountain bike?
- Blogging vs Big Media

Swarm Innovation: Assumptions

- Innovation is social and dynamic
- Authorship joint, complex and evolutionary
- Knowledge created by interaction
- Innovation as a mass activity
- Use is creative
- Organised without being an organisation

Swarm Model

- Community has to start with something, who provides the kernel/core?
- Communities are structured: membership, decision making.
- Motivated by problem solving, very practical not idealistic
- Provide people with easy to use tools, allow decentralised initiative
- Governance to manage conflict, uphold values, set direction

Swarm Model

- Fast feedback, allows trial and error
- Designed to be incomplete, and so to evolve
- Good ideas drive out bad according to clear yardsticks
- Distribution of labour, not division of labour
- Ownership blurred between community and host organisation

Swarm Innovation: Advantages

- Increase diversity of parallel experiments: faster learning
- Public platforms, shared development, lower cost
- Better at dealing with technological and market uncertainty
- Users as co-producers increase the systems resources
- Communities build momentum, scale behind products
- Innovation central to modern economy, this is new model of innovation

Swarm Innovation Questions

- Who gets the kernel going? How is that funded?
- Good for mass incremental innovation but what about big leaps?
- What if experimentation is complex and costly?
- What if speed of feedback much slower?
- Is it just for geeks?
- Does open style of work require open source ownership/licensing?

The Future?

- Can we apply this approach in mainstream public services?
- Education, health, social welfare, community safety.
- What's in the space between the pipeline and the swarm?

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