INNOVATION AND CREATIVITY TEXTBOOK

Managing Creativity and Innovation

Harvard Business Review. (2003). Managing Creativity and Innovation. Harvard Business Review Press.

WEEK 1 Lecture

Chapter 1 – Types of Innovation

Key topics:

- Incremental and radical innovation
- The factors that favor incremental innovation
- Innovation in processes and services

Definition

- Latin root nova = new; at its core innovation = introducing something novel
- Invention + exploitation—ideas only count when they create value.
- Embodiment, combination, or synthesis of knowledge in original, valued products, processes, or services.

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Two broad flavors

- Incremental: extends existing tech (e.g., GPS units repurposed for luxury cars).
- Radical / disruptive: new to the world—transistor, SiGe chips, jet engines, digital imaging.
- Disruptive tech often spawns new markets while toppling old business models.

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How to spot a radical innovation

- **Any of the following:**
  - Entirely new performance feature set
  - ≥ 5× improvement on a key metric• ≥ 30 % cost reduction
  - Changes the basis of competition.
- **Classic signal:** IBM's electric typewriter wiped out manual rivals overnight.

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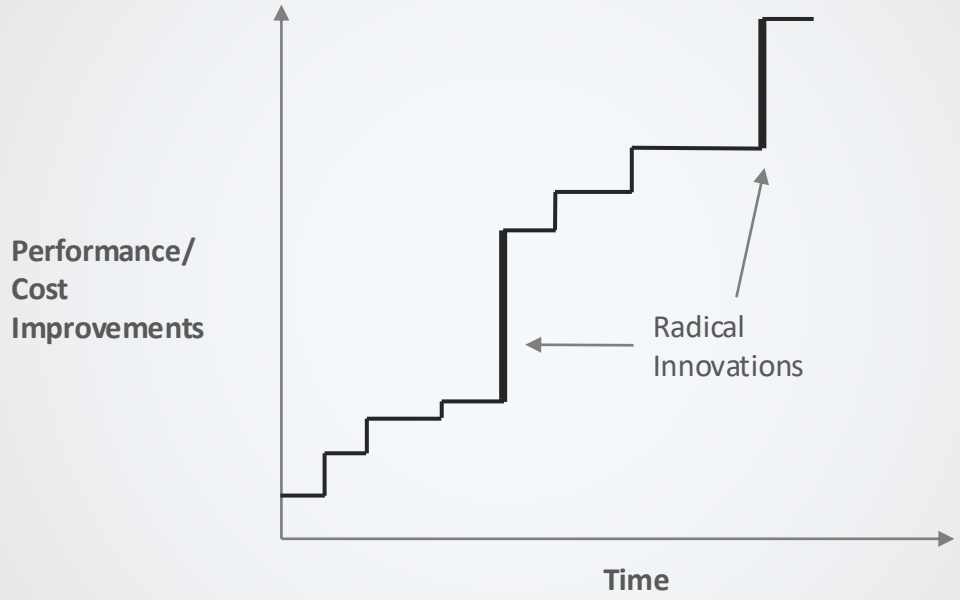
An Industry Timeline of Radical and Incremental Improvement

Figure 1-1



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Why incremental often dominates

Radical projects = risky, pricey, decade-long bets; incremental is faster, cheaper, easier to fund.

Beware "bells-and-whistles" creep—bloated software suites show how feature overload alienates users.

Don't only play it safe; keep options open for the next game-changer.

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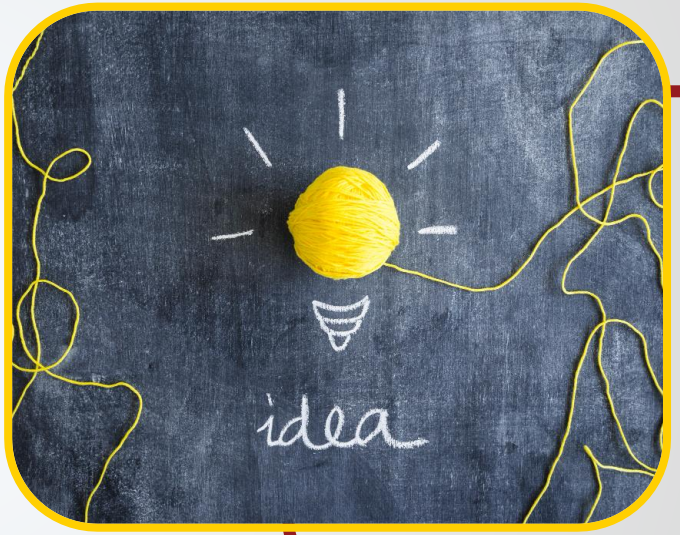
The radical–incremental rhythm

- Industries cycle through periods of technological ferment (VHS vs Betamax; Mac OS vs DOS/Windows) before standards settle.
- After each leap, incremental tuning resumes—visualize the stair-step timeline in Fig 1-1.



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Process innovation matters, too

- Nucor’s thin-slab “mini-mill” cut steel costs > 20 % and rewrote industry economics.
- Pilkington’s float glass folded five labor-intensive steps into one continuous line—an integration masterclass.

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Product ↔ process link

- Breakthrough products often wait for a viable process:
- P&G's disposable diaper only took off after engineers cracked low-cost, high-quality manufacturing.

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Service innovation: business-model alchemy

- Dell—direct-to-customer PCs + lean supply chain.
- Southwest Airlines—low fare + high-frequency + fun.
- Zipcar—urban car-sharing on demand.
- Cautionary tales: Streamline & Webvan show that a brilliant idea fails if the delivery process bleeds cash.

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Chapter 1 take-aways

Curate a portfolio—steady incremental streams and a few long-horizon moonshots.

Scan for hidden value in processes and services, not just shiny products.

Success = product idea plus a scalable, cost-winning process; ignore either at your peril.

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Chapter 3 – Idea Generation

Key topics:

- New knowledge as a source of innovation
- Tapping the ideas of customers
- Learning from lead users
- Empathetic design
- Generating ideas through invention factories and skunkworks
- Open market innovation
- The role of mental preparation
- How management can encourage idea generation

Six primary wells of inspiration

1. New knowledge
2. Customers
3. Lead users
4. Empathetic design
5. Invention factories & skunkworks
6. Open-market innovation.

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New knowledge → radical leaps

- Breakthroughs in binary math, silicon-germanium alloys, fiber optics and more show how lab insights eventually remake markets—though pay-offs may take decades.

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Listening to customers (and their pain points)

- Users reveal product weaknesses (“great device, but too big for my briefcase”) or unmet needs (pizza chains lacking lunch traffic). Turning complaints into concepts is low-hanging fruit.

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Learning from lead users

- People whose needs run years ahead of the mainstream—e.g., racing teams or radiologists—prototype solutions first.
- Firms can mine them via a four-phase process:
  - Lay the foundation
  - Spot trends
  - Co-create
  - Workshop breakthroughs.

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Empathetic design (observe, don’t just ask)

- Field observations—Harley engineers at HOG rallies.
- P&G researchers in homes—surface latent problems customers can’t articulate.
- A 5-step loop moves from:

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Invention factories & skunkworks

- Corporate R&D tackles long-horizon bets; focused skunkworks (e.g., Johnson Controls' 30-engineer off-site that birthed CorteX car-interior material) shield teams from bureaucracy and speed trials.

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Open-market innovation

- Importing ideas multiplies building blocks; exporting raises cash and stress-tests value—four advantages that keep knowledge flowing across firm boundaries.

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Prepare minds & clear creative blockers

Chance favors the prepared mind: immerse in literature, play with the problem, ignore "accepted wisdom."

Watch for mental traps—rule worship, fear of failure, resource myopia—and flip them into building blocks like playfulness and intelligent risk-taking.

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Mental Blocks to Creativity

Stumbling Blocks to Creativity		Building Blocks to Creativity	
• Resource myopia (nearsightedness) • Following the rules… too closely, too often • Seeing play as only frivolous • Focusing on just the right answer • Being judgmental, critical • Fear of failure • Discomfort with taking risks	• Difficulty hearing another perspective or opinion • Lack of openness to ideas • Political problems and turf battles • Avoiding ambiguity • Intolerance • Lack of Flexibility • Giving up too soon • Worrying too much about what people will think • Thinking you're not creative	• Resourcefulness • Ability to think outside the rules • Playfulness • Focus on exploring possibilities • Being accepting • Ability to accept failure and learn from it • Intelligent risk taking • Active listening, acceptance of differences	• Receptivity to ideas • Collaboration, focus on mutual gain • Tolerance for ambiguity • Tolerance • Flexibility • Persistence • Having an inner focus • Recognizing creative potential in self

Source: HMM Managing for Creativity and Innovation.

Table 3-1

Harvard Business Review. (2003). Managing Creativity and Innovation. Harvard Business Review Press.

Managerial levers to spark ideas

- Rewards beyond pay (time, travel, resources).
- Build a climate of innovation: discomfort with current success, outward scanning, meritocracy.
- Hire broad-minded problem-solvers; rotate talent to cross-pollinate; act as idea patrons.

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Two idea-generating techniques

- **Brainstorming** – five rules: focus, suspend judgment, ensure psychological safety, one conversation at a time, build on others' ideas.
- **Catchball** – "toss" an idea around the team, each pass refining it and deepening shared ownership.

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Catchball Figure

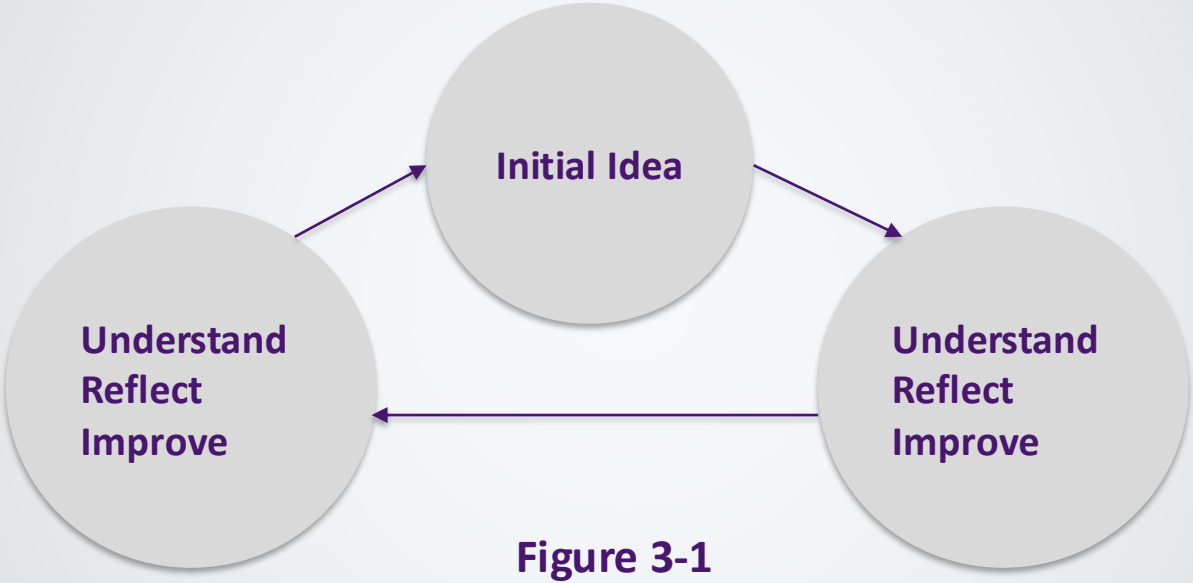

Figure 3-1

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Chapter 3 take-aways

Diversify your idea portfolio across the six sources.

Pair rigorous preparation with cultures that prize curiosity and calculated risk.

Use structured tools (brainstorming, catchball) and unstructured spaces (skunkworks) to keep the pipeline full.

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