Technology and Strategy

Polaroid
Michael A M Davies
Even when incumbents anticipate disruption and respond, cognitive limitations may doom them

- Polaroid was the leader in instant photography
  - 23% pa sales, 17% profit growth late ‘40s to late ’70s
- A technology-driven company
  - belief that long-term, large-scale research enables great products, great products create their own market
  - endogeneous demand, little need for or value in conventional market research
- Believed in consumables
  - “What’s the business model? It’s the razor/blade ... so we make money with the film”
  - “… in the photographic business, all the money is in the software [film], none of it is in the hardware...”

SX-70: eight and half years, $500 million

• Launched in 1972
• First instant SLR (Single Lens Reflex) camera
• new integral print film
• Later models had sonar autofocus, the first autofocus SLRs available to consumers

• (Film discontinued in early ‘06)
• (Austrian firm now makes film)
Strong intellectual property position protected value capture

- Monopoly until ‘76
- Kodak enters
- Polaroid forces Kodak out by ‘85
- Kodak pays $925 million in damages in ‘91
Polaroid is initially successful at developing technologies, but fails at **product development**

- ’81 digital imaging group
- ’86 microelectronics lab
- “..orientation was ‘technical challenge’ – we can do it.”
- By 1989 >40% of R&D spend on digital imaging
- Major technological breakthroughs
- By ’96, 66% of R&D
- ‘93 sells microelectronics lab to MIT
- BUT few successful new products
  - Helios
  - Printer in the Field
  - PDC-2000 not ‘til ’96
- As of 1997, >90% of revenue from established products
- Digital imaging has lost $120-130 million

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PDC-2000

- Price ~$3,000 to $5,000
- “...a new breed of digital camera that combines professional quality and affordability. ... If you've been waiting for digital cameras to mature, the PDC-2000 marks a clear jump from infancy to adolescence...”

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The latest installment in the story…

• "Polaroid wants to conjure up its golden analog days of vast sales and instant gratification — this time with images captured by digital cameras and camera phones. This fall, the company expects to market a hand-size printer that produces color snapshots in about 30 seconds.

• Inside, a new kind of paper embedded with microscopic layers of dye crystals, the creation of former Polaroid employees …spun off as a separate company, Zink Imaging in 2005"
…but success depends not just on the technology, but the system and the ecosystem
Response to transition – whether your survive or thrive – ultimately depends on four key factors

**Demand opportunity** - who your customers are and what they want

**Business model and business ecosystem** - your chosen niche and target customers, its business model and hence how you make money

**Technological infrastructure and innovation** – explicit and tacit component and architectural knowledge

Your **mental models** - beliefs about the future, about how to make money, reflected in your communication channels, information filters and search and problem-solving strategies

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