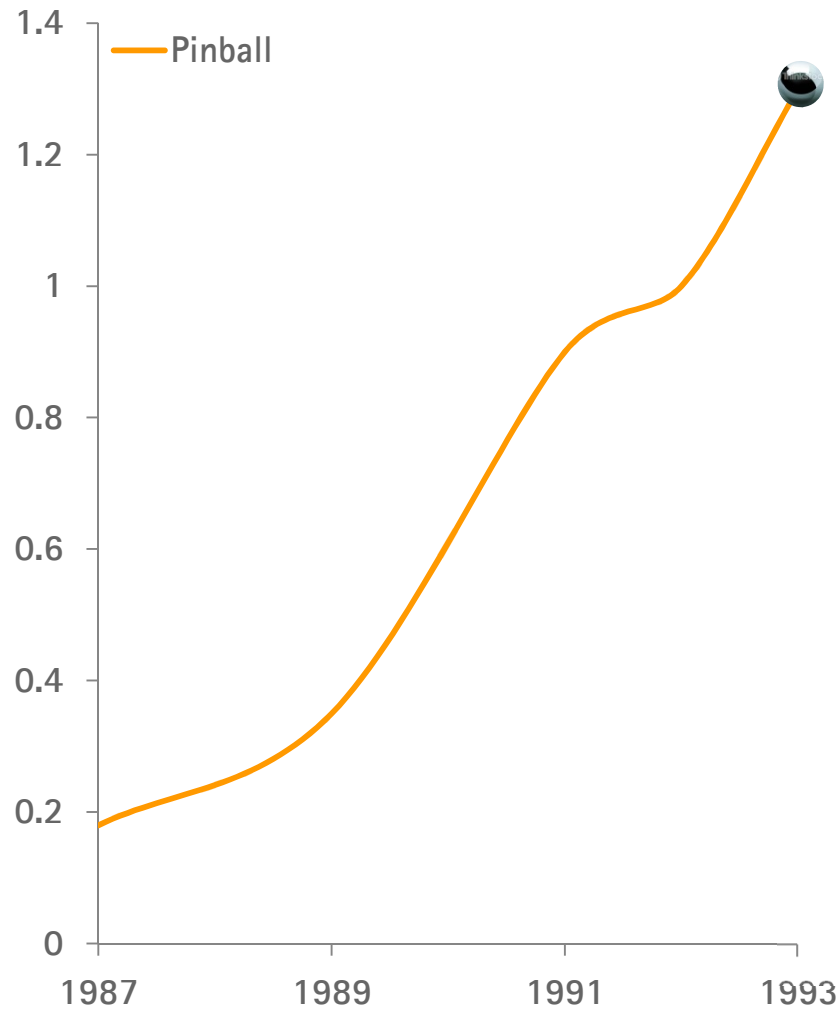


# Big Bang Disruption



# Pinball Thrived in the Early Days of Video Games

Units, hundred-thousands



## Full-Tilt Comeback

"...I've played video games, but I like pinball more... Sooner or later, you grow out of video games. You never grow out of pinball."

April 28, 1995, Tampa Tribune

## New Wizards Flipping Out Over Pinball

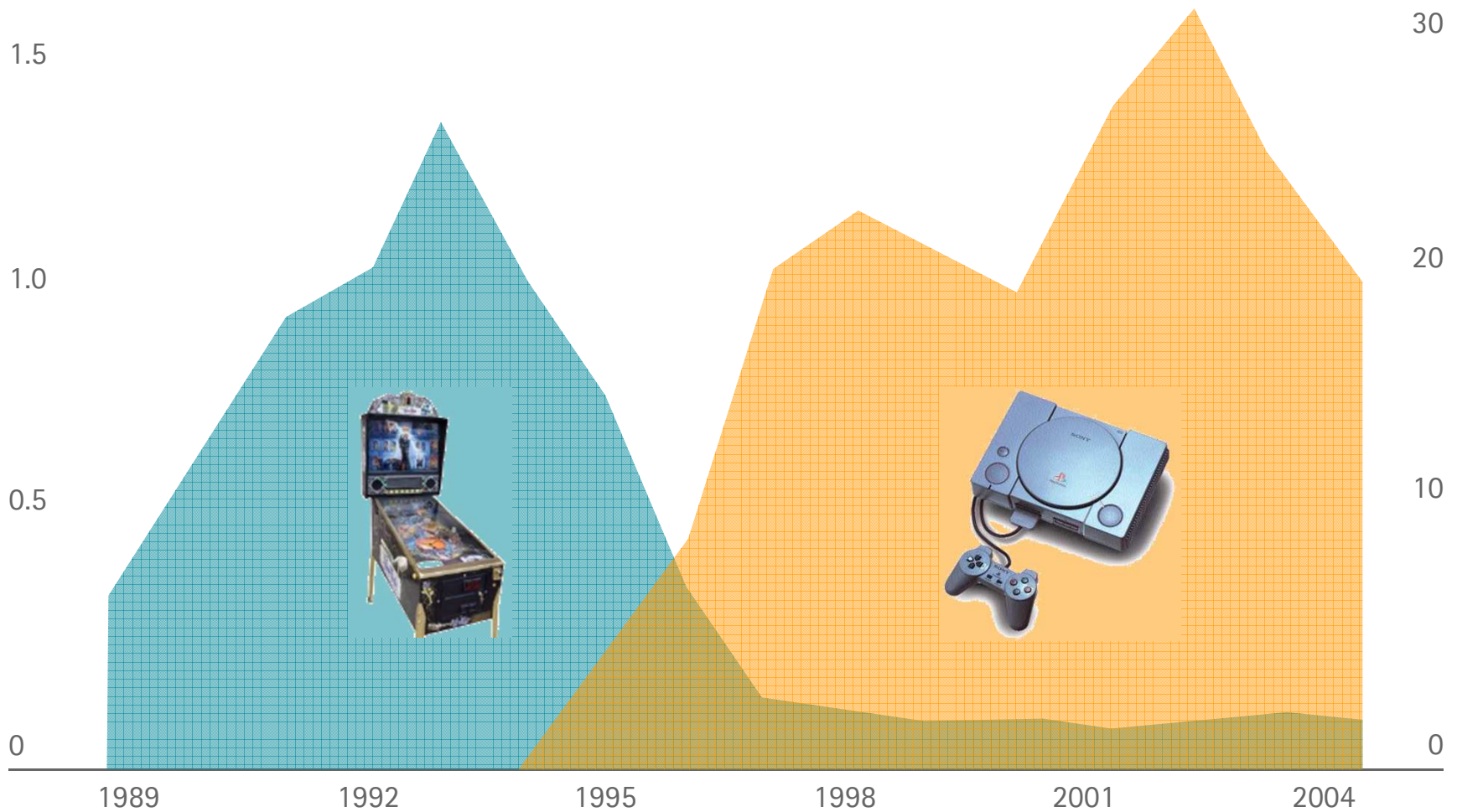
Pinball is back, after nearly dying in the mid-'80s as video games took over. In 1983, pinball accounted for only 5 percent of the amusement industry market. But by 1990, the number had jumped to 30 percent.

March 10, 1994, San Francisco Chronicle

# Until the Big Bang Disruptor Showed Up

## Pinball Units Sold

(Hundreds of Thousands Per Year)



# Big Bang Disruptions Upend Conventional Wisdom

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## Conventional Wisdom

Focus on only one strategic "discipline" or "generic strategy" – low cost, product innovation, or customer intimacy.

First target a small group of early adopters and later enter the mainstream market.

Seek innovation in lower-cost, feature-poor technologies that meet the needs of underserved customer segments.

Strategic Discipline

New-Product Marketing

Innovation Method

## Big-Bang Wisdom

Compete on all three disciplines at once.

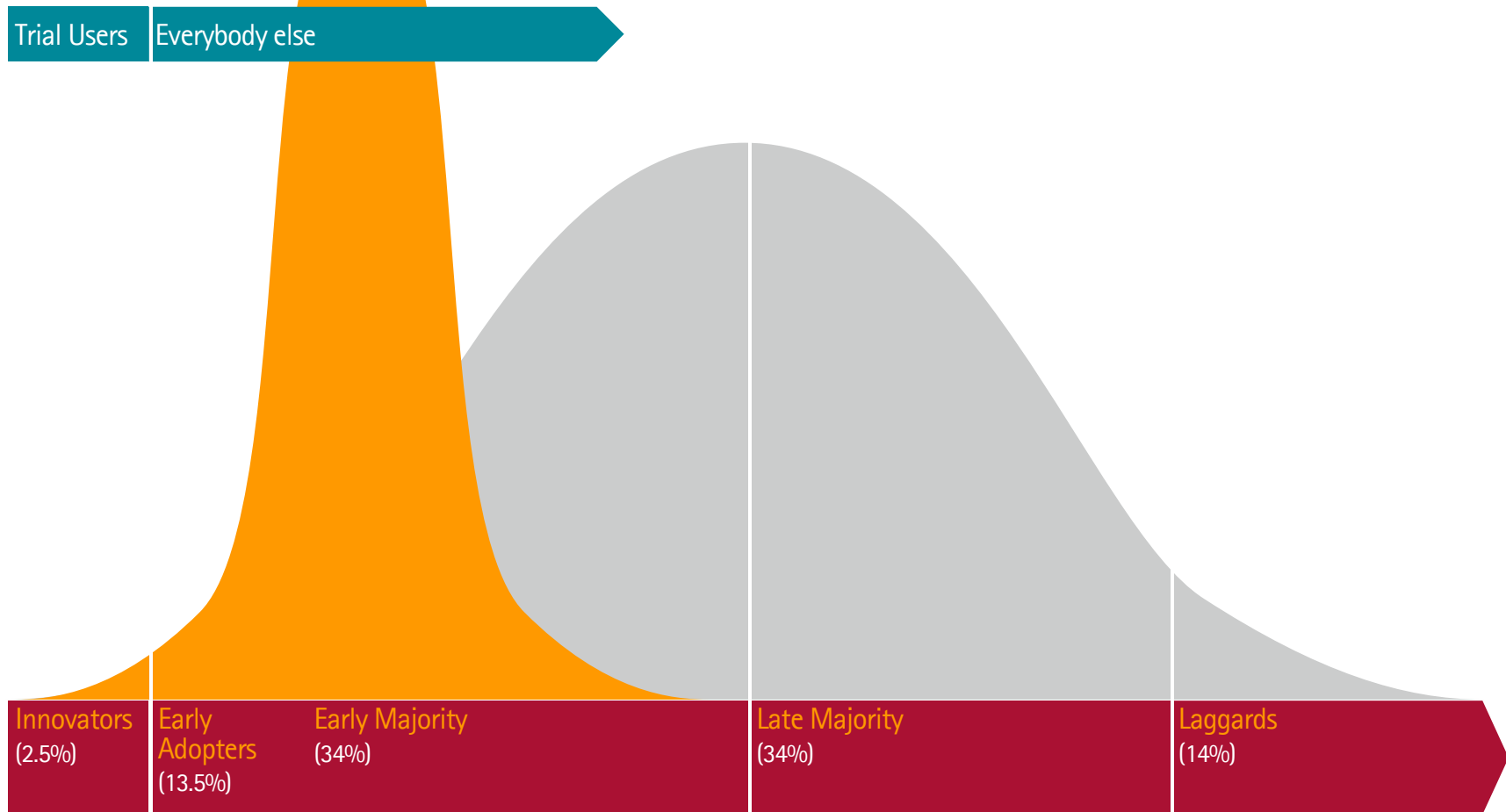
Market to all segments of users immediately. Be ready to scale up – and exit – swiftly.

Seek innovation through rapid-fire, low-cost experimentation on popular platforms.

# Adoption, Saturation, Abandonment in Record Time

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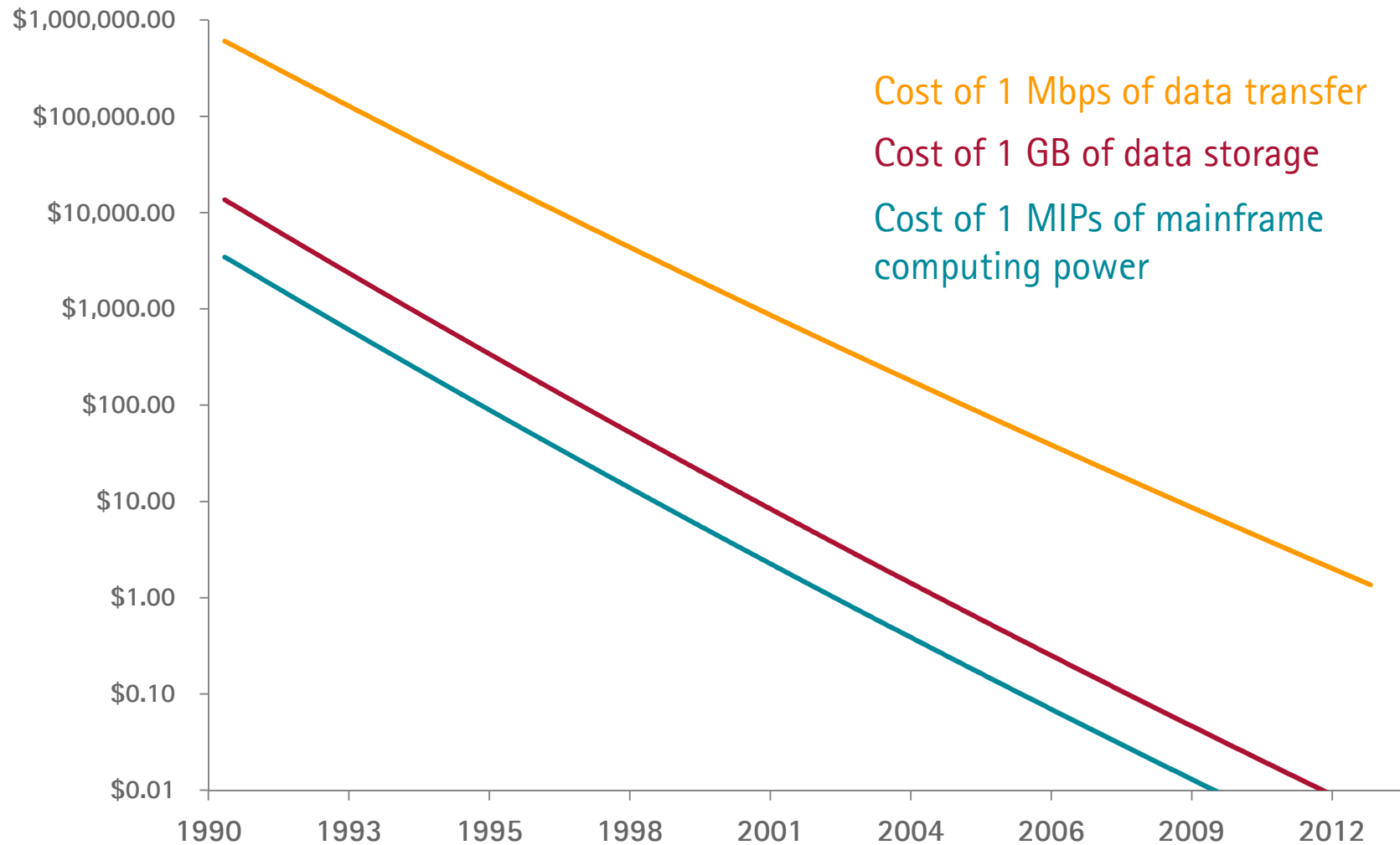
## Big-Bang Market Segments



# Deflation in Technology is Driving a New Economy

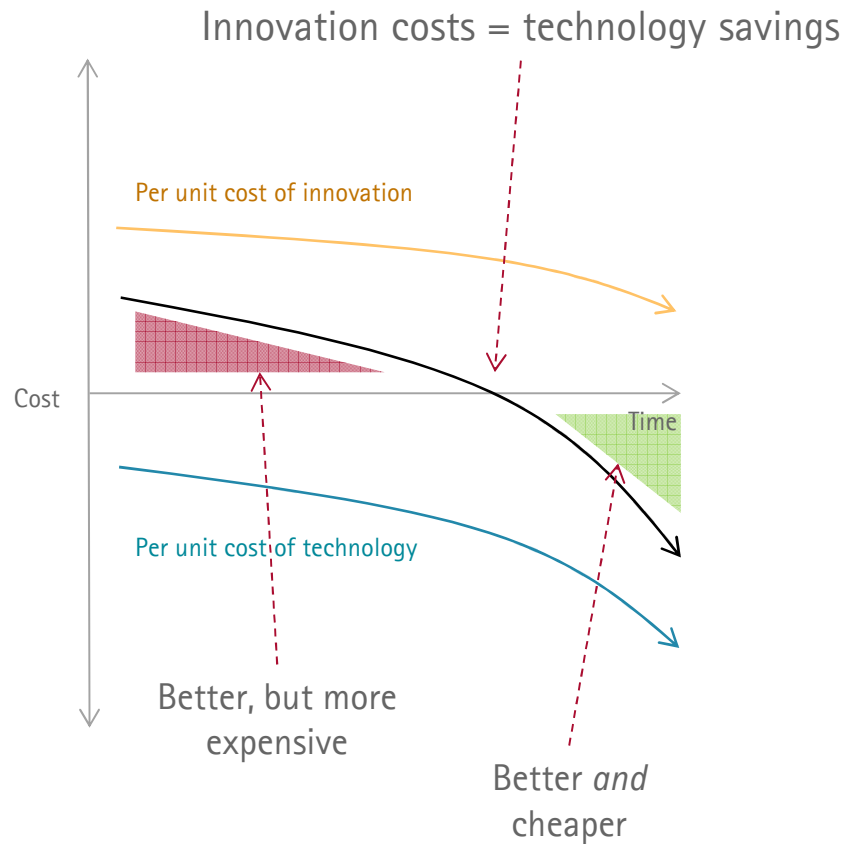
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## It's not just Moore's Law



# How Can New Products be Better and Cheaper...Consistently?

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Deflationary pressures on innovation:

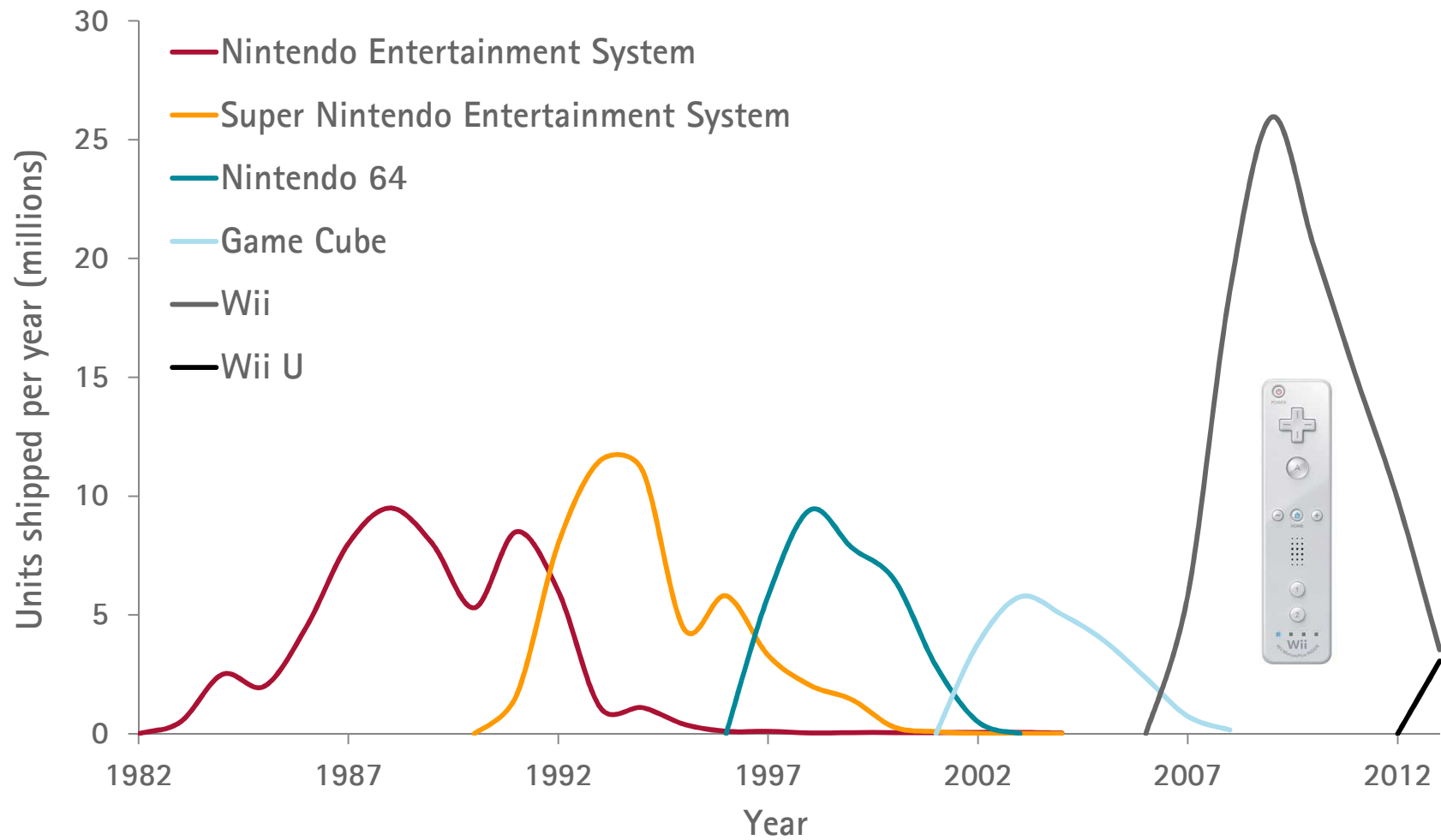
- Crowdsourcing
- Open source communities
- Open innovation
- Open markets
- Nonstop seamless channels
- Crowdfunding

Deflationary pressures on costs:

- Moore's Law effects on
  - Core technologies
  - Sourcing
  - Manufacturing
  - Distribution
  - Selling
  - Servicing (!)
  - Other costs

# Innovators Increasingly Compete Against Themselves...and the Market

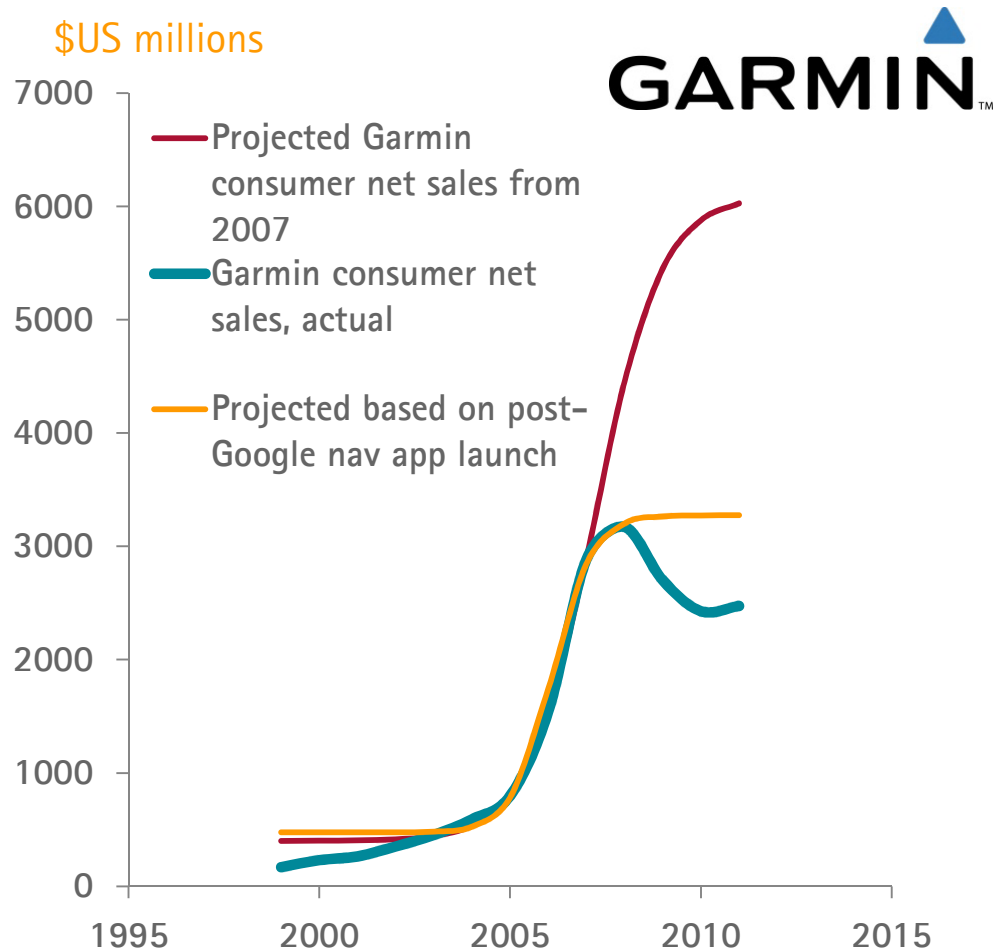
## Nintendo Console Sales: Accelerating Sales, Accelerating Declines





# Meanwhile, Incumbents are Left for Dead

They disrupt without even trying



"There's been no market impact on the demand for standalone GPS devices"

-TomTom SVP regarding the smartphone market, in 2010

From 2010 to 2011, TomTom's:

- sales declined by 29%
- stock lost 60% of its value
- market cap fell from \$2.3 billion to \$1.3 billion.

# Two General Forms of Response Have Emerged

## Moving Beyond Traditional Boundaries to Capture Growth



Becoming the gatekeeper for content - disrupting the publishing industry as iTunes did with the music industry

- Wall Street Journal

Walgreens eyes further push into healthcare with new educational program for patients with chronic diseases and role in the emerging accountable care organizations

- BNET



AT&T, T-Mobile and Verizon Wireless formed a joint venture chartered with building ISIS, a national mobile commerce network that aims to transform how people shop, pay and save

- Gigaom

Takes on pharmaceutical sector and pioneers new industry between food & pharma

- Financial Times



## Failing to Actively Defend its Position leads to Decline



- Filed for Chapter 11 Bankruptcy in September 2010, closing over 1000 stores

- Failed to react to new business models like Netflix, over-the-top on-demand content, and new competitors like Apple, Hulu

- Market share fell from 39% in 2009 to 33% in 2010 (Top Tech News) with operating profit down 26%



- Hit by Apple's iPhone and Google's Android as well as low-cost handsets by new entrants such as China ZTE



- Filed for Chapter 11 Bankruptcy in February 2011, closing 200 stores

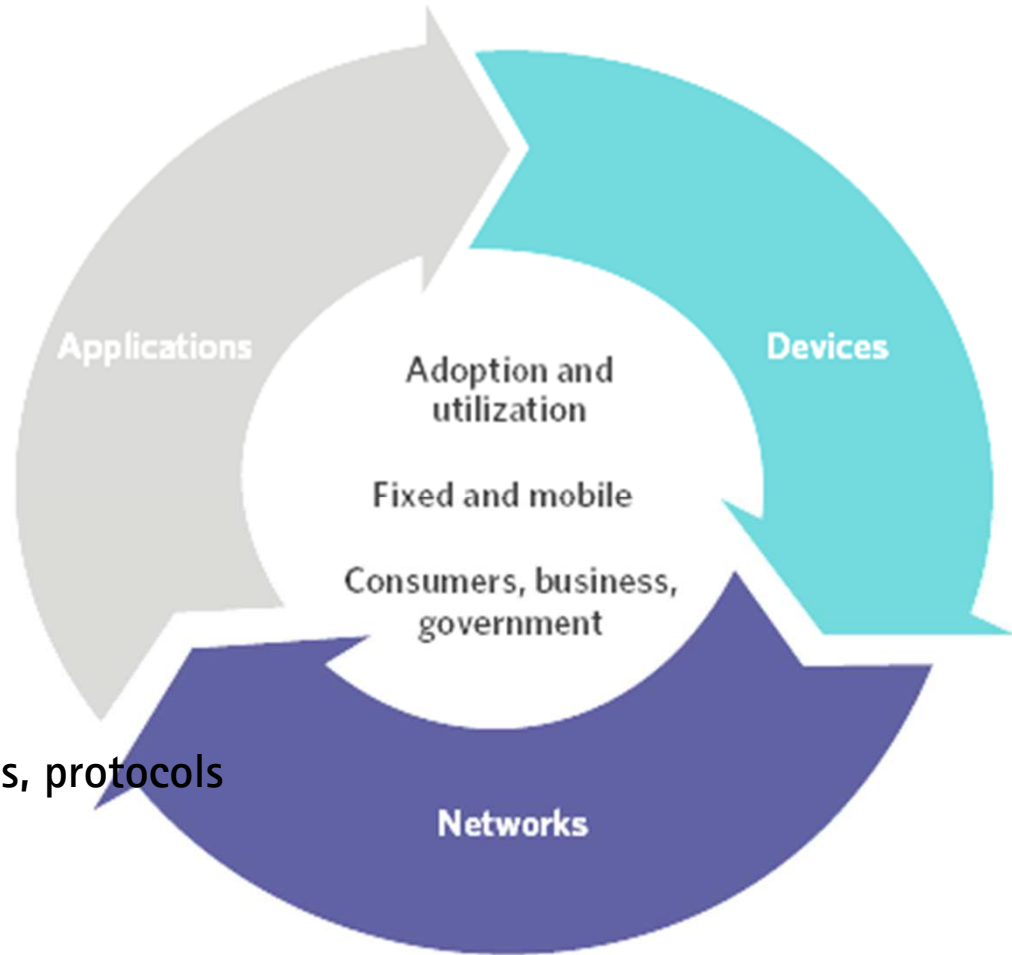
- Stiff competition from Amazon, Apple, and popularity of e-Readers

# Communications is a Leading Arms Merchant for Big Bang Disruption

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## Components of the Broadband Ecosystem

- Fixed high-speed broadband
- Mobile broadband
- Mobile devices
- App stores
- App developers
- IP convergence
- Fiber
- LTE, 5G
- Global Internet
- Audio, video, VoIP standards
- Content distribution platforms, protocols



## Providers are Also Dealing with Disruptions of their Own

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1. Transition to native IP technologies
2. Spectrum crunch

## Implications for Public Policy – in General

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- Market discipline comes increasingly from ecosystem participants (smartphone)
- Near perfect market information gives consumers new leverage (privacy)
- "Information empires," "monopolies" and "duopolies" are rarely what they seem, and don't last long in any case (antitrust)
- Incumbents turn to courts, regulators, and legislators as a last resort (copyright/patent)
- Deregulation can itself be a form of Big Bang Disruption (airlines)

## Broadband Policy Lessons – In Specific

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- Common carriage, public utility model is counter-productive given ecosystem dynamism.
- Retiring the legacy TDM network is essential – industry is not the problem here.
- Unencumbered VIA auctions maximize social welfare with minimal risk to "competition." Conditions, caps, screens are all vestiges of a by-gone era of slower change, if that.
- "Prophylactic" rules are counter-productive.

# Rules of Engagement

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- When in doubt, leave it out
- Create broad spaces for innovation and experimentation rather than micromanaging the crisis-du-jour
- Avoid technology-specific solutions when technology is changing rapidly and consumers are still defining their interests
- If you can't define the problem, the chances of unintended consequences are highest
- Resist reasoning from "the ox to the electric battery" – disruptive innovations are not analogous to anything
- Give the technology and its ecosystem the benefit of the doubt (repeat).

# Resources

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## Upcoming Webinar (3/27)

[http://online.krm.com/iebms/reg/reg\\_p1\\_form.aspx?ct=0011408&eventid=20140&oc=10&m=SP2](http://online.krm.com/iebms/reg/reg_p1_form.aspx?ct=0011408&eventid=20140&oc=10&m=SP2)

## Article PDF

<http://www.accenture.com/us-en/Pages/insight-surviving-big-bang-disruption.aspx>





# Upcoming Big Bangs

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## Some examples by industry

- **Manufacturing** – The "Internet of Things" drives the supply chain from the bottom
- **Health care** – Biometric sensors demystify the shamanistic myth of medicine
- **Finance** – Money becomes just another form of information
- **Government** – Market pricing for public services
- **Consumer Products** – Market-led marketing takes over
- **Energy** – Practical fuel cells...launched on Kickstarter
- **Education** – The virtual ivory tower revolutionizes learning
- **Utilities** – Portable electricity networks mirror wireless communications
- **Pharmaceuticals** – Bespoke drugs based on your DNA
- **Retail banking** – The end of cash
- **Retail** – The disruptive force of the sharing economy

# Embracing an Innovation Agenda

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- **Privacy**– Consumers adapt quickly to “creepy” new features, and will do a much better job policing them without unintended consequences
- **Antitrust** – Information empires don’t exert the kind of economic leverage that justifies intervention, and don’t last long in any case
- **Copyright** – Tread carefully. Look for opportunities to reform excess incumbent protections.
- **Patent** – Twenty-year protection for innovations with a lifespan of less than ten is skewing the trajectory of emerging markets. End software, business method patents.
- **Securities** – Reduce friction for crowdfunding experiments
- **Federalism** – Local regulators much more likely to be captured by incumbent industries (Uber, e.g.). Lean toward preemption for innovation law
- **Immigration** – The more open, the more innovation
- **Governance** – Think multistakeholder, not ITU