Staying Power
Six Enduring Principles for Managing Strategy & Innovation in an Uncertain World
(Lessons from Microsoft, Intel, Apple, Google, Toyota & More)

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The Big Picture

• Now in an age of *innovation & commoditization* in high-tech businesses, both products & services

• Long history, recently accelerated
  – **Hardware Products**: Mainframes to minicomputers to PCs, cell phones and other devices
  – **Software Products**: Prices dropped for PC software products, but not for enterprises (products or services), until recently
  – **Manufacturing**: China’s prices becoming the world’s prices
  – **Services**: India’s prices becoming the world’s prices

• No room for error in strategy or operations!

• Hard to separate “fads” from best practices!
Assumptions

• No competitive advantage or set of distinctive capabilities are “permanent”
• All “best practices” must be understood in context and need to be dynamic (constantly evolving)
• All firms (& industries & nations) experience ups & downs due to improved competition, decline in attention, bad luck, mistakes in judgment
• All practices & performance must be evaluated RELATIVE to the competition
My Six “Enduring” Principles
Not original to me, but underlie my work & with students and colleagues, as well as others’, with some 30 years of empirical & theoretical research behind them

1. Platforms, Not Just Products
2. Services, Not Just Products (or Platforms)
3. Capabilities, Not Just Strategy
4. Pull, Don’t Just Push
5. Scope, Not Just Scale
6. Flexibility, Not Just Efficiency
Narrow Way of Thinking About Focus and Competitive Advantage at the Product Level

- Push
- Scale
- Efficiency

Examples:
- Toyota
- Microsoft
- Intel
- Sony in Betamax era
- GM in the 1920s
- Apple before mid-2000s

Broader Way of Thinking About Agility and Competitive Advantage at the Ecosystem Level

- Pull, Don’t Just Push
- Scope, Not Just Scale
- Flexibility, Not Just Efficiency

Examples:
- JVC in VHS Era
- Apple after mid-2000s
- Google, Adobe
- Cisco, Qualcomm, et al.
- Ford in Model T Era
- GM in the 1920s
- Sony in Betamax era
- Apple before mid-2000s

- Strategy
- Products

- Capabilities, Not Just Strategy
- Platforms & Services, Not Just Products
Implications for Managers?

- **Platforms** = more control over future technology trends, value chains, global innovation ecosystems, (e.g., Intel chips, Microsoft Windows, Google browser/portal, Apple iPhone, Facebook... Wal-Mart.... human genome database)

- **Services** = movement beyond commodity manufacturing to efficient hybrids (e.g. IBM, Oracle, SAP), or automated platforms + services (e.g. iTunes, Google, Facebook)

- **Capabilities, Pull, Scope, Flexibility** = ability to deliver differentiation, adjust quickly to changes in markets, technologies, and customer needs (the firms who can reinvent themselves as needed!)
Key Questions Re Platforms

• Possible for firms to think “platform first” and still develop “great” products?
  – Sony and Apple – traditionally have thought “product first”
  – JVC, Microsoft, Intel – generally have thought “platform first”
  – Google, Qualcomm, EMC, Cisco, Facebook, et al.?

• When does a “product” or product platform have “industry platform” potential?

• How best use the different levers and concepts in the emerging “platform strategy toolkit” to:
  – Formulate and maintain a platform leadership position,
  – overtake an existing leader, or
  – create a platform where one has not existed before?
Industry Platform Definition

• A foundation technology (or service) used beyond a single firm, whose value increases geometrically with (a) complementary products & services, and (b) more & more users
  – A phenomenon known by various names: positive feedback, bandwagon effect, network externality or network effect

• Historical Examples: Railroad Network, Telegraph, Electric Power System, Radio, TV, Mainframe Computers, VCRs, PC OS, CD/DVD, Browsers, etc.
**Platform Ecosystem:** Platform + Complements + Network Effects

Platform (E.g., VHS player, Windows-Intel PC, Apple iPhone, Barbie doll) complementary product complementary service

Direct network effect

Indirect network effect

number of users

Positive feedback loop

number of advertisers, content providers, channel partners, etc.

Ongoing Platform Battlegrounds

- **Web Search**  Google vs. Bing/Yahoo, foreign engines
- **Smart PhoneOS**  Apple vs. RIM, Nokia/Symbian, Android, Microsoft, Palm, Linux, ARM, Intel Atom
- **Digital Media**  Apple (iPod, iPad & iTunes) vs. Microsoft (Media Player, Zune) vs. Real?
- **Social Network’g**  Facebook, Twitter, LinkedIn, etc.
- **Video Games**  Sony, Nintendo, Microsoft
- **Enterprise s/w**  SAP vs. Oracle/Sun, Microsoft, IBM
- **Micropayments**  Sony Felica vs. PayPal, credit cards
- **Displays**  E-Ink vs. LCD (Sharp, Sony, Samsung, others)
- **Batteries**  Sony vs. Panasonic, Sanyo, A123, others
- **Power systems**  Toyota hybrid vs. traditional gas vs. hydrogen

And many more platforms, or platforms within platforms, in smaller or emerging markets
A Platform Strategy Toolkit

• **Product or Platform, or Complementor?**  – The key decisions, and how to make them?

• **4 Levers** (Firm Scope, Platform Technology, External Relations, Internal Organization) – broad categories for implementing platform leadership

• **Coring & Tipping**  – How create a platform market where one does not yet exist or encourage an existing market to adopt your platform when multiple compete

• **WTAoM**  – Framework to analyze the dynamics of platform markets & complements, potential for how much share is possible, ways to influence outcomes
Product vs. Platform Strategy?

**Lever 1: Source of Key Complements**

- **Mainly In-house**
  - Mainly Closed
    - Betamax, Macintosh
  - Mainly Open
    - First iPod & iPhone??
- **Mainly Outside**
  - Product-mainly strategy
  - Cisco router + IOS?
  - Microsoft Windows?
  - Red Hat (Linux)?
  - Current iPhone, iPad?
  - Intel microprocessor?
  - iMode?
  - iTunes, AppStore?

**Lever 2: Platform/Interface Technology**

- Mainly Open
  - Product-mainly strategy
Apple:
Before 2003 = Product Over Platform
Now = Product + Platform + Services!

• Apple through 2009 still ½ the sales and ¼ the profits of Microsoft, but catching up fast.
  – *Surpassed Microsoft in market value on May 27, 2010*
  – *PC sales FLAT*

• What Apple did: Moved beyond PC to link PCs to consumer electronics and smart phones, with digital services and content. Common iPod, iPhone, iPad and iMac platform for iTunes and App Store!
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<th></th>
<th><strong>Microsoft</strong></th>
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<td><strong>Operating Profits (%)</strong></td>
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“Winner Take All” (or Most) if...

1) Very strong direct or indirect network effects

2) Little room to distinguish among different platforms (few niches or differentiation opportunities for your competitors!)

3) Difficult or costly to use more than one platform (“multi-homing” rare for users & app developers or advertisers)

Why Did Windows Win 95% of Desktop OS Market?

1. **Strong network effects?** – Yes. Many more apps for Windows; incompatibility of the Mac (modified recently with the switch to Intel chips & virtual s/w)

2. **Little differentiation?** – Yes, eventually. Growing similarity with the Mac; rivalry among PC manufacturers & low entry barriers brought PC prices down. *Mac survived in a niche – desktop publishing & extreme ease of use, e.g. for schools*

3. **High cost of multihoming?** – Yes. The Mac usually cost 2x a WinTel PC. Both are costly so users choose one.
Why No Permanent Winner in Video Game Console Market?

1. **Strong network effects?** – Yes. Strong direct network effects tying specific games to each platform (Sony PlayStation, Nintendo Wii, Microsoft Xbox). Some network effects tying game developers but often do multiple platforms.

2. **Little differentiation?** – No. Each vendor different – Sony -- high-end, Nintendo -- non-traditional and h/w innovations, Microsoft -- like PC/internet platforms. Also “hit” games or features vary by generation and vendor.

3. **High cost of multihoming?** – No. Consoles relatively cheap. Often subsidized by makers. Serious game users buy more than one platform. Some games on multiple consoles.
Why Has Google Most (65%) But Not All the Search Market?

1. **Strong network effects?** – Yes, for search algorithm, and indirect for advertisers & app developers tied to Google search. Google portal (email, etc.) “stickier.” **No, for users – no direct network effects tying users to search engine.**

2. **Little differentiation?** – Yes, and **no**. Search engines similar. **But some specialties or niches by geography and language (e.g. China, Brazil), and technology (e.g. video)**

3. **High cost of multihoming?** – **No. Users can easily use several search engines.** Some multi-homing costs for advertisers, but not much. More for app developers.
Will There Be One Winner in the Global Smart-Phone Market?

1. **Strong network effects?** – Yes. Direct network effects tying specific applications and some services to each platform (Nokia/Symbian, RIM/Blackberry, Apple iPhone, Google Android, NTT Docomo, Microsoft Windows CE)

2. **Little differentiation?** – No. Different vendor strengths (e.g. business/email vs. consumer functions, computer-like, social networking, etc). Different operator strengths, politics, and bundles in different regions.

3. **High cost of multihoming?** – Yes. Phones often subsidized, but service contracts expensive. Most users chose one vendor. *But users can and do switch over time.*
Lessons for Managers

- Huge potential differences in **strategy & implementation** for a platform vs. product strategy or for a complementor
- Huge potential differences in **economic value creation**
- **Staying Power** for platform leaders and wannabes requires understanding:

1. **Interrelationships:** Between *product & platform* strategy

2. **How to win platform battles:** The “best platform” should win: open interfaces & modular architectures easy to build on and extend, with the most compelling complements, generally the result of the most vibrant ecosystem)

   - **Starting with a very good product** helps a lot, though the platform winner does not have to be the “best product”!
Key Questions Re Services

• **When** should product firms treat services as essential to their *business models* (ways of making money, or smoothing out revenues & profits) and *competitive strategies* (ways of competing more effectively)?

• **How** does managing the services side of the business differ from the product business? Or complement it?

• **Why** have we seen the rise of services (professional and automated) so prominently in computing & information technology?
  – Simultaneous trend of “innovation & commoditization”?
Service Revenue %, Select Hardware Firms

Calendar Year

% Sales

IBM
HP
Sun Microsystems
EMC
Cisco
Dell
Typical View of Services in Product Companies?

“Services will be the graveyard for old tech companies that can't compete.”

Scott McNealy
Chairman (then CEO), Sun Microsystems

Referenced in N.Y. Times, Sept. 16, 2004
Service vs Product as % Sales - Average All Sample

Excludes video games
SaaS counted as product revenue
Services include professional + maintenance

Note: Maintenance about 55% of services revenues for firms breaking this out
Different Evolution Curve – Product, Process, and then Services?

Source: Adapted from Utterback and Abernathy
Different S-Curve Dynamics – Product Platform Disruptions Generate New Services & New Business Models?

Source: Adapted from Foster, Christensen, Utterback
Product = Platform for Selling Services
(Like a smartphone, e-book, iPad, others?)

Example: “Servitizing” the Automobile

- Financing (loans, leasing; insurance)
- Lifecycle (warrantee, maintenance)
- Repair (remote diagnostics)
- Semi-Customization (configured features)
- Telematics Services/Content Intermediary
  - Internet access
  - Practical Content (navigation, satellite radio)
  - Entertainment Content (music, games, movies, etc.)
Lessons for Managers

• Many companies today are **hybrids** – products + services

• **Staying Power** requires understanding how to create **synergies** across both:

  1. **Need to manage the crisscross** (balance of products, maintenance, and professional services -- consulting, integration, customization, training, etc.);

  2. **How “servitize” products** (innovate around the product to generates value-added customization, support, training, consulting, new pricing/delivery models); and

  3. **How “productize” services** (software factory-like customization or automated service delivery (SaaS/Cloud or iTunes-type digital service = new type of software product)