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Strategic Management of Platforms and Ecosystems

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What is a Platform? What is Modularity?

- Product is a Platform if:
 - It is functionally interdependent with most of the other parts of a technological system
 - When end-user demand is for the overall system
- Some product platforms possess Modularity:
 - Parts of the system can evolve without changing the core platform and visa versa
- Advantages of (Modular) Platforms:
 - Efficiency introduce new product versions
 - Others can help you create value!

Platforms Involve Ecosystems of Complementors

- Ecosystem of Complementors:
 - Firms who produce other products that use the platform
- Managing the ecosystem is critical because these complementors create products that sell more platforms!
 - E.g., Ecosystem of Software Applications increases value of OS and Microprocessors

Managing Platforms Involves Industrial and Technological Leadership in Four Areas

- Four Levers of Platform Leadership:
 - Scope of activities: in-house vs. ecosystem activities
 - Technology design and IP: features/functions in platform
 - Encouraging relationships with complementors
 - Internal organization that facilitates platform changes

How to build a platform? Coring and Tipping

- **Coring** (creating a new platform): identify a part of the system that all (most) of the others depend on
 - Technological:
 - Solve an essential system problem
 - Facilitate “add-ons” by others
 - Industrial:
 - Create high switching costs from your platform
- **Tipping** (win platform wars against other platforms): build market momentum
 - Technological:
 - Develop unique features that are hard to imitate and attract users
 - Absorb and bundle features from adjacent markets
 - Industrial:
 - Provide more incentives for your complementors than competitor product

How to manage a platform

- Create Value:
 - Improve your platform!
 - Encourage complements
- Capture Value:
 - Grow the platform to include critical technologies/features
 - Squeeze value from the complementors
- So, is capturing value mostly about dominating the ecosystem?

Ecosystem dilemmas of Platform Leaders

- On the one hand, platforms create enormous incentives to “squeeze” your ecosystem:
 - Extending the platform into their space – e.g., envelopment
 - e.g. Microsoft: Windows platform now includes important middleware not originally part of the platform
 - Releasing your own complementary products in the critical areas (high growth, or strategic control points)
 - e.g., Microsoft: enters key complementor markets that are high growth (Office suite) or offering strategic control points (IE & the browser wars)
- But complementors must have an incentive to innovate...if you squeeze them they’ll exit! They create much (if not most) of the value for the platform!

How to resolve this dilemma? We'll examine Intel's solution, 1990-2004

- Dilemma: Capture value from Microprocessor platform, but don't curtail value Creation by Ecosystem in many complementary markets...
 - E.g., Security, PCI, USB, DVD, Video, Motherboards, Audio, and many others...
- Step 0: Consider entering markets where you have competencies
 - Avoid markets where Intel has no competency, no matter how tempting at the time (e.g., internet software)
 - Hard to resist temptation: 5 failed entries into internet software became quick exits
 - Consider entering some complementor markets...but do so carefully... (the rest of the strategy is about how to do so)

How to enter complementor markets gingerly...

- The Goal: capture value, but convince ecosystem firms they should still create value
 - “make some money but not too much”
 - Credibly claim that Intel won’t “eat their lunch”
- How to credibly claim that Intel won’t eat their lunch and “squeeze them” at a later date?
 - Complementors fear Intel will just “wait and see” which markets are most successful and then enter on their own

Intel creates new BUs with Separate P&Ls to compete with complementors

- Step 1: Create specialized business units with separate Profit and Loss responsibly to convince ecosystem that Intel will compete “fairly” with them
 - Definition of Fair: won’t try to include complementor features/functions inside the Intel Microprocessor
- New BUs signal techs won’t be brought into the core platform
- These BUs will compete head-to-head with complementors, when necessary, though!
- Especially target important complementor markets that Intel fears ecosystem will be slow push
 - e.g. Redesigning the “bus” component that allows new Microprocessor speed to be recognized.

Facilitate Ecosystem Innovation

- Step 2: Give away your IP about platform “connectors” (interfaces) to encourage potential entrants in complementary markets
- Step 3: Subsidize their efforts, but not too much!
 - Loan engineers, make introductions, aid in marketing, release SDKs
 - Insist that complementors always “put some skin in the game”
 - “I will help you mitigate the risk. I’ll pay for half of it. But you pay the other half. I want you to have some skin in it. So you are interested in making it successful.”
 - Help them fight with Intel’s own competing BUs!

Enable competing complementors

- Jim Pappas, director of Platform Initiatives at IAL (Intel Architecture Lab):
 - “We developed the [USB] code and we gave it to our internal chipset business group in Chandler, Arizona, who used it to do their chip. And we also made it available to anybody in the industry. I can guarantee that there were times where the group in Chandler was livid with me for freely distributing this. They have competitors out there who are building products”

Organize for Ecosystem Facilitation

- Step 4: Create a separate group for facilitation...without P&L responsibility
 - “Intel Architecture Lab”
 - Enough power to fight with the Business Units
 - “We had a very clear separation [between BUs and facilitation]. We had a group defining the specification, and we had other groups implementing products. They would take our specification and implement the products, but we kept a sort of wall between the two.”

Credibility with the Ecosystem is key

- “For USB to be successful, it needs to be available to the industry...even though we would develop products, at the same time **we would lose our credibility if** we were saying that this is something we’re only going to do for our internal products and we’re not going to enable any competition here.”
- This strategy makes it hard to “make too much money” and can “make the BUs livid”
- BUT it lets complementors know there will be space for them...they won’t be squeezed
 - Ongoing Value Creation balanced against Value Capture

How will Apple, Google, and Nokia balance Value Creation and Value Capture in their Mobile Platforms?

- What types of complementor markets will each be most likely to enter?
 - How big is the temptation for each firm to enter complementor markets?
- What will they do to convince complementors that they won't squeeze them?

Looking forward

- **Putting IT to rest.**
- **Value Delivery**
 - **Medtronic:**
 - **What were the biggest problems?**
 - **What were the best solutions?**