



# **Product to Platform Transitions: Organizational Identity Implications**

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## Product to Platform Transitions: Implications of Organizational Identity

### ABSTRACT

Organizations are increasingly recognizing that value they once derived from offering standalone products can be significantly enhanced if they transition to platform-based businesses that harness the innovative capabilities of complementors. While the competitive dynamics of platform-based businesses have been studied extensively in the economics and strategy literatures, the organizational implications of shifting from a product to a platform-based business model remain relatively unexplored. We propose that such a shift is not simply an operational change, but may challenge the core of how an organization views itself, calling into question organizational identity. Organizations that have historically defined themselves as creative and innovative may have trouble accepting a platform-based context where outsiders engage in much of the creative activity. Organizational identity can also influence whether and how organizations become platform-based. To succeed, we propose that organizations must question elements of their existing identity and actively modify it to become consistent with their new business approach.

**Keywords:** *Organizational Change, Organizational Identity, Multi-sided Platforms, Ecosystems, Complementors, Managing Innovation*

**INTRODUCTION**

The ability of organizations to innovate and adapt to changes in the external environment is a critical component of competitive success. Historically, scholarship has focused on understanding the challenges of technological innovations that require organizations to master new scientific disciplines and develop new competencies (e.g., Henderson & Clark, 1990; Tushman & Anderson, 1986). However, more recently scholars have started to explore the role of business model innovation (e.g., Casadesus-Masanell & Ricart, 2010; Zott & Amit, 2008). In particular, organizations in many industries have adopted platform-based business models, in which, rather than simply sell a product, organizations manage multi-sided platforms that “get two or more sides on board and enable direct interactions between them” (Hagiu & Wright, 2013). Some platforms, such as mobile phone app stores, connect producers of a complementary product (e.g., developers) with consumers, while others serve as marketplaces that connect buyers and sellers of goods (e.g., eBay) or match users (e.g., dating platforms). While platforms enable direct interactions between both sides, each side also generally has a relationship with the platform provider. These relationships range from less formal interactions, such as single people signing up for an account on a dating site, to formal economic contracts such as application software developers registering with a smartphone manufacturer’s developer website and then selling software via an app store. Figure 1 provides a schematic representation of this type of business.

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Figure 1 about here  
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The traditional yellow pages directory is a classic example of a multi-sided platform-based business where buyers and sellers search for (and then interact with) each other, yet both are also customers of the yellow pages provider (Evans, 2003; Rysman, 2004). eBay is a more modern example of a multi-sided platform-based business where buyers and sellers interact directly with each other (i.e., a seller pays a buyer directly when buying an item), yet the interaction is enabled through eBay. Both sellers and buyers are affiliated with eBay; sellers pay eBay a fee, and buyers have a registered account on the site. The video game industry provides a hardware and software-centric example. Manufacturers sell video game consoles to consumers, and game titles are developed both by console manufacturers and independent producers. Consumers can buy games both from manufacturers and also directly from third party producers through the console manufacturers' websites (e.g., [www.microsoftstore.com/](http://www.microsoftstore.com/)) and other venues. Thus, the video game console manufacturers enable interactions between consumers (one side) and game producers (the other side); the game producers offer a complementary product that enhances the value of the game consoles. Multi-sided platform firms are now primary players in a variety of both online and offline industries that include mobile phones, tablets, personal computers, on-line retailing, credit cards, media, innovation contests, financial services, and shopping malls (Eisenmann, Parker, & Van Alstyne, 2011).

While some of these markets have existed for a long time, current technological advances are making these industries and organizations increasingly relevant (Gawer, 2009). Leveraging the declining costs of information processing, storage, and communication, and the associated increasing penetration of broadband Internet and computing, organizations in many industries are expanding their innovative activities by engaging with external communities, frequently through platform-based business models (Altman, Nagle, & Tushman, 2013). In addition, with the

widespread adoption of technologies such as software operating systems that enable external development of applications and other complementary services, industries that were traditionally comprised of single-sided, product-based businesses now consist of organizations adopting platform-based business models. Even the automotive industry has recently moved in the direction of multi-sided platforms, with firms like General Motors creating new structures such as their developer ecosystem program. This program facilitates interactions between consumers and external software application developers, such as those building apps that enable drivers to communicate with their cars remotely or track mileage for business expenses (Trop, 2013).

As multi-sided platform-based businesses have become ever more relevant in the global economy, researchers have increasingly focused attention on topics related to their growth and management. The competitive and strategic implications of multi-sided platforms have been studied extensively in the economics and strategy literatures, including modeling of pricing, competitive dynamics, and growth strategies (Armstrong, 2006; Rochet & Tirole, 2006). However, the organizational implications of shifting from a product-based to a platform-based business model remain relatively unexplored.<sup>1</sup> In particular, the implications of this transition for organizational identity, and the role of organizational identity in guiding the transition are not well understood. Yet, these transitions can affect the essence of how an organization views itself and operates, so if an organization attempts to make a product to platform transition without taking into account the implications of identity, it may be problematic. If organizational identity does not evolve to accommodate the activities and beliefs that accompany a platform-based

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<sup>1</sup> In this chapter, when we refer to transitions from product to platform-based business models, we also mean those that might be from merchant-based to platform-based models. We see this in the case of Amazon, which shifted from being entirely merchant-based to including platform-based offerings.

business, dissonance may result between those involved in building the platform-based business and those historically involved in the product-based business, inhibiting an organization's ability to successfully transition. At the same time, some aspects of organizational identity may also influence the type of platform-based strategies a firm utilizes. In this chapter, we explore the relationship between movement to a platform-based business model and organizational identity.

### **ORGANIZATIONAL IDENTITY**

We conceptualize organizational identity as a shared understanding on the part of organizational members about “who we are as an organization.” It represents what individuals believe is central to and defining about their organization, often in contrast to other organizations (Albert & Whetten, 1985; Corley, Harquail, Pratt, Glynn, Fiol, & Hatch, 2006). Organizational identity manifests itself in two ways. First, organizational identity can address the question, “How do we define what business are we in?” This aspect of identity is often expressed by claiming membership in a particular product market or industry category (Glynn & Abzug, 2002). For instance, Koch industries was defined as an “oil and gas company” (Barney, 1998), and Linco as a “digital photography company” (Tripsas, 2009). Second, organizational identity can consist of a set of attributes that members collectively believe are core. For instance, in their study of the New York Port Authority, Dutton and Dukerich (1991) listed a set of six attributes that organizational members identified as distinguishing their organization. These included items such as being “a professional organization..., ill-suited to social service activities,” and being “ethical, scandal-free, and altruistic” (p.526). Similarly, in their study of a unit that was spun-off from an established firm, Corley and Gioia (2004) found that key elements of the unit's identity

included being a younger, more agile competitor than [Bozco]... ‘an industry founder,’ ‘an aggressive competitor,’ ...[and] a ground-breaking marketer” (pp. 185-186).

Because organizational members have a shared understanding of “who we are” there is also an implied agreement about “what we do” (Navis & Glynn, 2011). Organizational identity therefore creates a clear set of expectations about what constitutes appropriate action. These expectations often result in a set of heuristics and routines that guide and coordinate organizational action (Kogut & Zander, 1996). Interpretation of the external environment is filtered through the organization’s identity, providing a common ground for decision making (Tripsas, 2009).

While organizational identity can serve as a guidepost that unifies an organization, it can also create conflict. Actions inconsistent with the organizational identity result in discord and dysfunctional behavior within the organization (Elsbach & Kramer, 1996; Golden-Biddle & Rao, 1997). Kraatz and Zajac (1996) found that when liberal arts colleges adopted vocational and professional programs that were inconsistent with a liberal arts identity, those programs were denounced by key actors. In addition, if a firm violates the norms and expectations that outsiders have for a given product market category, the firm loses legitimacy (Benner, 2007; Zuckerman, 1999, 2004). For instance, Zuckerman (1999) found that securities analysts provided less coverage to firms that did not conform to generally accepted categories, and the share prices of these firms suffered.

Managing identity effectively can help increase an organization’s flexibility in response to environmental shifts. For instance, in contrast to Polaroid, which maintained a narrow identity as an instant photography company, Fujifilm re-defined itself as an “Information and Imaging” company, an identity that encompassed digital imaging activities and made those activities



legitimate in the eyes of organizational members (Tripsas, 2013). Scholars have also shown that proactive, planned changes in identity are often necessary to effectively accomplish other types of organizational or strategic change. For instance, Gioia and Thomas (1996) in their study of higher education institutions attempting to become more business-like, found that articulation of a new, desired future identity was important in managing the transition.

## **MULTI-SIDED PLATFORMS**

With multi-sided platform firms gaining in prominence, there has been a focus on this organizational form in the field of economics with roots in industrial organization (Armstrong, 2006; Boudreau, 2010; Rochet & Tirole, 2006). Research can be grouped roughly into two segments addressing two broad areas of strategic choice. The first relates primarily to competitive dynamics, and examines the implications of network effects on pricing and growth strategies. The second addresses platform governance and covers questions about how open a platform should be, whether standards should be proprietary, and the establishment of criteria for interacting through a platform.

### **Competitive Dynamics and Network Effects**

From an economics perspective, one of the factors that distinguishes a platform-based business from a product-based business is the presence of network effects, also sometimes referred to as network externalities (Hagiu & Yoffie, 2013). Network effects are present when the value of a product or service increases as others utilize that product or service and expand the size of the network (Katz & Shapiro, 1985). Network effects are said to be direct when the source of increased value comes from direct connections among members. The classic historical

example of this is a public telephone system, where having more people to call increases the value of the system to each individual who has a telephone.

There are also systems that exhibit what are referred to as indirect network effects in which the source of increased value for customers comes from the greater number and variety of complementary products and services that are available when more customers use a product. A classic example of this is the computer hardware/software paradigm where, as more users adopt a particular type of hardware such as a PC or video game console, more software will be developed for that hardware (Katz & Shapiro, 1994). Indirect network effects are also sometimes referred to as “opposite side network effects” because the value to an individual member on one side is affected by the actions of members on the other side of the network.

Multi-sided platforms are most affected by indirect network effects; the larger one side of a platform becomes, the more value is created for actors on the other side of the platform.<sup>2</sup> For instance, the availability of more high quality applications for a smartphone platform is beneficial to consumers, and the more consumers there are on the platform, the more attractive the platform becomes to application developers (Armstrong, 2006; Hagiu, 2009; Rochet & Tirole, 2006). Empirical research has demonstrated the strength of these network effects in the yellow pages (Rysman, 2004), PDA industry (Nair, Chintagunta, & Dubé, 2004), VCR industry (Cusumano, Mylonadis, & Rosenbloom, 1992), and video game industry (Clements & Ohashi, 2005). In some cases, network effects are so strong that a “winner take all” phenomenon is at

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<sup>2</sup> Economics scholars disagree about whether strictly speaking the existence of network effects is necessary for an entity to be considered a platform. However, since we are studying product to platform transitions, and the platforms of most interest to us tend to have indirect network effects as a defining characteristic, we center our discussion on platforms that contain network effects (Katz and Shapiro, 1985; Rochet and Tirole, 2003; Gawer, 2009). Additionally, in this chapter we use the generic term network effects, although in most cases we are referring to indirect network effects.

play and the market “tips” in favor of the dominant platform (Arthur, 1989; Cusumano, et. al., 1992; Shapiro & Varian, 1998).

Given the strength of network effects, much of the research related to platforms has focused on how firms can quickly build critical mass on both sides of the platform to get a feedback loop started (Evans, Hagiu, & Schmalensee, 2006; Gawer & Cusumano, 2002; Parker & Van Alstyne, 2005; Rochet & Tirole, 2003). This is sometimes referred to as the chicken-and-egg problem, or getting the flywheel going, and addresses the challenges of getting early adoption (Caillaud & Jullien, 2003; Evans, 2009). Scholars have shown the effectiveness of a number of approaches to growing a platform when network effects are in place. These include pricing strategies, potentially including subsidization, and providing free services to some participants on the platform.

To achieve early growth, firms may cut prices to generate demand. In a formal model of two-sided markets, Caillaud and Jullien (2003) focus primarily on e-commerce marketplace platforms and find that effective pricing strategies are in the mode they call “divide-and-conquer” where the firm subsidizes one side and recovers the loss on the other (Caillaud & Jullien, 2003). Parker and Van Alstyne (2005) extend this work by addressing the question of which side of the platform is optimal to subsidize. Using a formal model, they show that in two-sided markets comprised of content producers and consumers, the best approach is to subsidize the side of the market that contributes more to demand for the other side.

Another approach to jump starting a platform is to provide free technical support to either or both sides. For instance, to encourage adoption of the Postscript standard, Adobe Systems provided laser printer manufacturers with a free boilerplate reference design for a Postscript interpreter and also gave technical support to applications developers who wanted to create

Postscript output (Tripsas, 2000). Parker and Van Alstyne (2005) illustrate the theoretical justification for this approach in their model which finds that firms can profitably invest in developing products they give away for free (such as application development toolkits) because doing so increases the number of providers on one side of the platform (e.g., number of application developers) which drives demand on the other side of the platform (e.g., end users), and the revenue from the enhanced demand more than covers the cost of development.

While platforms need to obtain the appropriate level of participation to start their growth engines, the dynamics related to gaining a “critical mass” of adoption varies (Evans, 2009). For some markets, such as dating platforms, organizations need to secure critical mass of both sides at launch to succeed. There are yet other cases where organizations may need to make pre-commitments to one side to entice them to invest in the platform. For example, in the case of hardware/software types of products such as console-based video games, hardware providers (console manufacturers) need to convince software developers to invest in product development (creating video games) before the console is on the market and proven to be a hit with consumers. Hardware providers must provide enough pre-release confidential information to potentially convince developers to invest, or provide financial guarantees to catalyze demand for the console (Evans, 2009).

### **Multi-sided Platform Governance and Management**

Scholars have also addressed questions of platform management such as to what extent a platform should be open or closed, and how to manage the quality of contributors to a platform. The distinction between open and closed is not straightforward as there are varying degrees of openness (Baldwin & Woodard, 2009; Boudreau, 2010). While organizations that have decided

to provide a platform-based offering have already chosen to be open, at least to some extent, by enabling others to transact through their offering, there are still many choices related to the level of openness they are willing to allow and the means with which they achieve it.

For example, organizations that offer closed self-contained software products that decide to transition to a multi-sided platform-based business model need to decide to what extent to open software and how to enable complementors (developers) to interact with their products. One such decision, which is tactical but may have significant strategic consequences, is whether an organization is going to offer application programming interfaces (APIs) and/or a software developer kit (SDK) to developers. Decisions about whether and how to offer APIs and SDKs highlight trade-offs between open and closed access, flexibility for developers, and ease of access for developers, all of which reflect an organization's stance towards moving to a platform-based business model. An API is essentially a set of specifications and rules that explain how to interact with and access software code. The act of an organization "opening an API" means it is providing access to code for developers and is a step towards openness. An SDK is a set of software development tools for designing apps on a particular system and typically includes one or more APIs (and possibly software code for accessing those APIs). The tools that are part of an SDK may provide structure and guidance for developers, but only proscribed access to the code. Thus, while they may deliver significant assistance to developers, this may come at the expense of constraints on access, which may limit creativity and flexibility. Decisions about which APIs to offer, whether or not to include an SDK, and what form the SDK should take are examples of practical decisions that an organization transitioning to a platform needs to make that set the stage for the level of openness an organization is willing to allow for its complementors.

Organizations must choose between developing their own proprietary standards through which to interact with others and adopting industry standards. West (2003) notes that firms have an incentive to follow closed, proprietary strategies that can provide better barriers to imitation, higher margins, and more control (since they do not necessitate interoperability with other standards). However, there are frequently technical and economic considerations that force organizations to move to either open or hybrid strategies. For example, to balance the creation and capture of value, when Adobe Systems introduced the Postscript “page description language” and font standard that allowed software applications to communicate with laser printers, it was both open and closed. To increase adoption of Postscript and thereby create value, it was open to application developers. As Charles Geschke, one of the founders explained, “We made a decision early on that the standard itself -- the documentation for how you describe the page -- would be open, freely available and we would publish it. We would retain the copyright and the trademark, but we would make the interface open to anyone” (Tripsas, 2000). To capture value, however, the standard was closed, in that Adobe did not disclose the technology for interpreting the Postscript language in a laser printer. Laser printer manufacturers had to pay to license the controller technology from Adobe.

Another topic related to multi-sided platform governance is how organizations keep out unauthorized or low quality contributors through a regulatory role. In the video game console industry, Atari suffered from allowing too many poor quality games into their ecosystem. Nintendo later solved the problem through deploying a security chip that enabled only authorized games to work with their systems (Boudreau & Hagi, 2009). Similarly, Apple addressed this problem when they introduced their App Store by maintaining the ability to remove inappropriate applications such as the “I Am Rich” \$999 app that didn’t provide any useful

functionality (Boudreau & Hagiu, 2009). With the introduction of topics such as the regulatory role that multi-sided platform-based businesses play, this research is starting to address more management related issues.

## **PRODUCT TO PLATFORM TRANSITIONS**

Some organizations are born platform-based. eBay was founded as an online auction and shopping website with the aim of connecting buyers and sellers; Match.com was initially started as a test site for a newspaper classified advertising system with the explicit goal of connecting individuals. In these cases, from the start of building the business, a management team can take into account that there are multiple sides of the platform to be served. The activities of the organization can be aligned with creating a platform-based business or marketplace. However, in some instances, organizations start as product-based, directly providing complete products to customers, and then transition to multi-sided platforms where they enable others to transact with each other. As technologies are evolving such that products and services are becoming more receptive to complements, product-based organizations are increasingly finding themselves in situations where they need to transition to being platform-based to remain competitive.

The mobile phone industry exemplifies a historically product-based industry that has become platform-based as mobile phones have become technologically more sophisticated such that consumers add after-market applications (more commonly referred to as apps) to increase a smartphone's functionality. For many years in the United States, firms in this industry thrived by selling basic mobile phones (called feature phones) to network carrier customers (e.g., Verizon Wireless) who then sold them to consumers. Firms that developed feature phones created most of the innovations and features in their own R&D labs, or contracted directly with developers to

embed new technologies in phones before they were shipped. As microprocessor technology evolved such that programmable operating systems could reside on inexpensive mobile devices, smartphones that could run apps began to substitute for feature phones. With smartphones, consumers could procure their own apps and add them to their devices to increase functionality. With the widespread proliferation of smartphones, most firms in this industry now operate as multi-sided platform-based businesses. They enable consumers and software app developers to interact through an intermediary (e.g., the Apple App Store or Google Play marketplace). Figure 2 provides a schematic representation of this transition.

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Figure 2 about here

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As organizations make this change, not only do they need to modify their product or service offerings, but they also need to modify the activities that support these offerings. We next describe the primary activity-related changes that organizations undertake as they transition from being product to platform-based. (See Table 1.)

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Table 1 about here

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### **From Providing the Best Products to Developing the Best Network of Complementors**

In product-based businesses, an organization's goal is to develop products that best meet customer needs. The organization that offers the most value to customers – the best product given its price – will generally outperform others in the marketplace, all else equal.



Organizations, therefore, focus their efforts on gaining a deep understanding of customer needs and segmenting the market such that they can target products effectively.

In platform-based businesses, the value created for a customer is dependent not only on the quality of a particular product, but also on the number and quality of the complementors. What matters is the volume of participation on the platform and the strength of the network effects. Rather than focus exclusively on developing superior technology to have the best product performance, organizations need to develop structures to identify and attract the best complementors to grow adoption of their platform. In the video game console industry, for instance, having a blockbuster game such as Electronic Arts Tiburon's "Madden NFL" or Activision's "Call of Duty" available to run on a firm's platform is just as important as including features such as superior graphics capability of a gaming console. Organizationally, in some cases, a separate group may be developed with professionals who are adept at working with this second type of customer (e.g., with developers). Policies for this new group, such as compensation, may also need to be modified to align with and provide proper incentives for serving these complementors.

### **From Maximizing Product Profit to Driving Platform Adoption**

It takes time to build a critical mass of users in a platform-based business. In addition, many of the short-term strategic moves that organizations make to encourage adoption, such as cutting prices or giving products away for free, result in losses. The goal is to maximize the number of customers participating on each side of the platform, even if this means losing money in the short term. This type of behavior is in direct contrast to accepted norms of product-based

businesses, where profits and profitable growth are primary, and usually short term, goals. Shifting this behavior is important, but not without controversy.

After developing Postscript, Adobe Systems started to compete aggressively in the shrink wrap software business with products such as Photoshop and Illustrator. Then, in 1993, the firm introduced the Acrobat software system, which required two types of software: one product to create PDFs and another to read them. When Adobe introduced the software, the products lost money for about four years. Initially, Adobe charged money for both types of software: people who just wanted to read PDFs paid between \$35 to \$50 for Acrobat Reader software, and those who wanted to create PDFs paid \$195 for simple Acrobat creation software, or \$695 for the full-featured Acrobat product. Eventually, to encourage adoption, Adobe changed its approach and offered the Acrobat Reader software for free. Essentially, they needed to incentivize one side of the market to adopt the software, so they subsidized it. As Adobe founder, John Warnock, explained in a recent interview, “The board questioned [the decision.] ‘You’re going to give the Reader away?’ I think it was one of the first instances of giving software away.”

(Knowledge@Wharton, 2013). Other Adobe software packages, such as Photoshop, followed a more traditional product-based model, and the contrast with Acrobat created internal organizational conflict. Warnock noted, “We had meetings where [the managers of] other applications, like Photoshop, [would say], ‘Why in the hell are we spending a dime on Acrobat when we make all the money?’” (Knowledge@Wharton, 2013). Providing the Acrobat Reader for free, however, created a large base of users that could consume PDF content, and therefore helped increase demand for Acrobat PDF-creation software. Acrobat eventually became one of Adobe’s most profitable lines of software, and 20 years after its launch, the PDF format is still a dominant means for exchanging documents.

### **From Maximizing Units Sold to Maximizing Transactions Enabled**

Two conventional measures of success for product organizations are units sold and market share. Employee compensation, bonuses, and award structures are often based on these numbers, and individuals typically make decisions with the goal of maximizing sales profitably. As an organization transitions to becoming platform-based, and starts to enable others to transact with its traditional customers, there may be other non-traditional metrics that become relevant.

In 1995, Amazon began as an on-line book seller that procured books from publishers and sold them to consumers. In 2000, the Amazon team launched Amazon Marketplace, which allowed other businesses to sell merchandise, in an integrated fashion, on Amazon's website. The shift also meant that a portion of Amazon's traditional sales would likely be cannibalized because buyers could easily purchase from competitors through Amazon's main website. In fact, over time, the volume of sales through Marketplace affiliates grew to the point that it became a significant portion of Amazon's overall business. While Amazon's profit on individual Marketplace transactions was lower, the overall number of transactions increased. In addition, by simply collecting a royalty payment and not holding inventory, nor incurring logistical costs associated with physically handling goods, Marketplace became highly profitable. With the new platform-based model however, prior metrics for measuring success, such as units sold and market share might no longer be adequate. Instead, metrics such as number of merchants participating in the program, or number of transactions, or aggregate royalties might be more relevant.

## **PLATFORM TRANSITIONS AND ORGANIZATIONAL IDENTITY**

When an organization transitions from being primarily product-based to being platform-based, and adopts new activities and behaviors consistent with this transition, there are important implications for organizational identity. Given dramatic changes in “what we do,” the answer to the question, “What business are we in?” may change. Similarly, new activities associated with platforms may be inconsistent with existing identity attributes, and left unresolved, this may cause discord. In the following section we explore how specific aspects of identity may be challenged by the shift to a platform-based business model. (See Table 2.)

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Table 2 about here

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### **From One Definition of the Business to Another**

As organizations evolve, their identity claims also sometimes shift. For instance, as it extended its product-line from memory cards for digital cameras to include flash drives, Linco went from defining itself as a digital photography company to defining itself as a memory company (Tripsas, 2009). After breaking away from AT&T and the Bell System, US West went from being part of a telephone company to “not a telephone company” to a “multimedia company” (Sarason, 1998). Similarly, the transition from a product-based to platform-based business is likely to imply a shift in how an organization defines its business – in other words, what category claims it makes.

When Amazon started operations as a bookseller, Jeff Bezos, the founder, referred to the company as “Earth’s Biggest Bookstore” (The New York Times, 2005). Consumers visited Amazon’s website, searched for a book, and then ordered it from Amazon. Amazon took the

payment from the customer, procured the book, and sent it to the customer. Amazon was a straightforward on-line merchant (Hagiu, 2007). While the business model was innovative at the time, the sales transaction still occurred simply between the end customer and Amazon. When Amazon launched its Marketplace initiative, allowing third parties to sell goods through Amazon's platform, the business model shifted from a pure merchant model to a combined merchant and platform-based model. Given this major change in "what we do," Amazon broadened its identity claims to encompass being a marketplace for books and many other types of goods. Today, the press section of Amazon's website lists as its mission: "To be Earth's most customer-centric company where people can find and discover anything they want to buy online."

By changing the answer to "what business are we in?" through both modifying its business activities and claiming membership in a different or broader industry category, a firm can alter what is considered legitimate behavior. In Amazon's case, it expanded its strategic mission and modified its claims to support that expansion in alignment with its new activities and behaviors. This sort of shift in organizational identity may be particularly important when moving from product to platform-based businesses given the significant changes in "what we do."

### **From Technology-Driven to Business Development Focused**

In many organizations, the prominence of a particular functional area is a key identity attribute. For instance, Fiol (2002: 654) discusses the transformation of a large IT organization from an "engineering-driven data storage company" with "a primarily hardware, engineering mind-set to a mind-set of information management and storage solutions." Similarly, Nag,

Corley, and Gioia (2007: 822) explore how one telecommunications organization moved “from an engineering-oriented (‘technology-push’) R&D organization into a business development–oriented (‘market-pull’) R&D organization.” In each of these cases, organizational members had originally considered the firm’s technical skills and accomplishments to be defining characteristics, and then, through an identity transformation process, they shifted to consider market-based capabilities to be more salient. In the case of the IT company, developing total solutions required a deeper understanding of customer needs, and in the case of the telecommunications company, once the organization became a separate establishment, business development capabilities became essential.

We propose that when organizations shift from being product-based to platform-based, similar to the organizations studied by Fiol (2002) and Nag, Corley, and Gioia (2007), these organizations may need to shift their identity to become more business development focused. In a product-based organization where research and product creation are the most highly valued skills, scientists and engineers may be the most respected, well compensated, and well treated in the organization. As a result, these organizations are likely to view being “engineering-oriented” as a core part of their organizational identity. However, in a platform-based organization that depends on complementors to be successful, business development people may hold more sway. They may be the employees who primarily manage relationships with complementors and ensure that an organization is building solid relationships with external partners. As these external interactions increase in number and importance, so too should the prominence of the people who manage them. In some cases, identity may evolve in an emergent fashion as business development gains importance, such that eventually the organization is no longer engineering-

driven. In many cases however, this type of identity shift will likely encounter resistance since it implies a change in the power dynamics among functional areas.

For example, Blackberry, which was formerly known as Research in Motion Limited or RIM, is a highly technology-driven organization that early in its history changed from being primarily internally product-driven to becoming more business development focused as its products became more platform-based and dependent on applications. At the time of their 1996 IPO, the focus was on engineering. The paragraph describing the corporation in the IPO prospectus stated, “RIM develops and supplies radios and other network access devices... RIM has developed an international reputation in the wireless industry for innovations in radio engineering” (Research in Motion Limited, 1996: 2). In 1998, Jim Balsille, RIM Chairman and Co-CEO, noted the importance of externally-developed applications in an earnings release, emphasizing “the broad range of industries currently developing applications for our products - such as financial services, field service, health care, public safety, real estate, retail, security, telecommunications, transportation, utilities and the military.” (Research in Motion Limited, 1998). By this time, RIM appears to have moved beyond focusing solely on their own capabilities and recognized the need to highlight the role other organizations played developing applications to drive demand for RIM’s products.

### **From End User Service-Oriented to End User and Complementor Service-Oriented**

Commitment to customer service is often a salient element of an organization’s identity. For instance, Dutton and Dukerich (1991) found that being “a provider of superior service” (p.526) was a key identity element of the New York Port Authority. If an organization’s identity is tied to the quality of its customer service, when the nature of the customer changes, such as in

a product to platform-based transition, the organization's identity may be challenged. Product organizations are focused on serving customers who use their products, so being customer service-oriented means understanding and satisfying end users is paramount. In contrast, platform-based organizations attempt to serve the needs of not only end users, but also complementors. More specifically, organizations with developer platforms serve customers that purchase end products (e.g., smartphone buyers) and the developers that create products that complement those end products (e.g., application developers). Those with marketplace platforms serve customers who wish to acquire products (e.g., buyers of used goods) and entities that aim to sell to those customers (e.g., sellers of used goods). So, when an organization shifts to a platform-based offering, members must expand their view of who the customer is and what good customer service means to them. If they don't, deeply held beliefs about being a "service-oriented" organization may be violated as employees make trade-offs that emphasize the welfare of complementors as opposed to prioritizing end consumers or vice versa.

When Amazon was simply a bookseller, its focus was entirely on consumers who purchased books and other items the firm offered. After introducing the Marketplace, its large scale platform initiative integrated into its main consumer website, it also needed to meet the requirements of merchants selling on Amazon's platform. While booksellers may care more about the ease of posting items for sale or ease of transaction processing, book buyers might be more concerned with breadth of offerings and competitive pricing. In some cases, the preferences of participants on a platform may be in direct conflict; Amazon merchants may want more advertising opportunities while Amazon buyers may want fewer (Hagiu & Jullien, 2011). To manage these situations, we propose that an organization must adapt its identity.



Unlike other identity attributes that we have discussed, in this situation, organizations may be able to adapt by broadening the meaning of existing identity labels such as “service-driven,” to accommodate service to both sides of the platform. This sort of “adaptive instability” (Gioia, Schultz, & Corley, 2000) enables organizations to accommodate the new behaviors associated with a platform-based business without completely shifting organizational identity. Intuit is in the process of transforming its QuickBooks small business accounting software product family to a platform-based offering. It is working to expand its traditionally end user customer-focused organization to one that similarly places high value on serving the needs and challenges of developers and other complementors. In the process, it may be undergoing identity work that takes into account the new behaviors while maintaining core elements of the existing organizational identity (Hagiu & Altman, 2013).

### **From Creativity to Discipline**

For many organizations, being creative and innovative are important identity attributes. For instance, the organization studied by Corley and Gioia (2004) included “an innovative company” as one of its core descriptors, and many of the universities studied by Elsbach and Kramer (1996) also included “innovative” as an important dimension of their identity. Bang and Olufsen, a design-oriented audio/video system manufacturer included “inventiveness” as one of its seven identity components (Ravasi and Schultz, 2006). When organizations produce standalone products they control the overall architecture, which allows for high levels of freedom and creativity in making design decisions. They can optimize product designs based purely on aesthetic design and functionality considerations. Firms designing small kitchen appliances and tools, for example, can place aesthetic and ergonomic design considerations high on their list of

priorities and not worry about interdependencies with accessory or application providers.

Similarly, on an old Sony 8 mm. camcorder, if the designers decided to move the hand strap from one side to the other, it influenced only the design of that product and did not affect any other products supplied by members of an ecosystem. On a digital camera, if Canon decides to change the size of a display on the back of a camera, no complementor firms are affected.

For platform-based offerings, designers cannot unilaterally make changes that might affect complementary products; potentially many external firms are relying on a design to remain stable along certain dimensions so accessory or application products can work with that design. Organizations need to be aware of considerations such as backwards compatibility because these affect the complementor firms in their ecosystem. As a result, discipline -- following an orderly process to determine which product characteristics to maintain as product generations mature -- becomes a valuable and necessary skill. Further, standard interfaces that enable seamless interoperation between products become essential elements and need to be mandated and enforced by the organization. For software products, this is frequently discussed in terms of adopting a service-oriented architecture (SOA), and the extent to which an organization does so may be considered a measure of how committed it is to transitioning to being platform-based.

When design decisions affect complementors, it can cause extreme difficulties for them if they do not have enough lead time to re-design or modify their complementary products (Staudenmayer, Tripsas, & Tucci, 2005). If a smartphone manufacturer decides to change the size of a display, an entire cadre of application developers and accessory providers is affected. This means that the level of creativity that a platform-based organization's designers can exhibit is curtailed. They operate under significant constraints imposed by the needs of the complementors and have fewer degrees of freedom within which to operate. If Canon decides to

adopt an open operating system that allows independent developers to create apps for cameras, then its designers will have a whole new set of constraints. Display size decisions will become dependent upon operating system versions and the needs of application developers. Designing to standards and creating rigidly standardized interfaces to benefit an ecosystem may be perceived as “not nearly as much fun” as designing what looks and works best.

As organizations transition from product-based to platform-based, particularly if they are moving from an entirely closed product to one with open interfaces, they may notice that designers and/or engineers are frustrated by newly instituted requirements to hold elements of designs constant for the benefit of complementary developers or accessory providers. Engineers and designers, who pride themselves on their creativity, may have a difficult transition to an organization that has to choose upon which elements to compete and upon which to adopt standardized approaches. They may resist this change by continuing to design products that are not fully compatible with other platform elements, or continue to try to design around platform specifications.

### **From Self-Reliant to Team Player**

Organizations accustomed to performing most key activities internally may include self-reliance as a key identity element. For instance, “individuality” was an identity component at Bang and Olufsen, which was projected using the phrase “We think differently” (Ravasi and Schultz, 2006). Becoming a platform essentially involves moving into a mode of more extensively working with and enabling an expanded group of partners in one form or another. The transitioning organization needs to change from prioritizing providing solutions through internal development and a select, narrow set of strategic partners to enabling a broader range of

complementor partners (e.g., developers, users, other ecosystem members) to serve their customers as well.

This is particularly difficult for organizations that consider independence and self-reliance as core parts of their identity. Their management's first impulse is generally to consider how they can accomplish tasks themselves and build their own internal capabilities. Even for organizations that may have previously entered into many supply or marketing partnerships, if they have not engaged extensively in product development alliances, which affect core operations, they may encounter significant challenges. Opening up interfaces and allowing others to contribute to their products, possibly affecting central product propositions, may be a very hard, and thus identity threatening, shift. If an organization's general approach to challenges is to work harder internally, or potentially acquire an outside firm, rather than build relationships with other organizations, moving to a platform orientation may be particularly difficult.

Nokia provides an example of an organization that had trouble changing along this vector. Throughout the 90's and early 2000's part of Nokia's identity was its emphasis on internal technology development. It was also known to be a very difficult firm with which to partner (Vilkamo & Keil, 2003). When the mobile phone industry shifted to being smartphone-centric, which required phone providers to build strong relationships with application developers, Nokia faltered. Though it attempted various platform-based strategies related to mobile software, none of them took hold to the extent that they became an enduring industry-wide standard and some might say this was in part because they were not implemented in a way that was attractive enough to developers and other partners (Selander, Henfridsson, & Svahn, 2010; Steinbock, 2001). Although the reasons for Nokia's troubles are certainly complex, the

inconsistency between partnering behaviors and Nokia's historical organizational identity as an internally-focused mobile phone developer may have contributed to the situation. Their existing identity served as a barrier to change.

## DISCUSSION

In this chapter, we have examined the relationship between innovation in the form of platform-based business models and organizational identity. We propose that moving from a product-based to a platform-based business model requires organizations to engage in a broad range of activities that may either influence, or be influenced by, an organization's identity. We have primarily discussed cases where moving from a product-based to a platform-based business model requires organizations to engage in activities that challenge expectations associated with existing product-based identities. However, we also recognize that there are cases where existing organizational identities may be supportive and reinforcing of these changes. An organization's strong identity might guide the strategic choices necessary to accomplish these transitions.

For example, when Apple needed to choose a standard to enable its devices to stream media with one another and with other firms' products, it chose to develop its own proprietary system called Airplay instead of adopting the industry standard platform, Bluetooth. While the literature frames this as a strategic decision (West, 2003), one could argue that it also echoes Apple's identity. Apple has always been a design-focused firm with an emphasis on creating the most customer friendly experiences. Controlling the user experience by developing Airplay was consistent with Apple's identity. Similarly, while creating the iPhone App Store resulted in Apple losing some control of the user experience, the manner in which Apple implemented the

App Store, with approval required before an app could be offered, was fully consistent with the meticulous approach Apple takes to managing customers' overall experiences with Apple offerings. In the same vein, after introducing the Marketplace, Amazon marketed a branded guarantee program, which provided customers a full refund if they had a problem with a purchase made through an Amazon affiliate. This step was consistent with its identity claim of being "Earth's most customer-centric company" (Amazon.com, Inc., 2013). In each of these cases of transitions to platform-based business models, organizations took specific steps that were consistent with, and likely highly influenced by, their existing organizational identities. Though they embarked on business model innovation that likely challenged many elements of their organizations, they did so by incorporating some changes that were well aligned with their core organizational identities.

Still, in many cases, particularly during times of considerable transition, organizational identity may be challenged by substantial strategic change. Organizations must rethink "Who we are" as "What we do" changes dramatically. To be successful, organizations should question elements of their existing organizational identity, and when there are inconsistencies with new business approaches, actively attempt to adapt their organizational identity to resolve them. While proactively changing identity can be a challenging process, frequently accompanied by organizational resistance, as illustrated by prior research (e.g. Dutton and Dukerich, 1991, Ravasi and Schultz, 2006, Tripsas, 2009), ignoring the need to attempt an identity shift may result in dissonance and contribute to dysfunctional behaviors such as those that may hinder innovativeness, creativity, and entrepreneurial behaviors.

We contribute to the literature on platforms in two ways. First, platform-related research generally considers the focal entity to be an existing or emerging platform-based organization

rather than an incumbent, more mature, organization transitioning from another business form into a platform-based one. Yet, established organizations with a long history of traditional, product-based business models make up a significant portion of the organizations starting to compete in platform-based markets. Understanding how to manage these transitions is therefore as important as comprehending the pure competitive dynamics of platform-based businesses. Second, we link our discussion of organizations making this transition to considerations of organizational identity. While economics and strategy scholars have done an excellent job of evaluating the optimal strategic moves in platform-based markets, they have for the most part ignored the organizational considerations suggested by a shift from product to platform-based competition. We propose that success in the implementation of new strategic opportunities created by transitioning to a platform-based business model may require a shift in organizational identity.

### **Future Research**

While the discussion above encompasses a variety of considerations related to product to platform transitions and organizational identity, we believe there are significant opportunities to expand this research in a number of directions. These research avenues include both contributions to the organizational identity and multi-sided platform literature. Additionally, they encompass multiple research methodologies, some of which have yet to be fully leveraged in these arenas.

This chapter has highlighted a variety of dimensions of organizational identity that are relevant to product to platform transitions. However, the dimensions discussed here are by no means exhaustive. We believe there are likely to be other identity elements that generally change

when an organization makes the type of shift we have discussed. Furthermore, organizations will potentially need to overcome constraints imposed by their current organizational identity. In-depth qualitative field-based research could enable researchers to better understand the change mechanisms associated with transitions to platform-based organizations and determine which dimensions of organizational identity are most salient. Additionally, there may be interdependencies between these dimensions affected by shifts from product to platform that are worth studying further.

As organizations become platform-based, in some instances the dimensions of organizational identity may not shift from state A to B, but rather move from state A to state A+B (or, A+B+C, etc.). We highlighted such a shift above as we discussed Amazon moving from being end user focused to being both end user and complementor focused. As we consider this, we recognize that new dimensions of organizational identity may be added to an organization as it makes this type of shift, and this may lead to potentially interesting implications for the study of organizational identity. What happens if the new additional states are inconsistent with the existing states? For example, if the existing organization has been entirely consumer focused but the platform-based organization must also be application developer focused, what are the implications of that change? Are they the same as when an organization just expands into new markets, or is something different at play because the new markets consist of complementors and function as part of a platform-based business model? We know that organizational identity can constrain an organization's ability to adapt and implement change. What is the process by which organizations accomplish changes in identity associated with the transition to platforms? Are there instances where an organizational identity change precedes a strategy change or modifications in activities? Or, is it primarily the case that



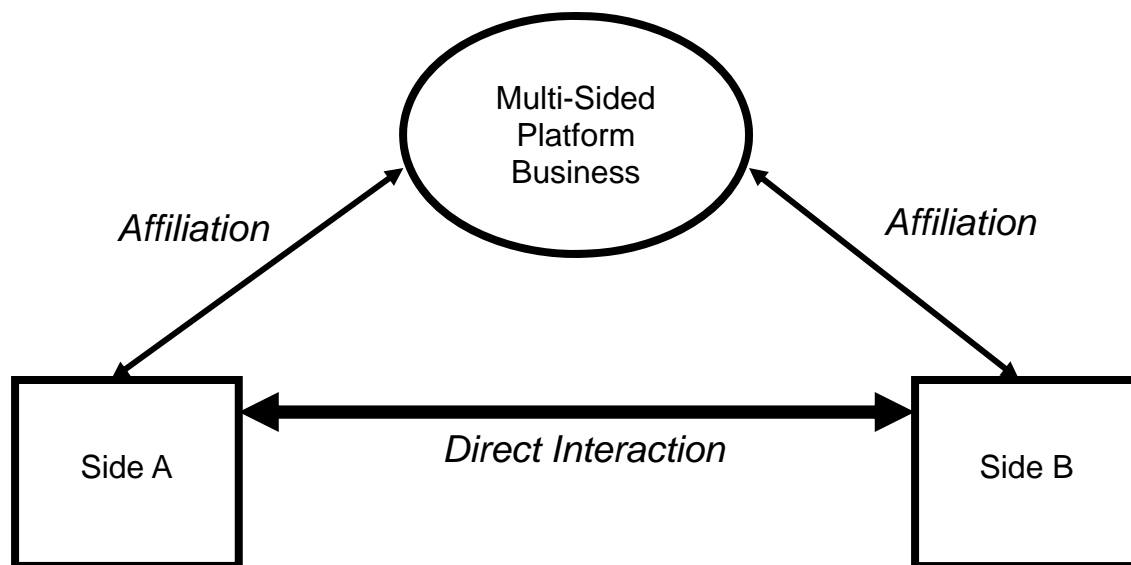
strategies and activities are changed first, followed by a re-alignment of organizational identity? How does this differ from other contexts in which organizations shift identity? Are some mechanisms more effective than others?

Although we have emphasized changes to organizational identity, some attributes of organizational identity may remain intact as an organization makes a transition to platforms. In general, values dimensions of identity that relate to beliefs, social concerns, or morals, are unlikely to be affected. For instance, organizations connected to a particular religious doctrine or with political affiliations are likely to maintain those aspects of their identity even if they move from a product to platform-based model. Ironically, having some elements of identity that remain constant may actually make it easier for organizations to change other aspects. In general, changes in identity are difficult to accomplish and disruptive to the organization (Fiol, 2002; Tripsas, 2009). Individual-level identification with the organization makes changes to organizational identity a highly personal and emotional experience for employees. By providing organizational members with identity anchors that remain consistent, they may be more willing to accept changes in other aspects of the organizational identity. This connection between individual-level identification with macro-level organizational change that encompasses multi-level research, particularly associated with product to platform transitions, remains a fertile area for study.

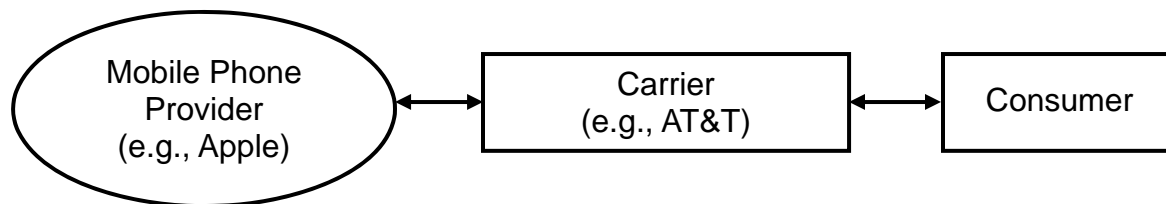
Finally, multi-sided platform research also notes that organizations can operate along continua of dimensions ranging from being pure multi-sided platforms to being pure product suppliers or retailers (Hagiu & Wright, 2011). Though we consider the transitions that organizations make, we need to remember that the transitions are not necessarily binary ones and may involve moving only partially to a platform-based model (e.g., allowing other entities to

offer complementary products, yet retaining strict control on what they can offer and who is authorized to do so) or transitioning only part of an organization (e.g., maintaining a traditional product-focused division alongside a platform-based one). Regardless of the extent and form of the transition, challenges to organizational identity are likely to be present. Research considering different units of analysis beyond more traditional organization-level platform analysis (i.e., considering transitions for product divisions within multi-divisional firms) may be particularly interesting.

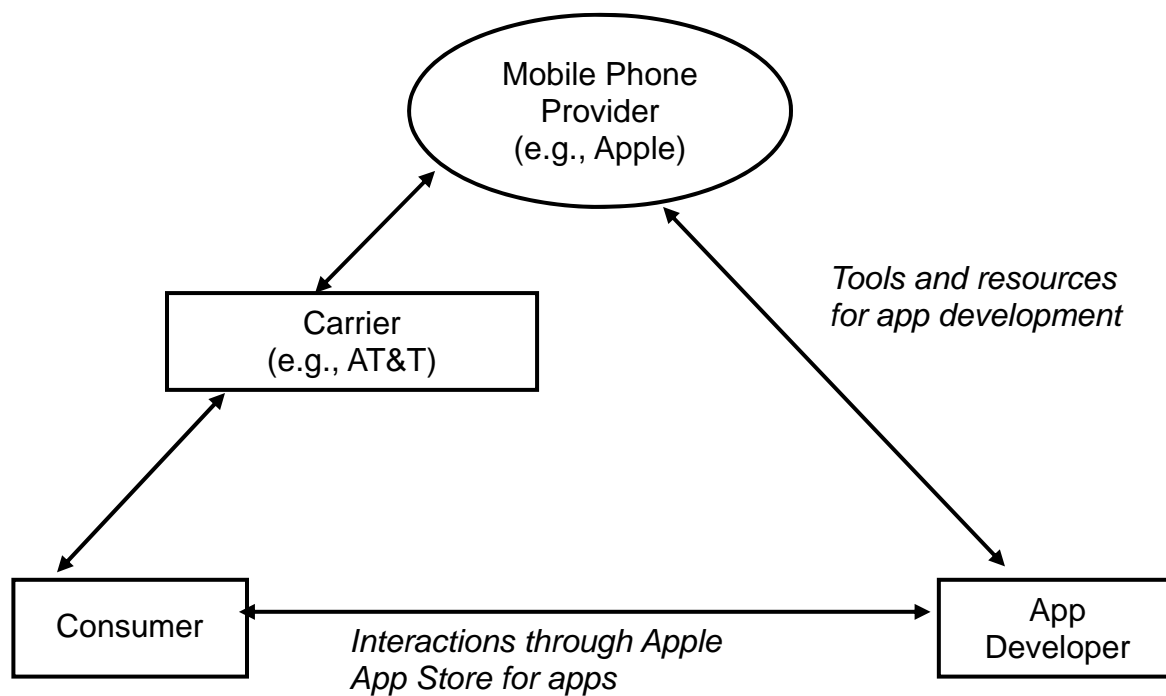
**Figure 1. Multi-sided Platform (MSP) Business Model Schematic**



**Figure 2. Example of transition from product to platform-based business model**



**Product-based Business Model**



**Multi-Sided Platform-based Business Model**

**Table 1. Product-based vs. Platform-based Activities**

<b>Product-based Activities</b>	<b>Platform-based Activities</b>	<b>Example</b>
Provide the best product	Develop the best network of complementors	<b>Amazon:</b> From providing best selection of books to providing best selection of vendors offering both new and used books
Maximize product profit	Drive platform adoption	<b>Adobe Systems:</b> Offering Acrobat Reader for free to drive adoption of Acrobat software that creates PDF files
Maximize units sold	Maximize transactions enabled	<b>Amazon:</b> Books sourced and sold to revenue shares of transactions enabled and hosting fees

**Table 2. Example Implications of the shift to Platforms on Organizational Identity**

<b>Product-based Identity</b>	<b>Platform-based Identity</b>	<b>Example</b>
Merchant Bookseller	Marketplace	<b>Amazon:</b> Bookseller to marketplace
Technology-driven	Business development focused	<b>RIM / Blackberry:</b> Early history from internally product-driven to third party application business development focused
End user service-oriented	End user and complementor service-oriented	<b>Amazon:</b> Focused on serving consumers only to focusing on consumers along with other merchants
Creative	Disciplined	<b>Canon:</b> Impact of display size design changes when there is not a community of complementors versus when there is one
Self-reliant	Team player	<b>Nokia:</b> Difficulty transitioning to a platform-based industry

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