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DISRUPTIVE INNOVATION
How the Internet of Things Changes Business Models

by Gordon Hui
As the Internet of Things (IoT) spreads, the implications for business model innovation are huge. Filling out well-known frameworks and streamlining established business models won’t be enough. To take advantage of new, cloud-based opportunities, today’s companies will need to fundamentally rethink their orthodoxies about value creation and value capture.

*Value creation*, which involves performing activities that increase the value of a company’s offering and encourage customer willingness to pay, is the heart of any business model. In traditional product companies, creating value meant identifying enduring customer needs and manufacturing well-engineered solutions. Competition was largely feature-versus-feature warfare. And when feature
innovation eventually proved to be too incremental, price competition would ensue, and products would become obsolete. Two hundred and fifty years after the start of the Industrial Revolution, this pattern of activity plays out every day, at your local big box electronics retailer or department store.

But in a connected world, products are no longer one-and-done. Thanks to over-the-air updates, new features and functionality can be pushed to the customer on a regular basis. The ability to track products in use makes it possible to respond to customer behavior. And of course, products can now be connected with other products, leading to new analytics and new services for more effective forecasting, process optimization, and customer service experiences. A variety of consumer products and services, from Nest thermostats to Philips Hue lightbulbs to If This Then That (IFTTT), highlight these new possibilities for IoT-based value creation.

Albert Shum, Partner Director of UX Design at Microsoft, notes: “Business models are about creating experiences of value. And with the IoT, you can really look at how the customer looks at an experience—from when I’m walking through a store, buying a product, and using it—and ultimately figure out what more can I do with it and what service can renew the experience and give it new life.”

To foster a conversation about the potential implications of connected experiences for designers, technologists, and business people, Albert’s team at Microsoft recently released a short film documentary called “Connecting: Makers.”

Just like value creation, connecting to the cloud forces a new mindset around value capture, the monetization of customer value. At most product companies, value capture has been as simple as setting the right price to maximize profits from discrete product sales. Sometimes this is done creatively, as with the razor-and-blades model made famous by Gillette. Margins are maximized to the extent that companies leverage core capabilities in bringing products to market, and are able to establish control of key points in the value chain, for example regarding commodity costs, patents, or brand strength. Here are some ways to shift your thinking when it comes to both value creation and capture:
However, making money in the connected space is not limited to physical product sales; other revenue streams become possible after the initial product sale, including value-added services, subscriptions, and apps, which can easily exceed the initial purchase price. In a recent conversation, Renee DiResta, a Principal at O’Reilly AlphaTech Ventures, noted: “Things that generate recurring revenue are actually more appealing to venture capitalists. Otherwise, the business model is banking on the hope that prospective customers will be loyal and be compelled enough to come back to buy the second product.”

Options for control points also expand through the IoT. Customers can become “locked in” due to personalization and context gained through information gained over time, and network effects scale as more products join a platform. Equally important, firms’ efforts to develop their core capabilities change focus to emphasize growing partnerships, not always build internal capabilities—so that understanding how others in the ecosystem make money becomes important to long-term success. Zach Supalla, the CEO of Spark (an open source IoT platform), says, “With the IoT, you can’t think of a company in a vacuum. The market stack is deeper than traditional products; you need to think about how your company will monetize your product and how your product will allow others to generate and collect value, too.”

In his classic book Competitive Strategy, Michael Porter describes three generic strategies: differentiation, cost leadership, and focus. For some industries, those basic strategies still hold true.
today. But in industries that are becoming connected, differentiation, cost, and focus are no longer mutually exclusive; rather, they can be mutually reinforcing in creating and capturing value. If your company is an incumbent firm that built its kingdom through a traditional product-based business model, be concerned as your competition and disruption-minded start-ups take advantage of the IoT.

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