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Demand innovation: GM's OnStar case

Adrian Slywotzky and Richard Wise

Adrian Slywotzky and Richard Wise are vice presidents of Mercer Management Consulting, both based in Boston (adrian.slywotzky@mercercmc.com and rick.wise@mercercmc.com). Their book *How to Grow When Markets Don't* (Warner Business Books), which explains how demand innovation works, was published in April.

Creating sustained growth is hard under the best of circumstances. From 1990 to 2000, just 7 percent of publicly traded companies in the US enjoyed eight or more years of double-digit growth in revenues and operating profits. As the growth crisis worsens in the coming decade, you can expect this percentage to shrink significantly – unless companies rethink their approach to growth.

Demand innovation

The good news is that we have recently begun to observe a new form of business design innovation – a new response to the challenge of growth that is being pioneered by a handful of farsighted companies. These companies are focused on creating new growth and new value by addressing the hassles and issues that surround the product rather than by improving the product itself. They have shifted their approach from product innovation to demand innovation.

Demand innovation expands the market's boundaries. It focuses on using one's product position as a starting point from which to do new things for customers that solve their biggest problems and improve their overall performance. Thus, companies skilled in demand innovation do more than simply take value and market share away from traditional businesses. They also create new value and new growth in revenues and profits, even in mature industries that appear to have reached a plateau.

Several of today's most innovative growth companies, including Cardinal Health, Johnson Controls, Air Liquide, GM OnStar, John Deere Landscapes, and Clarke American have become skilled a demand innovation. They compete in widely divergent industries, and the specific business strategies they practice vary greatly. But all have one thing in common: they have managed to create impressive new revenue and profit growth in industries or industry niches that most observers and business leaders consider inhospitable to growth.

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The more we studied the approach to business practiced by Cardinal, Johnson, and the rest, the more convinced we became that it represented a genuinely new phenomenon. The new-growth innovators are great business model innovators as well as imaginative and insightful analysts of the business environment, skilled at recognizing opportunities where others do not and developing profitable ways to respond. Such new-growth businesses focus on growing new value by discovering new forms of demand.

A case study in demand innovation: GM OnStar

General Motors faces a challenge peculiar to very large companies: It has an enormous base business that dwarfs almost all new-growth initiatives, making any such move seem trivial. Yet GM has found a way to make new growth pay by looking for opportunities to create businesses that are capable of driving profit growth at a rate disproportionate to their modest size. GM views OnStar, a unique offering of safety and security services enabled by special in-vehicle electronics, as just such a business.

GM's growth program is largely focused on enhancing its base business. Key elements of the plan include a renewed emphasis on vehicle styling and engineering, the development of profitable niche models (particularly in the highly lucrative truck market where GM excels), more focus on high-margin add-ons and accessories, and more astute merchandising, advertising, and incentive programs to drive dealer traffic and sales volume. The approach paid off. During 2001, GM gained market share and left the rest of the industry scrambling to match its moves.

But GM's management team also recognizes that improving the base auto business alone will not be enough. Even Toyota, considered by many to be the most successful auto company in the world, has just a 7.6 percent operating margin, a 3 percent return on assets, and low-single-digit annual sales growth. Most other auto companies have numbers that look a lot worse. GM's management and stakeholders want to do better.

The solution developed by CEO Rick Wagoner and his team is to continue to push hard at growing the base business, but also look for opportunities to supplement that growth with a few profit drivers in peripheral but related businesses. In the mid-1990s, it looked as if they might have discovered one. It was a business concept that used new technologies in an exciting way to address many of the latent issues associated with owning and driving a car.

Electronic horizons

In the mid-1990s, engineers within several GM business units realized that technological advances might enable the creation of a new business focused on the needs of drivers. Thanks to breakthroughs in digital mapping, satellite navigation, and mobile communications, drivers might be able to access a collection of information, support, and even entertainment services like those the telephone, the personal computer, and the cell phone had already brought to the home and the office.

Motivated by this vision, GM engineers developed a new mobile hardware system and service package called OnStar. The hardware includes a cellular phone, a global positioning system (GPS) receiver, two antennas, a three-button control panel, and a modem. The services fall into two broad categories. The first group focuses on safety and security issues. In an emergency, for example, a driver need only touch the red OnStar button on the dashboard. This alerts a call center adviser, who locates the vehicle via GPS and contacts the nearest 911 service to send help. The same thing happens automatically whenever a vehicle's airbag deploys. Other security features include remote door unlocking, theft tracking, and vehicle warning light diagnostics.

The second group of services offers ways of making car travel more convenient and fun. An OnStar adviser can provide directions to any destination or help drivers find the nearest gas station, rest stop, or repair shop. In fact, OnStar has built a database with 5 million entries listing bank branches, movie theaters, restaurants, hotels, shopping malls, campsites, and other locations nationwide.

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Acting as concierge, an OnStar adviser can also help drivers with a range of personal services including vacation planning, ticket purchases for plays, concerts, and sporting events, hotel reservations, and so on.

In 1995, with its technology in place, OnStar was launched as a freestanding business unit within GM's North American operations. Chet Huber, the 40-year-old executive chosen to lead the new venture, brought a couple of unusual qualities to the assignment. He was a respected insider with a long GM tenure and strong senior management relationships, but also somewhat of an outsider. He came not from the Detroit auto business but from GM's Illinois-based Electromotive division. At Electromotive, he had the rare experience for a GM manager of running his own P&L relatively early in his career. Huber's inside/outside perspective and his experience managing a self-contained business would prove important in launching OnStar.

A new kind of business

At first, many GM executives viewed OnStar as the newest embodiment of a long tradition of adding features such as moon roofs to cars. But as Chet Huber and his leadership team worked to commercialize OnStar, they began to evolve a new perspective on the nature of the OnStar business. As a mobile information service, OnStar would have economic characteristics very different from those of the traditional auto business – or from any mere auto feature or accessory.

Rather than simply helping enable a vehicle purchase (a onetime transaction), OnStar could launch a recurring stream of monthly subscription revenues, conceivably for the life of the vehicle. The target market for this subscription business was actually significantly broader than the market of 5 million new vehicles that GM sells every year. Instead, over time it would encompass all 80 million GM vehicles on the road. A successful OnStar had a shot at owning a recurring revenue stream from a decent share of this large market.

Thus, OnStar could be in a different category from traditional automotive amenities. If launched and developed effectively, it could represent a new form of value capture for GM and a significant revenue growth opportunity in its own right – provided that the new service could be quickly made available to a large number of drivers.

Stalled engine

The initial distribution strategy for OnStar quickly emerged as a major stumbling block. At launch, OnStar was designated for dealer installation on just one model, the 1997 Cadillac DeVille. As with other add-on amenities like DVD players and rear spoilers, this meant that the Cadillac dealer would be responsible for selling, installing, and briefing the customer about OnStar.

Unfortunately, the cost and price realities of OnStar made it a relatively unattractive proposition for most dealers. The economics of the distribution channel were not so good for OnStar either. At the \$895 price, OnStar was subsidizing a significant portion of the total hardware cost.

Not surprisingly, OnStar fell short of its initial sales targets. By the end of 1998, OnStar had only 44,000 paying subscribers rather than the 100,000 GM had hoped for.

GM had yet to figure out how to make the business into the high-intensity profit driver they were seeking. The first half of the new-growth equation was in place: customers liked the service

immensely. The second half of the equation, signing up a large number of customers, still had to be resolved.

This was a major challenge. The service was slated for a relatively measured rollout onto other GM vehicles, adding just a handful of other Cadillac models to its lineup over the next few years. Moving faster would be difficult. OnStar cannot be dropped easily into a new vehicle, but must be connected to many of the car's electronic components, from airbags to diagnostic sensors to door locks and headlights. Getting OnStar to work correctly requires a complicated design and testing process known as validation, which takes up to six months per vehicle model to complete.

Meanwhile, potential competitors were beginning to emerge. They included carmakers such as Ford, with its RESCU offering; start-ups like ATX Technologies, which offered a luxury communications system to owners of BMW, Mercedes-Benz, Lincoln, and Jaguar vehicles; and the juggernaut Microsoft, which was signaling its intention to build an "auto PC". In combination, these competitors might steal the market out from under GM or, even worse, turn mobile services into simply another expected auto feature, like airbags or power windows.

So here was OnStar, technically impressive, lauded by customers – but expensive to deploy, narrowly available, dependent on dealers for distribution, and with a burgeoning list of all-too-similar aftermarket competitors nipping at its heels. To survive and win, OnStar had to grow – and fast.

At a crossroads

Huber's leadership team, together with the top leadership at GM, considered several moves to jump-start OnStar's growth. The most challenging path called for shifting from dealer installation of the hardware to factory installation. This would eliminate a lot of the dealers' issues. More important, factory installation would allow GM to leverage its one significant advantage in building a mobile services business: its unique access to the huge installed base of GM-produced vehicles. By installing OnStar directly in the factory, GM could gain significant advantages versus its competitors in building out a mobile services subscriber base. For example, factory installation would give GM close to a 70 percent cost improvement in acquiring a new customer, making it profitable to OnStar much more quickly. It could also – potentially – allow GM to introduce OnStar on a wider array of car models more quickly than previously planned, creating important long-term advantages.

Chet Huber and his team understood that market penetration would play a big role in determining OnStar's long-term profitability. Having more customers would drive down equipment costs, call centers and supporting information systems could be amortized across a broader base of users, and third-party service and technology providers would likely come calling OnStar first.

This last insight suggested a third option that was even bolder: to broaden the potential market for OnStar by making it available on non-GM car models.

Recruiting other original equipment manufacturers (OEMs) to share OnStar offered some huge potential benefits. Most significantly, if GM moved quickly enough (and enjoyed a little good luck along the way), OnStar might become the *de facto* standard of the nascent in-vehicle services industry.

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But pursuing this goal would require breaking with the traditional car industry culture. It would also mean “giving” competing firms a proprietary technology that GM had spent millions of dollars to develop. Most important, it would mean changing the relationship between the parent company and its offspring. OnStar would have to become a connected-yet-independent business free to work with automakers other than GM in markets around the world, to build its own customer base, and to develop and promote its own brand name.

Breakout

In early 1999, GM’s leadership made two tough choices. One was to make OnStar a factory-installed option on a wide array of new GM vehicles, not just on Cadillacs. By mid-2002, OnStar was available on 38 of GM’s 52 models. The other was to pursue the goal of making OnStar the *de facto* standard of the new in-vehicle services business, available through multiple carmakers. Today, OnStar is available on cars made by Lexus (Toyota’s luxury brand), Audi, Acura, Isuzu, Saab, and Subaru, with more automakers coming online every year. In combination, these moves produced a dramatic growth explosion for OnStar.

By early 2002, more than 2 million vehicles were equipped with OnStar, as compared to fewer than 50,000 three years earlier. This figure is forecast to grow to over 4 million by the end of this year.

Challenges to come

GM’s vision for OnStar does not stop with its first-generation safety and security and diagnostic services. A key element of the company’s growth strategy is to build out from a new business platform once it begins to show promise. For example, OnStar has launched several new services since 2001. One is Personal Calling, a hands-free mobile phone service in partnership with Verizon. This opens the door to a new profit stream for OnStar via the buying and reselling of cell phone minutes – in fact, OnStar is already the largest cellular service reseller in the country. Another is Virtual Advisor, a customized, voice-activated information service that provides drivers with traffic and weather reports, sports scores, stock quotes, and even delivery of e-mail messages read aloud by an automated voice. It’s a prototype of the information and entertainment services that could end up as commonplace parts of the mobile services bundle.

GM is starting to build additional services into OnStar, ranging from mobile transactions and in-vehicle entertainment to dynamic traffic and route assistance. GM has invested in XM Radio, a satellite radio system offering 100 digital channels of music, news, and chat for a monthly subscription fee.

Measuring OnStar’s success

The crucial factors in GM’s success have been its ability to look at customers’ driving needs from a fresh perspective and its decision to serve these needs through a business design that leverages GM’s unique hidden asset – its unequaled installed base of vehicles.

While OnStar is just now maturing as a business model, it is on its way to becoming one of those high-impact growth opportunities that GM has sought. OnStar is approaching \$1 billion in



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Taking a page from OnStar’s playbook

If you work in a traditional product-centered manufacturing firm, there may be a significant growth opportunity in the areas surrounding your product’s installed base. Here are some relevant questions:

- GM found new, unmet needs in an otherwise mature industry by expanding its view of the market. Can you identify one or more adjacent market spaces with high-intensity growth and profit potential?
- OnStar sought to address the emotional and empowerment issues associated with improving the car driving experience. Do your customers have “soft” emotional needs that might be addressed in innovative ways?
- GM’s installed base represents an asset that would be virtually impossible for a new competitor to replicate. Does your core business generate any assets that are similarly difficult to match?

annual revenue. This may look tiny next to GM's \$180 billion in total revenue, but OnStar provides revenue with a high margin. Once the initial hardware installation has been paid off, subscription fees drop almost entirely to the bottom line. As OnStar focuses on enhancing customer retention rates and driving up monthly fees through new services, its performance should only improve.

CEO Rick Wagoner puts it this way: "OnStar represents an important part of our strategy of having a number of these high-intensity profit drivers in our portfolio – businesses that are smaller today but have the potential to create outsized returns. For us, they represent the critical difference between a solid company and one with momentum and expanding prospects for growth in the stock price".

Acknowledgment

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