

Chapter 2

Ford Finds Its Connection

Today, we are moving from a culture that discourages innovation back to a company that celebrates it.... This company was founded by an inventor; we want to make sure that today the company is overflowing with innovators. We're going to find them, encourage them, and then we're going to reward them.

Bill Ford, Executive Chairman, Ford Motor Company (Ford 2006)

Ford Motor had a problem. Workers at its state of the art assembly plant were taking too long to produce each vehicle. Top management came up with a radical innovation by rethinking the standard automotive manufacturing process. Productivity soared, with the average time to produce each vehicle speeding up from over 12 h to just 90 min. With further process improvements, Ford accelerated the pace of global production to under a minute per vehicle. This was an unprecedented level of efficiency, a change that allowed the company to reduce car prices dramatically. Lower prices meant that millions of Americans could buy their first automobile. The advantages of Ford's manufacturing innovations were so enormous that they revolutionized the entire automotive industry. The process efficiencies were quickly copied by other manufacturing sectors generating similar productivity advances. The radical improvement that Ford pioneered back in 1913 was the moving assembly line, an invention that established Ford's early reputation as an architect of transformation.

Under the relentlessly inventive leadership of founder Henry Ford, the company went on to pioneer dozens of innovations in automotive production and design. By the following decade, the Ford plant could assemble a vehicle (the famous Model T) in about half a minute. Ford became the global auto industry leader, scaling up its output, further reducing its cost per vehicle, and boosting profitability. In 1927 Ford Motor produced and sold more than 15 million automobiles, representing half of the total global automotive market. Ford survived subsequent economic downturns and world wars to maintain its position as a leading global brand and one of the largest family-controlled companies in the world.

Despite this enviable century of growth, Ford Motor faced a crisis in 2006 that raised questions about its long-term corporate survival. Ford's share of the North American car market had eroded from 23.7 % in 2000 to just 15.5 % by mid decade.

The company's model selection was heavily weighted toward trucks, large SUVs and sedans, increasingly out of tune with consumer preference for the fuel economy offered by smaller cars and for more economical crossover sports utility vehicles. Ironically, the company that had pioneered manufacturing efficiencies now lagged behind industry best practices. Ford's average cost to produce a vehicle was \$2,500 higher than the global industry average.

In the second quarter of 2006, Ford Motor reported the largest quarterly loss in its history, \$1.27 billion. This was a bitter pill for investors, as was the forecast that Ford's current performance would result in a full year loss of over \$8 billion. The company's corporate bonds were downgraded to junk status and Ford had to put most of its corporate assets on the line as collateral to borrow the billions of dollars it needed to meet operating costs. Thanks to aggressive cost-cutting and a surprisingly strong Q3, the company's fiscal 2006 results were not as dire as anticipated. Nevertheless, Ford ended the year with a total loss of \$2.7 billion. Annual profits, moreover, were not expected to return until 2009. And this grim outlook was about to get considerably worse as Ford sales sank along with those of the entire automotive sector in the global financial crisis of 2008.

It took 2 years of budget cuts, over 30,000 layoffs, 14 plant closings, elimination of unprofitable vehicles lines, and internal reorganizations to streamline Ford's production processes enough to stem the company's losses. Of the big three US automakers, Ford was the only one able to survive the 2008 downturn without government assistance. By 2009, Ford had achieved its short term financial goals, ending the fiscal year with a profit of \$2.7 billion, the company's first annual profit in 4 years. Against long odds, Ford Motor had positioned itself for a second century of growth.

Ford has come back strong from its 2006 crisis, but the company is still a long way from matching the transformational inventions of its early days. Achieving Bill Ford's vision for a resurgence of innovation remains a work in progress. This case will analyze the strategies that Ford Motor has adopted since 2007 to restart its innovation engine and become a high growth, profitable Power Practitioner. By adopting innovation best practices from technology and ecommerce companies such as Google, Apple and Netflix, Ford is positioning itself to become a digital pacesetter within the automotive industry.

Automotive Industry Context: Incremental Innovation

The automotive industry has a long-standing track record of investing billions in research and development. Each major car maker funds an in-house research team and multiple development groups. In 2013 the automotive industry as a whole will invest over \$100 billion in R&D. Volkswagen, which is the biggest spender among the 1,000 global companies surveyed by Booz & Co, will spend \$11.4 billion. Toyota will spend \$9.8 billion to join Volkswagen on the list of top ten top global spenders. Honda and Daimler each spend over \$6 billion, making it into the ranks

of the top 20. But automakers are not prominent in the list of the world's most innovative companies as ranked by the Booz survey, reinforcing the conclusion that R&D investment does not reliably translate into breakthrough innovations. The highest ranked global innovators are Apple at number one and Google at number two, followed by Samsung and Amazon. The only automaker in the top ten is Tesla Motors, the electric car maker which spent a relatively puny \$300 million on R&D last year (Jaruzelski et al. 2013).

Automakers pour billions into research, but the auto industry as a whole produces incremental rather than transformational change. Year after year, leading car brands introduce new automobile models with updated navigation, safety and driver assistance features that reflect an impressive level of advanced technology. Despite all these features, the baseline characteristics of mass-market automobiles have remained stable over time and the industry itself is highly resistant to disruptive innovation. When the year's new car models are compared to each other they end up being very similar to other brands in the same price category and not very different from last year's models.

From decade to decade, carmakers put their efforts into improving the performance and safety of their vehicles through long-term engineering projects that are slowly introduced to the market. Each vehicle has multiple interconnected computers, electronic sensors and internal networks. A mid level car today typically contains hundreds of sophisticated microprocessors that manage everything from vehicle steering and braking to door locks, turn signals and seat belt sensors. High end vehicles contain an array of advanced navigational, entertainment, and driver monitoring features that support radar enhanced collision avoidance with automated steering, braking, and other advanced safety capabilities. It takes years for new features to make it from the research lab to the auto showroom. In addition to meeting safety, regulatory and performance testing hurdles, any innovations that impact core auto components will require changes in the manufacturing process and possibly an expensive adaption of existing assembly lines. Adding new vehicle components may also require supply chain adjustments. The time and expense involved in retooling for fundamental changes is a strong industry-wide deterrent to radical innovation (Cronin 2010).

Car makers anticipate little threat from disruptive new market entrants, and with good reason. The complexities of new vehicle design and manufacture, combined with the enormous capital costs of building new factories, are daunting and effective barriers to automotive start ups. Despite the hundreds of millions in venture and government funding invested in new electric vehicle makers during the past decade, few survived long enough to bring commercial models to market. Tesla, one of the innovative and potentially disruptive survivors, still faces a long uphill battle to become a well-established brand.

In this context, Ford had to develop its Power Practitioner innovation strategy from the ground up, seeking models outside the automotive industry for best practices in innovative digital services, open platforms and developer ecosystems.

Rebirth of Innovation at Ford

As Bill Ford acknowledged in his 2006 business review, Ford Motor was facing a struggle for survival. With the future of the company at stake, Ford turned first to the areas in which it had fallen behind. One of these was internal production processes. A lack of coordination in manufacturing systems and a plethora of different vehicle bodies and incompatible parts had pushed Ford's production costs far above the industry average. To reduce its cost per vehicle and bring its production processes into line with industry best practices, Ford standardized its production infrastructure worldwide. It modernized and retooled its manufacturing plants to increase process efficiencies.

Responding to consumer preferences for smaller and more fuel efficient vehicles, Ford developed a plan to roll out new or upgraded versions of 70 % of all Ford vehicles along with a new emphasis on developing hybrid and electric vehicles to serve the growing market niche of environmentally conscious car buyers. This model upgrade was accompanied by an internal program to streamline Ford's vehicle design process, eliminating older models and those that had lagged in sales. Ford selected a small number of base vehicle platforms upon which it could manufacture multiple car models. Instead of designing different cars for each of its global markets, the company used these standard base platforms with selected design and option variations to accommodate regional preferences.

Implementing such changes was essential to the success of Ford's campaign to rein in costs and regain competitive parity with leading manufacturers such as Toyota in process efficiency and cost per vehicle. Management pushed through innovations in each area of the company. Alan Mulally, the CEO whom Ford hired to spearhead the company's turnaround in 2006, insisted that managers use shared data to integrate across business areas. According to the company's data and analytics managers, Mulally's arrival created a data-driven culture, pushing the company to abandon its legacy of separate data silos to create an integrated data platform. While Ford Motor caught up with industry best practices in manufacturing and design, the company was also preparing to embark on more far-reaching innovations in automotive digital services (Hiner 2012a, b).

The rebirth of innovation that Bill Ford had promised came in a series of innovations based on best practices from the digital sector. Ford was determined to move beyond the traditional, hardware-focused, proprietary solutions typical of the automotive industry to innovate with digital applications, services, and open platforms. Top management wanted to use digital innovation to differentiate the company in the eyes of consumers. Ford's first step was its launch of the Ford SYNC platform in 2007.

Ford's embrace of an open platform and Bring Your Own Device (BYOD) strategy for connecting smartphones and their apps to Ford vehicles was a bold decision for the industry. Instead of insisting on end-to-end control of all the hardware and software in its vehicles, Ford was inviting partners to create strategic in-car services. The SYNC strategy reversed the long term trend for automakers to embed

proprietary communication and navigation solutions in their high end vehicles as exemplified by GM's OnStar. A comparison of the Ford SYNC with the OnStar service illustrates the disruptive potential behind Ford's decision.

Like OnStar, SYNC is designed as an embedded platform for providing frequently used in-car features and services such as maps, navigation and turn by turn directions, voice enabled calling through a mobile phone interface, music, news and other online content and applications. But the innovation strategy behind the launch of SYNC is completely different from that of OnStar.

Rather than developing its own system from scratch, Ford partnered with Microsoft to license the Windows Embedded Automotive platform and customize it with Ford-specific options. That itself was a radical step for the automotive industry in 2007. But Ford went further. Even though the core OS and embedded software was based on Windows, Ford insisted that the new SYNC module had to be designed to work equally well with all mobile operating systems and cell phones. Consumers would use Bluetooth wireless or USB to link their mobile phones and music players to the Ford SYNC platform to access apps and entertainment. If drivers bought a new phone, or added apps, they could continue to use Ford SYNC with their upgraded device.

As is typical of new technology, especially technology that attempts to interface and interoperate with multiple hardware and software systems, the performance of Ford SYNC was far from perfect at the outset. Bluetooth wireless connections were not easy for many mobile phone owners to manage and the platform software was buggy. But compared to OnStar and other expensive built in navigation systems, the price was right. Since Ford was relying on the driver's phone to provide connectivity rather than installing an expensive embedded cellular module and antenna, it was affordable to offer SYNC as a free service for up to 3 years in selected new vehicles.

The timing of SYNC's market entrance was also right on target with the widespread adoption of a new generation of smartphones and apps. 2007 marked the debut of the iPhone and Android phones with advanced voice calling features, integrated music and Google maps navigation that were perfect for connecting to the SYNC platform. The more consumers bought advanced smartphones and loaded them with apps, the stronger the value proposition of a BYOD platform strategy for Ford. Drivers could update their phones as often as they wished, creating their own personalized mix of in-car entertainment and services to complement the Ford-provided services such as 911 Assist for automatic calls to roadside assistance in case of an accident.

In contrast, when GM developed its OnStar service in 1996 it did not even consider the open platform, BYOD option—partly because mobile phones at the time were limited to voice calling, but primarily because GM executives wanted the system's design, hardware, and user interface to be totally controlled by GM. As an innovative service for its time, OnStar was expected to build customer loyalty as well as to generate revenues through a fee for installing the OnStar option on new GM vehicles plus charging drivers an annual subscription fee for the service.

The components required for OnStar, including an embedded wireless communication module, GPS and an antenna for satellite connectivity, added considerable cost to each vehicle in which it was installed. Moreover, OnStar services were voice-enabled and relied on live operators being available 24 h a day, 7 days a week to provide turn by turn directions and safety assistance such as summoning roadside help to the scene of a breakdown. According to Chester Huber who joined GM to help design and launch OnStar and spent 14 years as its first president and CEO, GM spent over \$1 billion investing in and subsidizing the OnStar service before it established enough of a customer base to become self-sustaining (Nobel 2013).

In addition to costing GM over a billion dollars, the proprietary design of OnStar required a constant and costly struggle to keep up with rapid improvements in competitive solutions. The first disruptive competitors were standalone personal navigational devices (PNDs) that became market favorites. Garmin, Magellan, Tom-Tom and other PND manufacturers offered superior mapping and navigational services featuring full color display screens, interactive touch graphics and other features that OnStar lacked. Over time, PND price points fell to under a 100 dollars for basic models, making them affordable for most drivers. The global adoption of the iPhone and Android smartphones in turn disrupted the PND market. With so many low cost and free options available, drivers saw even less value in a high priced embedded option with annual subscription fees and GM's opportunity to expand the traditional OnStar customer base declined.

Ford's decision to implement an embedded platform designed by Microsoft and the innovation of letting drivers to use their own mobile phone to provide connectivity avoided many of OnStar's problems. Partnering with other vendors and relying on a smartphone interface instead developing everything in house lowered the cost structure for delivering and updating in-car services. It also helped to extend the lifespan of the SYNC platform—an important consideration given the trend toward consumers keeping their cars for longer periods of time.

Since Ford SYNC provided standardized interfaces for all types of mobile devices, drivers can decide for themselves which apps and features are most important, updating their phones without needing a parallel update of the SYNC system. This solves the challenge of anticipating consumer tastes and smartphone capabilities at the time of car manufacture—an impossible task when device features and apps are changing so quickly from year to year. At the same time, the embedded SYNC module offers a secure connection from the phone to the vehicular network. This connection allows Ford to enable voice control of the car radio and other in-vehicle services. SYNC can also connect the phone display to a variety of safety features and vehicle performance and diagnostic information that can be used in developing third party applications.

Because Ford was not required to embed an expensive communications module or take responsibility for the satellite or cellular network conductivity, it was cost-effective to build the SYNC module into a broader group of vehicles. These lower costs also gave Ford greater pricing flexibility when it marketed SYNC and its MyTouch successor to car buyers. As of 2013, Ford SYNC is active on over five million vehicles. This compares very favorably to the estimated 5.1 million active OnStar subscribers in 2010, a full 14 years after GM's launch of its service.

Despite its strong points, Ford SYNC and especially Ford MyTouch system illustrates many of the risks faced by manufacturing companies innovating in software and services. Like much newly released software, MyTouch came to market with unresolved bugs and a propensity to crash in some configurations. So many MyTouch customers reported connectivity and interface problems that complaints over social media reached a fever pitch and Ford's overall vehicle consumer satisfaction rating suffered. Ford responded with upgrades, interactive support, and new software releases. The bottom line is that the innovations in SYNC and MyTouch are meeting Ford's goals of differentiating itself as a digitally savvy car maker and attracting new buyers. In a recent consumer survey, Ford noted that 80 % of 2013 buyers indicated their interest in a Ford vehicle was related to its reputation for advanced digital services and their desire to have a system like SYNC in a new car.

The Connected Car

At the beginning of 2013 Ford took the next step toward a fully open strategy for the connected car. It announced the formation of an OpenXC partnership that would make the Ford SYNC AppLink interface free and open to third party application developers. OpenXC lets registered users download a software development kit and the details of sensor specifications for Ford automobiles in order to encourage application developers to engage with the technology and eventually develop apps for the Ford platform.

Going even further, Ford announced that the entire SYNC AppLink platform was open and available for use by its competitors in the automotive industry. One analyst characterized this announcement as the beginning of Android for automotive apps, noting that Ford was breaking new ground by giving competitors cost-free access to the foundations of the SYNC AppLink system with no restrictions on how the system could be used in other manufacturer's vehicles. Ford's open platform offer could dramatically increase the availability and the strategic importance of applications for the automotive industry. Automakers that decided to adopt AppLink would have the advantage of joining a platform that was already well-regarded by embedded system developers, increasing the likelihood attracting innovative new ideas and app options to their ecosystems (Lavrinc [2013](#)).

Developers responded positively to the idea of experimenting with the free AppLink resources. Since Ford's announcement, thousands have registered to download the AppLink specs. A significant number of developers have approached Ford with ideas for new services. Given the long-standing inclination toward closed ecosystems and proprietary platforms in the automotive industry, it is not surprising that the other auto manufacturers are less enthusiastic about Ford's offer. Competitive automakers expressed reluctance to drop their own proprietary systems in order to join in with Ford's ecosystem. A General Motors executive remarked that from his company's perspective adopting Ford's AppLink standard would be immensely risky. Why? The open nature of the platform could result in a loss of control by GM.

This attitude underscores the disruptive nature of Ford's open source initiative along with the potential for Ford to become an industry pacesetter if it succeeds at attracting enough partners and app developers to create the vehicle equivalent of an App Store.

The AppLink open source announcement kicked off Ford's bid to become the open-source automotive innovator, with the Ford platform as an industry-wide standard for in car services and applications. It's another example of the Power Practitioner strategy of adapting best practices from other industries. Media comparison to Android is premature, however, even though Ford's current strategy with SYNC and AppLink clearly draws inspiration from Google's open source model. To come anywhere near Android's level of success, Ford will have to redouble its efforts to attract a vibrant community of app developers and a strong following among consumers.

To generate market interest, Ford sponsored a developer competition in 2013 with prizes for the best applications and an opportunity for the general public to suggest a theme for the first round of competition. Consumer votes favored apps that would help drivers to increase fuel efficiency—an area which allowed Ford to showcase AppLink's ability to let developers tap into the data generated by various vehicle information systems.

Contest results were announced in fall 2013. Twenty-three applications designed to increase fuel efficiency had been submitted. A start up called Fuealytics won the grand prize with an app that compares the car's fuel results with similar models and Eco-Dash came in second with a graphic interface to help drivers visualize their fuel consumption in real-time. Despite the relatively low number of entrants, the contest outcome was positive for Ford. This was a contest that required developers to get familiar with the AppLink tools and to spend time deeply engaging with Ford's technical infrastructure and APIs. It extended the knowledge base needed for future development work.

Looking beyond its return to profitability based on industry best practices in manufacturing, Ford has crafted a well-integrated strategy aimed at becoming the leader of an ecosystem for in-car services and apps. It is ahead of the industry in embracing open standards and attracting software partners. Its Ford SYNC services have proven themselves to be attractive to new car buyers. As the next section will discuss, Ford has also demonstrated its skill as a Power Practitioner in leveraging social media to create a direct connection to consumers, instead of relying primarily on broadcast advertising and dealership sales channels.

Innovative Channels for Reaching Social and Mobile Car Buyers

The car dealership sales model dates back to the start of the automotive mass market. Independently owned US dealerships were established as a way for automakers to expand their reach into all geographic areas. Car dealerships provided showrooms and sales staff to encourage buyers to view and test drive new models. In addition to

providing information and driving experiences, the dealership staff gave distant auto manufacturers a trusted, local face and personality. Local car dealers were typically pillars of their community who were actively involved in all sorts of civic, business and neighborhood activities. This made them excellent ambassadors for promoting an automotive brand in the early days of the industry.

The early car dealers, however, were often forced to buy inventory from the big automakers well in advance of their hope of making a sale. This cushioned the automakers from economic ups and downs and guaranteed them steady flow of sales but it left the dealers to handle excess inventory. In exchange for their services, dealers lobbied for legal protection and gained exclusive right to sell cars directly to consumers.

In the days before ecommerce, giving dealerships an exclusive channel to consumer sales made sense to automakers. It protected dealership investments, motivating them to expand their physical locations and local ad budgets. But now that ecommerce has become a multi-billion-dollar sales channel for all types of goods and services, the automakers are chafing at the dealer franchise restrictions that prevent them from selling cars directly to consumers over the Internet.

Most automakers still rely on traditional broadcast and print advertising supplemented by websites that allow consumers to explore vehicle features and configure models with a variety of different options. Online configuration lets automakers see how their potential customers think about which features are most important and how they respond to the bottom line price for a customized vehicle. But just at the point of decision, prospective customers are referred to nearby dealerships to switch from online interaction to visiting a showroom. Consumers who land on automaker websites are already interested in a particular brand. There is a large gap between those serious car buyers and the general consumer who may or may not pay attention to a 60 s television commercial.

Ford was an early adopter of social media marketing to bridge that consumer gap, using innovative social media campaigns to convey the experience of being a Ford owner to the general consumer. One of Ford's first social media campaigns served to launch a redesigned Ford Fiesta brand in 2009. To attract a younger audience to the new Fiesta, Ford launched a contest for consumers, asking entrants to describe why they would enjoy driving a new Fiesta free for 1 year. From thousands of entries, it selected 100 drivers to experience the Fiesta—and to share that experience with the world through regular blogging, tweeting, Facebook posts and videos. Winners were encouraged to talk candidly about the positives and the negatives of their experience.

The outpouring of opinions and spontaneous observations from Ford's 100 social drivers articulated the day to day experience of owning a Fiesta in ways that professionally produced commercial messages could never capture. Ford edited clips from some of the winners to put together a more traditional marketing campaign, retaining the authentic voice and videos from the participants. This approach to marketing leveraged the fact that consumers today are much more likely to trust their peers and to make purchasing decisions based on advice from friends. Positive comments on social media and candid consumer reviews of products have more influence than

advertising. The Fiesta campaign presented Ford in an authentic and engaging light much more effectively than a series of ads that would be easily tuned out by young car buyers. By the end of the Fiesta campaign Ford had attracted almost 2,000,000 fans on Facebook and over 200,000 Twitter followers.

Buoyed by this successful experiment, Ford has continued to innovate in its use of social media. It decided to forgo traditional advertising and trade show channels in 2010, instead launching its new Ford Explorer on Facebook. The Facebook launch was coordinated with social and digital marketing efforts to encourage consumer interaction. Over a 4 week period, the Explorer campaign reached over 100 million people via social media, a resounding success in terms of consumer engagement at a price point that was significantly lower than the cost of a single Super Bowl ad campaign (Laskowski 2013).

Ford's early use of social media helped it to build a reputation as a fun and engaging brand in the minds of younger consumers. Ford's innovations with the SYNC platform and its support for BYOD appeal to the same generation of young car buyers and owners who are the heaviest users of social media. To complement Ford's integrated innovation strategy, social media marketing provides a data-rich view of consumer trends and preferences that Ford can integrate with the data it collects from other sources, including vehicle performance data and insights into driver habits and their use of in-car services. The next section discusses how Ford is working to analyze and apply the data generated by its open platform, application ecosystem and social media to further its innovation strategy.

Big Data Opportunities: The Car as a Service

According to Gartner Research, "to generate future profits, automakers need to make a transformational shift from manufacturing and selling physical vehicles to designing smart mobility services and analyzing the data such services generate. This shift will depend on smart, connected vehicles that generate unprecedented amounts of data" (Koslowski 2012).

Bill Ford has been promoting a similar vision of smart mobility, inside his own company and more broadly in speaking with stakeholders in the wireless and technology industries. In a 2012 keynote speech at the Mobile World Congress, Ford urged telecommunications and other technology companies to work together with automakers to connect the billion-plus unconnected vehicles on the road today. To address global transportation needs, Bill Ford envisions creating an interconnected transportation network in which vehicle-to-vehicle communication could route drivers around traffic gridlock and alert them to dangerous conditions ahead.

If Bill Ford is the acknowledged visionary leader of Ford Motor then CEO Alan Mulally is its leading Power Practitioner. Mulally engineered Ford's turnaround by realigning the company toward best-practice based innovation in every area of business. He is also the internal evangelist for integrating and leveraging data as the foundation of future innovation. Ford is currently working on big data projects to integrate the unstructured consumer opinion data generated by its Internet and social

media activities with the unending stream of data that flows from the Ford SYNC Platform. Future plans include sharing that data with ecosystem partners and allowing app developers to leverage it in mobile consumer apps (Hiner 2012a, b).

Just how massive is the data collected by each vehicle in Ford's installed base of vehicles? A recent article reported that the 2013 Ford Fusion Energi plug-in hybrid has more than 70 embedded computers that process data from the dozens of sensors that are constantly monitoring the vehicle performance and every action of its driver. All those sensors produce more than 25 GB of data every hour that the car is on the road. Ford is not yet analyzing all that data to spot meaningful trends across all such vehicles, and it may be years away from having a seamless integration and analytics engine that can pull together predictive forecasts and holistic market insights based on multiple data resources. Thanks to the vision of top executives, the company has a head start working on that goal. Ford is making big data a priority in its quest to create new business models and innovation breakthroughs (McCue 2013).

Conclusion

Bill Ford is not content with being an automotive industry Power Practitioner. He has set his sights on a smart mobility future in which making and selling vehicles will be only one part of Ford Motor's business model. As he noted in a 2012 interview, "I suspect we'll always be making cars and trucks, but we may be doing something else very different as well. If we think of ourselves as a mobility company rather than just an automobile provider that really opens lots of different possibilities" (Hiner 2012a, b).

As we have seen, Ford emerged from its mid 2000s struggle for survival as an innovative adopter of best practices in the digital as well as automotive sectors. It demonstrated a commitment to innovate across the entire company and has delivered on that commitment with profitability, global growth and an open platform for the connected car and third party mobile applications. Ford is preparing to thrive in a future where connected cars become the primary business models of car makers and their partners. In this long-term future, car makers will have to offer smarter services to generate revenue and only the most innovative will survive.

Whether Bill Ford's radical vision of the automotive future ever materializes, Ford Motor has succeeded in reasserting itself as an innovative force with the resources and the vision to implement disruptive innovations in specific areas such as Ford SYNC and its open application infrastructure.

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