Examining the evolving mobility ecosystem

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Deloitte’s Automotive practice has been studying automotive consumer and mobility trends for years. Check out our latest installment, *The future of mobility*, which examines how transportation technology and social trends are creating a new business ecosystem.

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Examining the evolving mobility ecosystem

Craig Giffi  
Vice Chairman  
U.S. Automotive industry leader  
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The here and now gets comfortable sometimes. For players in the automotive industry, a here and now with low gas prices, low interest rates, and record consumer demand worldwide likely feels very comfortable. U.S. sales are reaching new record highs, fuel prices are at 30-year lows, and the sales mix is heavily skewed towards larger, more profitable vehicles. Globally, sales are forecasted to top out around 100 million units through the end of the decade.

But how long will the here and now maintain in a rapidly evolving mobility landscape? And are traditional automotive companies (OEMs, retailers, and suppliers) going to lead the evolution or follow the ever-increasing number of outsiders—disruptors—that are finding new ways to meet consumers’ mobility needs?

We see a high degree of pressure and change impacting traditional automotive companies and other enterprises whose business model leads back to the basic transaction of people buying cars. Some of the pressure is already in place. For example, regulatory requirements such as CAFE, zero-emission vehicles, and safety standards add billions in total cost pressure to new vehicle development, while consumers relentlessly demand that automakers integrate the latest technologies.

Looking ahead, macro trends like the ride-sharing, car-sharing and other mobility options that offer access versus require ownership will continue to reach far deeper into the century-old automotive business model. We’re seeing it today. What’s more, we’ve only started imagining the possibilities that autonomous vehicles provide.

After a century or more of owning steel, we believe more people will instead increasingly opt to “consume mobility.” That mobility may be shared, autonomous, networked, fleet-managed, or some of each. Today’s “sales person” may be tomorrow’s “mobility manager.” And business as usual will likely get unusual, pretty fast.

Getting to this holistic new landscape, and succeeding within it, will bring choices and challenges. What people in the industry must ask now, at the outset of this transformation, are questions like: How will it unfold, and at what pace? Will value capture shift and to whom? How will ever-more connected vehicles present and address cybersecurity challenges? What will it even mean in the future to be a dealer, a supplier, or an automotive manufacturer?

The articles in this supplement explore those questions. We explore and unpack the evolution and expansion of the mobility landscape and look at the forms it will take, the first-order effects it will have, and the ways those effects are likely to ripple across the industry and societies, worldwide.

What will determine whether these prospective changes come to pass and who will win? As with most things, consumers will likely decide. Change will likely move as fast or as slow as it brings value to consumers. We’ve seen how that barometer, and not raw technology, has governed the pace of the electric car’s market entry, for example. And we’ve all seen innovations that sped past expectations because people clamored to pay for them.

Every spark of change starts with a small cadre who looks to the future and gets it. This cadre often starts out at odds with the internal forces of a large, traditional organization. Then it’s usually a question of when, not if, the future unfolds as they predict.

The global automotive industry is at just such a turning point. Whether you’re a visionary, a follower, or even a skeptic, the only certainty is that the traditional model won’t endure forever. Let’s look ahead together.

Joseph Vitale, Jr.  
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How transportation technology and social trends are creating a new business ecosystem

There is a critically important dialogue going on across the extended global automotive industry about the future evolution of transportation and mobility. The debate is around whether the structure and dynamics of the current industry will evolve incrementally toward some new mobility system or arrive at something radically different than today’s system—and get there in a highly disruptive manner.

A series of forces are converging to drive the industry’s transformation, specifically: Shifts in powertrain technologies; rapid advances in the connected car; the emergence of autonomous drive vehicles; advances in materials; and changes in mobility preferences.

After exhaustive analysis and debate, we have concluded that for an extended period of time (perhaps the next 10-15 years), the most likely outcome will be that these two competitive visions will co-exist through four interdependent and concurrent futures for personal mobility, emerging from the intersection of two critical trends:

- Vehicle control (driver versus autonomous)
- Vehicle ownership (private versus shared)

Four future states

Incremental change: Future state one operates very much as it has for the past century. Private ownership of vehicles remains the predominant form. This future state assumes that while driver assist technologies continue to advanced, completely autonomous drive does not take hold anytime soon.

A world of car-sharing: The second future state anticipates continued growth of shared access to vehicles. In this state, shared vehicle services become ubiquitous as greater scale and increased competition leads to a more expanded range of services and segmented customer experiences at lower costs.

The driverless revolution: The third future state is one in which autonomous-drive technology becomes viable, safe, convenient, and economical, yet private ownership continues to prevail. Individuals seek the driverless functionality for its safety and other potential benefits but continue to own cars for many of the same reasons they did before the advent of autonomous drive.

A new age of accessible autonomy: The fourth future state anticipates a convergence of both the autonomous drive and shared mobility. In this future, mobility management companies offer a range of passenger experiences to meet widely varied needs at differentiated price points. Over time, as smart infrastructure expands and driver usage nears a tipping point, fleets of autonomous shared vehicles will likely become ubiquitous and spread from urban centers.

Profound disruption could extend far beyond the automotive industry. Every aspect of the modern economy based on the assumption of human-driven, personally owned vehicles will likely be challenged. In the United States, the sector generated nearly $2 trillion of annual revenue in 2014—11.5 percent of U.S. GDP—from automotive manufacturers, suppliers, dealers, financial services companies, oil companies, fuel retailers, aftermarket services and parts, insurance, public and private parking, public-sector taxes, tolling and traffic enforcement, medical care, and others.

Implications for the automotive industry

Global automotive manufacturers (OEMs) face momentous and difficult decisions. Notwithstanding the resurgence from the 2009 economic downturn, production economics for automotive companies remain exceedingly challenging. The automotive industry currently struggles with the fundamental economics of an intensely competitive global business with enormous capital requirements, while operating margins and return on invested capital remain low at the very moment when the industry is experiencing some of the most favorable business conditions it has seen in decades.

OEMs should consider whether they need to evolve from a (relatively) fixed capital production, first-transaction, product-sale business into one centered on being an end-to-end mobility services provider. This would represent a profound business-model change and requires the development of new capabilities to be competitively and sustainably viable.
At a minimum, they should consider weighing how to meet the needs of a changing landscape as consumers increasingly use shared mobility and become interested in highly tailored, customized, personally owned autonomous-drive vehicles. This could require transforming product-development and innovation capabilities and reconfiguring supply chains and production operating systems to be even more lean, flexible, and “smart customization”-enabled. At the same time, consumers could begin demanding shared autonomous vehicles for different kinds of trips, which could spur the creation of more varied vehicle forms. This could drive the development of high-speed, low-cost vehicle assembly operations to create and produce vehicles with lightweight frames, custom experience-focused software, and highly customized, design-focused interiors. Light autonomous-drive vehicles can be made to be highly energy-efficient and, with a longer driving range, make electric vehicles more viable and could help automakers meet stringent regulatory standards.

Automotive suppliers will likely have to adjust as OEMs transform. As sales of autonomous-drive vehicles grow, suppliers will need lean, agile operations to serve the highly varying needs of the personally owned segment. While most of the core powertrain, chassis, brake systems, and electronic wiring components on such vehicles may be standard, giving suppliers some benefits of operational scale, the packaging for personally owned vehicles will likely be tailored and customized. Building the more standardized vehicles needed for shared mobility solutions could offer large volumes, and the demand will likely be for less complex and lower-value-added products; therefore, the economics in this new marketplace will strongly favor the lowest-cost producers.

Dealers may also find their role in the ecosystem challenged; within a decade, they might be dramatically different than today’s model. For the moment, they continue to operate as they have for decades, selling and servicing driver-controlled, personally owned vehicles. As autonomous-drive vehicles become more widely adopted, however, there are likely be far fewer personally owned vehicles than the 250 million in operation in the U.S. today. The need for vehicle service and repair will likely continue, but may diminish as more maintenance occurs via remote software upgrades and patches. This will greatly reduce the need for the current network of over 16,000 dealers nationwide.

Moreover, as the market bifurcates between highly customized, personalized, autonomous-drive vehicles and mass-produced, high-volume vehicles used by shared mobility fleet management operators, dealers could build business models and develop new capabilities to serve each segment discretely. The former requires building operations that enable customers to engage in vehicle customization and personalization. The latter involves morphing from a sales- and-service center to either supporting or becoming a fleet manager that offers “end-to-end” mobility.

In our recently published study, *The future of mobility*, we highlight the impacts to numerous other sectors, including: insurance, financial services, public sector, long haul/cargo transport, energy, technology, telecom, media, healthcare and legal.

Moving forward
In the future mobility ecosystem, sources of value shift profoundly. With this evolution still taking shape, we want to share some reflections on the strategic and operational implications for legacy incumbents, extended industry participants and disrupters as they weigh their future direction. Specifically:

1. Industries rise and fall. Cycles take long periods to play out but eventually change occurs.
2. The system benefits and fundamental economics for passengers of the disrupter vision are overwhelmingly compelling.
3. There is a pathway for the existing automotive industry to lead the adoption to this future ecosystem but it will require fundamental and earlier change to their current business model. Value will likely accrete to those who: 1) provide “end-to-end,” seamless mobility; 2) manage the mobility network operating system; and 3) holistically create and manage the in-vehicle experience. Everyone in today’s ecosystem should reassess how they will operate and create value during the interim period of the four states and the eventual future that will emerge.
4. The insiders and disrupters need each other. Despite their wariness, and highly differing outlooks and perspectives, automotive companies and technology firms should consider evolving their relationship into one that is symbiotic since they are mutually co-dependent.
5. The disruptive effects cross industry are profound. Whenever an industry goes through a significant transformation, there are winners and losers. Everyone in today’s automotive core and extended value chain should determine “where to play” and “how to win” in the future mobility ecosystem. Offsetting these impacts are numerous areas of opportunity that offer potentially even greater promise. Each of these new horizons can bring about new players with differentiated capabilities and change the fundamental dynamics of where and how value is created—and the market will likely decide who wins and loses.

The next decade promises to be one of eventful change as the way passengers and cargo are transported fundamentally shift and a new ecosystem emerges. Deloitte is helping our clients to systematically address these challenges and transform their enterprises to compete in a highly uncertain environment. For more information and perspectives on how mobility is changing, please visit [www.dupress.com/us/future-of-mobility](http://www.dupress.com/us/future-of-mobility).
How technology is moving the automotive industry from products to relationships

John Hagel, co-chairman, Deloitte Center for the Edge, Deloitte Consulting LLP, and Joe Vitale, global Automotive industry leader, Deloitte Touche Tohmatsu Limited

The automotive industry is facing a sea change in how people think about mobility. Technology is fundamentally changing the relationship between businesses and consumers. How can OEMs position themselves to succeed in a rapidly shifting transportation landscape? We talked with John Hagel of Deloitte’s Center for the Edge and Joe Vitale, global Automotive industry leader, Deloitte Touche Tohmatsu Limited, to learn more.

What are the most significant changes you see emerging in the automotive industry?

Joe Vitale: For a long time, competition in the automotive industry has been around product, specifically product quality, performance, and safety. But as cars get better and better, we’re seeing diminishing returns on improvements in those areas. Instead, our research shows that consumers today value their experience with the brand as more important than vehicle design. At the same time, there’s a massive shift toward usage over ownership. Consumers are becoming more interested in mobility on demand, lower cost and higher convenience. That’s creating unique opportunities—and tremendous challenges for traditional business models.

John Hagel: It really depends how much of the automotive market shifts away from ownership. The automobile is becoming a rich repository of data about where, and when, each car goes. The value of that data is huge. If I own the car, the manufacturer gets visibility into my mobility patterns. On the other hand, if I take whatever vehicle best fits my needs at that time—through car-sharing, mobile car services, etc.—the data is about the shared vehicle. In that case, the customer’s smartphone becomes the best source of an integrated view of the individual’s mobility patterns, and the site of opportunity to build relationships with individual consumers.

You’ve said that to address these changes, the industry is going to have to shift from a product-driven business model to one based in relationships. How might a brand extend its relationship with customers using all this data?

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What kind of opportunities will arise in the context of this information? How might the intersection of different data sets open up new business opportunities?

John Hagel: Joe was talking about brands shifting to a focus on experience. There’s also the notion of shifting to a relationship focus. You need access to data about the individual, so you can get insight through analytics, then use that insight to dramatically enhance the user experience. Next, you need to build a trustworthy relationship with the customer, where the brand promise is redefined: “Do business with me, because I know you better than anyone else, and I can give you much more value in return.”

How will these new opportunities require OEMs’ existing business models to change? What specific capabilities will OEMs need to develop?

Joe Vitale: All the players are going to have to wrestle with that question. Ecosystems can be powerful sources of leverage, giving companies access to competencies, capabilities, and resources that they don’t have themselves. On the other hand, you don’t want to get lost in the crowd as the ecosystem...
grows and becomes more diverse. Success here means finding and occupying the influence points within ecosystems. Where is value going to concentrate in an ecosystem? How can an automotive OEM capture it, then rely on ecosystems for leverage beyond that? Automotive companies will have to choose where to play.

What initial steps can companies take to better understand the choices available to them, and to identify the most fruitful?

**JV:** As we move from ownership to usage, and also if we move from current vehicles to driverless vehicles, each company will have a significant set of choices. What role will it play in relationship to the customer—and to ownership of data, vehicle operating models, and mobility services? Next, what partnerships will it need to develop, and how can it build those relationships without giving up its competitive advantage? One way to think about it: Where is value being created? For example, who is in position to both create and own the operating system for driverless vehicles, to be the first to get it to market? Do you want to partner with someone to acquire those capabilities, or create them in house? There are risks and opportunities associated with these decisions—and they’re the kind of decisions the automotive companies haven’t had to make before given the industry’s fairly static value chain. But that’s changing quickly.

**JH:** This is a very different approach to strategy than most OEMs are comfortable with. Typically, they’ve worked with five- to seven-year plans. But in this rapidly changing world, we think the most effective approach to strategy is a “zoom out, zoom in” approach. You try to align senior leadership around a 10- to 20-year view of where the industry is headed and what position you want to occupy in that industry. Then you zoom in and ask, “What are the two or three business initiatives we could pursue in the next six to 12 months to accelerate toward that destination?” Five years is less relevant—it’s all about much longer or shorter terms.

And once you’ve defined your long-term destination, you can think about growth in new ways. With emerging mobility ecosystems, there’s an exciting opportunity for automotive OEMs to take a third path beyond organic growth or acquisition. We call it leveraged growth—rather than acquiring companies or developing capabilities internally, you’re adding more and more value to your market by mobilizing third parties in the ecosystem that can partner with you.

So what’s the best way for a large automotive manufacturer to start going after those new business opportunities? What advantages do OEMs have here?

**JV:** OEMs’ biggest advantage is access to markets. They’re truly global, with a huge entrenched capability to serve markets and consumers around the world. If the shift to these new models is more incremental, they can begin to embed capabilities incrementally into the vehicle. They can provide highly assisted vehicles that increase vehicle safety and convenience. They can collect customer data and create new service offerings, leveraging their relationships with customers. But if we quickly move to autonomous vehicles, and they don’t own the operating systems for that, or they aren’t able to create new business models, like Uber has done, they risk losing their advantage. Another advantage: OEMs understand how to operate in a fully regulated environment, which will continue to be a requirement, and a brake on the speed of transformation. It’s going to be a challenging ride. If OEMs can continue to invest in and improve their core business while adopting new business models and partnering with companies that offer the right capabilities, they can certainly emerge as winners. But that means having the right strategy, placing the right bets, and having the right partners to move quickly as the market continues to change.
Exploring the future of mobility at Ford Motor Company

A conversation with president and CEO Mark Fields

In July 2014, Mark Fields stepped into the role of president and CEO of Ford Motor Company, announcing shortly thereafter that the company would embark on a journey that would ultimately transform Ford into a product and mobility company. At the 2015 Consumer Electronics Show (CES), he announced Ford Smart Mobility—the company’s plan to get to the next level in connectivity, mobility, autonomous vehicles, the customer experience and data and analytics. A year later, our Joe Vitale, global Automotive industry leader, Deloitte Touche Tohmatsu Limited, and Scott Corwin, senior director, Deloitte Consulting LLP, sat down with Mark to discuss Ford Smart Mobility and what the future of mobility may have in store for the company.

Ford was one of the first companies to push the envelope around mobility, driving to not only be a product company, but a product and mobility company. What does that mean for Ford and for consumers? Every company has to have a purpose—a reason they exist. At Ford, our purpose has always been about making people’s lives better, and this dates back to our founder, Henry Ford. His affordable car put the world on wheels and made physical movement and mobility accessible to everyone. It gave people the ability to pursue new experiences and expand economic opportunities.

In its simplest form, mobility is giving people the freedom to live, work and play where they want. So when we talk about becoming both an automotive and a mobility company, it is about more than just moving from Point A to Point B. It really is about human progress. As a company, we want to provide that freedom of mobility to help make people’s lives better and change the way the world moves.

There are four global trends that are driving our approach.

First is the growth of megacities. There is simply going to be more and more congestion around the world as more people move into cities. Today, there are 28 megacities or metropolitan areas with total populations of more than 10 million people worldwide. Fast-forward to 2030, and we expect to see at least 41 megacities worldwide. At the same time many cities are growing, we are seeing a second megatrend: the rapid growth of the global middle class, which is expected to double globally from two to four billion by 2030. The growth of the middle class will further add to the congestion issue, as well as contribute to air pollution and other basic health concerns, which is the third trend we are watching.

Finally, we’re watching consumers’ changing mindsets, particularly among millennials. They are doing everything different than older generations. They’re delaying marriage, buying houses and having children. Their whole idea of mobility, particularly in urban areas, is centered on needing access versus ownership. And they use technology to stay connected and consume products and services in more ways than we have ever seen before.

When we think of ourselves as a mobility company, it comes back to our vision of making people’s lives better by changing the way the world moves.

It sounds like what you are describing is Ford’s core business enabling emerging opportunities, and those emerging opportunities strengthening the core business. Is that accurate?

Yes, and it is very important. If you focus too much on shiny new things, you can abandon or neglect the core business. The core business enables the emerging opportunities and the emerging opportunities strengthen the core.

When you look at the core business during our lifetime, the majority of people, particularly outside of urban areas, are still going to buy cars and drive. And they will continue to own vehicles the way they always have. So it is really important to continue to invest in our core business.

When you look at Ford Smart Mobility, a lot of it is focused on the monetization of the use of our products—or mobility services. But they all still require a product.

That’s why we are excited about how we’re thinking about and approaching mobility. By enabling the core and emerging businesses to strengthen and support each other, we are better positioned to make our products exceed our customers’ expectations.

Does smart mobility go beyond the Ford product? Do you envision providing mobility services for consumers that own other brands?

For us, it’s all about making people’s lives better. Could Ford Smart Mobility go beyond Ford products? Maybe—if you think about it in terms of looking at transportation as a service. These are some of the things we have to think through. At the end of the day, everything we do has to accrue to our business, whether financially, or by enhancing our brand and consumer loyalty.

The construct in our business has been that the successful OEMs will always be the ones with the best product. I strongly believe that, going forward, the most successful companies are going to be the ones that gather the best data to provide the best services to customers. To me, it’s about being a company that offers great products, but also great services that allow people to be mobile.
Some other OEMs look at emerging mobility opportunities as incremental to their business, whereas Ford is thinking of it as two areas that reinforce each other. What do you think about that?

We do not view “mobility” as incremental to our business. Again, we are looking at this holistically and it gets back to looking at those societal and customer factors. We have to recognize what is going on in the world around us, embrace consumers’ desire for connectivity and mobility, and use the data available to us and new enabling technology to better anticipate and foresee their needs.

For example, as we put modems into all of our vehicles moving forward, how can we use connectivity to make customers’ lives easier? Well let’s say the vehicle has to be serviced. What if we could give them the ability for their vehicle to cross-reference their calendar and schedule an appointment with their preferred dealer—all with the push of a button? That’s just one of many examples.

Becoming both an automotive and mobility company helps make our customers’ lives better, but it also makes good business sense as well.

If you look at the traditional automotive business, it’s worth about $2.3 trillion globally today. Ford gets about 6 percent of this. In comparison, the business of transportation products and services—think of it as revenue spent on miles travelled via mass transit, taxis, ride-sharing, etc.—that’s worth about $5.4 trillion. Today, we—and the rest of the traditional automotive industry—get 0 percent of that business.

There are a number of new, nontraditional competitors from outside of our industry that are trying to break in and take advantage of this revenue opportunity. This is making us think differently. For us, we are not just thinking about the number of units we sell, but looking at vehicle miles traveled and how that opens up opportunities for Ford to play a role.

**What are the milestones of success in this journey? Five years from now, where do you want to be?**

Rather than judging success by traditional measures, like how many patents have we been granted, we want to judge success by what percent of our business revenue is from our core business versus emerging opportunities—and not from a revenue standpoint, alone. It includes what percentage of our valuation comes from the core business versus emerging opportunities.

**When you think about accelerators and inhibitors, in the context of technological regulation and social acceptance, what do you see are the biggest impediments to achieving the vision of Ford Smart Mobility?**

I think social acceptance is already underway. We’re seeing the acceptance of ride-sharing and car-sharing—look how quickly those mobility services have grown in the last two or three years alone.

In terms of autonomy, we are making great advancements in the technology. Quite honestly, though, the technological advancements are outpacing the regulatory frameworks. So I think the legal and regulatory environment could be an impediment that may potentially slow down adoption.

That is why it is so important that we engage in discussion with regulators, cities, insurance companies, technology companies, and a host of players in the mobility ecosystem to help define standards and policies around self-driving vehicles. We need to ensure that the public and private sector work together to establish both global and national guidelines that help govern the future of mobility. The alternative is a patchwork of regulations that create confusion and stand in the way of innovation—and the benefits it will deliver for our customers.

This is a massive transformation for a company that has 197,000 people all over the world. How do you transform them and what role does innovation play in being able to change the mindset and focus of these individuals to continue to do what they do well, but also encourage them to open their mindset to different business models and capabilities?

It’s about having an innovation-driven culture, and innovation is part of who we are as a company. It dates back to our founder, Henry Ford. For us, it’s not about teaching the organization how to innovate—we already know how to do that. It’s about allowing the organization to innovate. So we are encouraging our employees in every part of our company to constantly innovate—no matter how big or small, how complex or simple. In fact, we encourage our team to adopt what we call an “innovation mindset,” and we regularly recognize team members who are doing the following:

1. Challenging custom and questioning tradition
2. Not taking anything for granted
3. Using technology where you can
4. Always looking through the consumers’ eyes
5. Moving fast, testing, learning and moving on
6. Taking appropriate risks

As a senior team, we have to continually give the organization permission to do things differently. We have to challenge ourselves to think, act and disrupt like a start-up—even as a 112-year-old company.
Automotive customer service becomes a relationship-based consumer experience

Dan Bolger, Deloitte Dealer Services group leader, Deloitte & Touche LLP, Andrew Dinsdale, director, Deloitte Consulting LLP, and Shane Green, president, SGE International

Progress is as robust at automotive dealerships as it is anywhere else. Today, customers can use their online tools to shop, check inventory, and even build the cars they want. Salespeople give out their cell numbers and social media contacts. The service department’s stale coffee and rabbit-ear TV have given way to plush, wired customer lounges. But always, at the center, there’s the old business model of buying a car.

That’s poised to change. Converging forces such as shared mobility and autonomous driving are combining and accelerating to rewrite the basic expectations people bring to automobiles. Buying a car has always been the means to mobility. In the future, more and more, people will be able to purchase mobility without buying the car. What we think of today as “service” may become more like fleet management, and software patches will at least partially supplant socket wrenches. In time, adapting and surviving in this new environment will require dealers to revisit their entire business models.

For now, car dealers still work predominantly under the traditional ownership model—in an environment that’s colored by wired consumers’ enhanced information and power. As long as the standard model endures, it’s up to dealers to refine it, even as they help usher in the next model. The way to promote both outcomes is to enhance the customer experience at every step.

According to the annual Global Automotive Consumer Study published by Deloitte Touche Tohmatsu Limited (DTTL), Gen Y consumers (born between 1977 and 1994) value the customer experience three times as much as vehicle design as an influence on their final purchase decisions. The same research shows that for Gen Y, a winning dealer experience means creating more value and greater convenience across the entire lifecycle.

The challenge for dealers is to keep up with those evolving values—to make sure the experiences they offer remain aligned with the expectations people bring to the showroom. While we wait for “automotive retail 2.0” to take root, “automotive retail 1.0” needs to hit every mark on culture and skills, not just prices and features.

Tomorrow, dealers might have to master car-sharing, autonomous fleet sales, and other innovations. The future vision for today, however, is the direct-to-consumer sale. The seven key moments in a customer’s sales journey are the foundations of that new strategy. Once those moments are defined, companies need to think about the processes, environment, and people involved in each one, so each element adds value that customers appreciate instead of turning them away.

1. The digital experience
   - When consumers learn about vehicles by brand, features, and price, they now spend most of their time online instead of visiting dealerships in person. Our Global Automotive Consumer Study indicates that more than 50 percent of all U.S. consumers spend more than 10 hours researching possible vehicles before purchase or lease. Another 30 percent spend between four and 10 hours on online research. And the study shows consumers trust online sources more than they trust dealers—so the online experience should live up to that trust.

Most dealerships have websites, but few are fully integrated into customers’ entire experience. As a result, consumers’ research actions taken on the OEM or a third-party site are not learned, remembered, nor used to make for a seamless transition. Basically, are the 10 hours of research performed by the customer contributing to a fuller, richer and more transparent experience? Customers expect the same retail experience they enjoy when buying other consumer goods. Why then, after a customer has built and configured an SUV does the dealer site still highlight a small sedan? Further, are these sites and digital experiences meeting customer expectations? Making appointments, checking inventory availability, and chatting live to a real person are all important elements. It’s even more important for the website to be mobile-friendly. Does the dealership have an app in addition to a website? That’s no longer just a wishful extravagance; it’s now a business necessity that must link to the overall omni-channel experience.

2. Coming into the dealership
   - The biggest point of differentiation a dealership has is the space where customers can touch, feel, and drive the vehicles. Yet many prospective customers leave frustrated. They believe the car they came to test and...
Examine the evolving mobility ecosystem

Welcome, using wireless tablets to select and configure a vehicle, and guiding the customer through the assessing and testing moments of their buying journey.

4. The test drive

This is the opportunity to impress a customer and make the sale. The sales channel may have been digital; the nature of ownership may evolve; but this is always the hands-on tipping point. Yet so many dealerships fail to stand out in this critical moment.

Out of the gate, the customer experience can suffer if the salesperson tries to qualify buying ability before handing over the keys. Then the drive follows a rote “around the block” track that bears no resemblance to the customer’s normal driving experience.

How can this time-honored process improve? We have seen leading practices that include taking customers through a drive-thru to purchase their favorite beverage, playing their preferred song or music type, and customizing the test drive route based on their daily driving patterns. Can augmented and virtual reality and 3D worlds play a part ahead of the physical test drive?

Some dealers offer at-home or work test drive delivery, or allow extended test drive periods unaccompanied by dealer staff.

Customers should walk away from a test drive feeling as if the car is already theirs. That can keep them from looking elsewhere. Unfortunately, standard test drives often fail to leave that impression.

3. Talking to salespeople

Consumers see buying a car as a painful task. The popular image of the “car salesperson” has a lot to do with that. In fact, our research shows most consumers feel disrespected by dealers and don’t have a positive attitude toward dealers (Figure 1). Are team members helping advance change, or getting in the way?

It can help if the first people customers interact with aren’t necessarily salespeople. Greeters who introduce the dealership and help customers find their way can be friendly, knowledgeable—and not incentivized to sell. Personality and attitude trump automotive experience in hiring these people. We are also seeing the emergence of “product specialists” who are responsible for a warm welcome, using wireless tablets to select and configure a vehicle, and guiding the customer through the assessing and testing moments of their buying journey.

Figure 1

“Automotive sales people treat me fairly and with respect.”

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“I have a positive attitude towards automotive dealers.”

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| Less than half of U.S. consumers have positive attitudes towards dealers.

Source: DTTL Global Automotive Consumer Study

Figure 1

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4. The test drive

This is the opportunity to impress a customer and make the sale. The sales channel may have been digital; the nature of ownership may evolve; but this is always the hands-on tipping point. Yet so many dealerships fail to stand out in this critical moment.

Out of the gate, the customer experience can suffer if the salesperson tries to qualify buying ability before handing over the keys. Then the drive follows a rote “around the block” track that bears no resemblance to the customer’s normal driving experience.

How can this time-honored process improve? We have seen leading practices that include taking customers through a drive-thru to purchase their favorite beverage, playing their preferred song or music type, and customizing the test drive route based on their daily driving patterns. Can augmented and virtual reality and 3D worlds play a part ahead of the physical test drive?

Some dealers offer at-home or work test drive delivery, or allow extended test drive periods unaccompanied by dealer staff.

Customers should walk away from a test drive feeling as if the car is already theirs. That can keep them from looking elsewhere. Unfortunately, standard test drives often fail to leave that impression.
5. **Negotiation and purchase**

All around town, customers interact with other industries that have invested in ways to make transactions more efficient. By doing so much research online, the customer has made a similar commitment to a smooth interaction. Our consumer research shows that most Gen Y consumers want an extremely efficient purchase process. For example, only spending approximately 40 minutes during the registration and financing phases. So, why then does it still take so long to go through the negotiations, paperwork, and finance department? Encouraging customers to complete paperwork online in advance is often, but the onus shouldn’t be on them. Some retailers are moving to a consultative selling model: The customer interacts with only one person from start to finish, without inefficient handovers. That can add efficiency for both parties. For example, a dealer may bundle non-warranty service into the sales transaction at a price that saves the average customer money and hassle, but still guarantees the service revenue to the dealer.

Some brands and public groups are testing the one-price approach: No negotiation, no haggling. The intent is to let customers know they are getting the best deal. It also saves a lot of time. But for customers to trust the price, they must first trust the person who is offering it. Their mobile power makes it effortless to walk away. Several have taken the next step and provide complete end-to-end online transactions where the entire purchase is completed online, forms can be electronically signed, financing and insurance (F&I) is handled remotely and the dealer delivers the car. The immediate benefit is providing the type of seamless transaction a customer is asking for, but over the long haul the industry will learn and develop tools, skills and support to sell and deliver new mobility and subscription-based services.

6. **Vehicle delivery**

The moment that crowns the sales process is a triumph for the retailer and a potential lifetime memory for the customer. Handing over a vehicle is the dealership’s chance to do something memorable and meaningful. That can take many forms. The dealership might tweet or post its congratulations. The buyer might receive a token gift, or the salesperson might capture the moment with a photo. What’s important is to step outside the business frame of mind with a little artistry that says, I know this is important for you, and it’s important for us too. The retailer will want to see these people again—and in a future colored by car-sharing and other changes to the ownership tradition, it will want to see them more often. Don’t pass up the chance to bring a little fanfare into the new relationship. And during the course of the initial honeymoon continue to leverage omni-channel and connectivity to welcome the customer to the new car, the dealer and the brand; to get the customer engaged and adopting connected services, scheduling the first service and managing the relationship right from the start to drive lifetime value.

7. **Service and the ongoing relationship**

The smile and wave isn’t the end of a sales relationship—it’s the beginning of a service relationship. The way a retailer handles that ongoing commitment is a rehearsal for the more flexible, long-term relationships that will mark the future of the industry. Our Global Automotive Consumer Study reveals 71 percent of U.S. Gen Y consumers say free routine maintenance is an important consideration in choosing a vehicle to buy, and two-thirds say their purchase decision hinges in part on how confident they are in the dealer’s repair abilities. How can a dealer use post-sale service to enhance the relationships it will depend on down the road?

Think about technology: It’s possible the long-term relationship beyond the “sale” will split into several discrete channels, including traditional nuts-and-bolts service, an increasing reliance on software, and “fleet management” style service to keep shared-mobility customers supplied with what they need.

Think about connectivity: Capabilities already exist for the service department to start hearing about repair needs not from people, but directly from their cars. And in the age of fully autonomous cars it will be feasible for cars to self-drive to the dealer and drive home before the next day’s commute. Think about selling forward: If a retailer retains the data that a buyer tested an SUV before buying a compact sedan, it can offer the SUV as a service loaner.

**Timeless principles will enable the pivot to new mobility**

These seven critical moments define the sales experience for the customers retailers will serve today. These are where investments of time and resources are likely to pay off most quickly.

As the standard bought-and-sold car begins to cede space to new approaches that treat mobility itself as the commodity, these seven turning points in the traditional process won’t be the entire answer to building consumer relationships—but they are an indispensable place to start—and begin to shift the dealer to think about the entire customer experience. In these new models dealers will need to carve out a role as a mobility manager. Already there are opportunities for the provision of shared fleets and keeping them on the road—and with well-positioned, suburban lots dealers can provide these emerging mobility management services.

The habit of seeing the relationship through the customer’s eyes and making it as pleasant as possible is a habit that will follow retailers into whatever future the automotive retail industry holds in store.
The changing nature of mobility

How are Gen Y consumers’ mobility preferences shifting? What is their perception of the shopping and dealership experience?

Explore *The changing nature of mobility* to dig deeper into the results of our *Global Automotive Consumer Study* by visiting:

Automotive cybersecurity: Growing technology needs a broader safety net

Joe Kwederis, Deloitte Advisory principal, and Greg Boehmer, Deloitte Advisory senior manager, Deloitte & Touche LLP

The first car radio caught on in the market in 1930. The first car-mounted telephones followed about a decade later. Since then, technology has claimed a greater and greater place in our cars, all in the name of improving customer experience, safety and security. Now, as the “Internet of Things” (IoT) links machines that create, share, and act on data without the need for human intervention, technology is becoming more central to the act of mobility. As connected and driverless cars emerge, technologies like GPS will become less an accessory and more a critical component. Connected vehicle services will play an increasingly greater role. Consumers will expect these components, systems and services to keep us safe. But what protects them?

The increased focus to make vehicles more connected, automated and driverless will transform our vehicles as product innovation, competition, and consumer demand drive integration of the latest technologies and services. The shift from an environment of independent, closed vehicle systems to one that is connected to vehicle ecosystems represents a historic reshaping of the opportunity and risk equation for the marketplace. This is particularly true when you consider the maturity of cybersecurity capabilities and risks.

One hallmark of the IoT is the “Information Value Loop,” in which sensors and machines are able to cycle through the stages of creating, communicating, aggregating, analyzing, and acting on data all by themselves. When the sum of those decisions and actions is the safety of human passengers, it becomes critical to make sure any vehicle ecosystem has three mutually reinforcing properties:

- **Secure:** Prevention is worth more than a cure, and effective risk management begins by preventing system breaches or compromises.
- **Vigilant:** Hardware and software can degrade, the nature and intensity of attacks can change, and no level of security is perfect. Security must be complemented by monitoring to determine whether a system is still secure or has been compromised.
- **Resilient:** When a breach occurs, limiting the damage and reestablishing normal operations are much more easily and effectively done when there are processes in place to quickly neutralize threats, prevent further spread, and recover. Remember the definition of “fail-safe”—not safety from failure, but safety during failure.

Security, vigilance, and resilience are hallmarks of cyber risk management and information security in more familiar information ecosystems. If the vehicles of the future are leveraging the same technologies we find on our home computers, networks and mobile devices, then are they not subjected to the same vulnerabilities and sensitivities? Companies and consumers need to consider the myriad of cybersecurity risks as the future of mobility takes shape. These risks will only multiply, and they demand attention. According to the World Economic Forum, “Hacking the location data on a car is merely an invasion of privacy, whereas hacking the control system of a car would be a threat to a life.” After all, when something goes wrong with your home PC, “crash” is only a metaphor.

Securing vehicles of the future

The importance of securing individual sensors is perhaps most important in today’s connected car—a data center on wheels full of Internet-connected features. A typical automobile today contains about 70 computational systems running up to 100 million lines of programming code—twice as many lines of code as the Windows Vista operating system. Along with GPS devices that aid navigation and report on real-time traffic and road conditions, diagnostic devices assess maintenance needs and alert authorities in the event of an accident or breakdown. Many motorists are already familiar with automated theft-retrieval systems, and insurance companies are now promoting safety data transceivers that plug into cars’ OBD-II ports. As infrastructure evolves, cars will have the ability to communicate with roadside devices such as traffic lights. Security must inform design from the outset.

IoT-enabled features can help automakers attract early-adopter customers while enhancing safety and convenience. In today’s cars, IoT-enabled technologies and services include power and infotainment systems, remote locking and unlocking, and remote engine start, with data flowing between different vendors. Vehicle-to-vehicle communication spans ecosystems as well—for instance, connecting an automobile to the driver’s home. Smart cars can communicate with smart home hubs to open garage doors, unlock front doors, and turn on house lights when GPS registers that the driver is nearing home. The scope of data communicated between connected vehicles encompasses a wide swath of personal information such as driving habits, real-time location, entertainment preferences, and daily schedules.

Much of this communication uses existing tools repurposed for the IoT, including mobile apps, cellular networks, and SMS technologies not originally designed for secure communications. These extended functionalities leave networks vulnerable to breaches. A recent survey found that nearly 100 percent of today’s cars include wireless technologies that may be inadequately secure, and most manufacturers may not be able to easily determine whether their vehicles have been hacked. Hackers, on the other hand, have demonstrated the ability to infiltrate vehicular systems by using SMS texting. Physical attacks via onboard diagnostic devices have shown it could be possible to manipulate some systems even while cars are moving.
Another complication: Those managing the secure development and deployment of these technologies often have less experience doing so—particularly for automotive. Coupled with the newness of the technology, that may mean fewer precautions to secure data at the component level. IoT manufacturers have yet to implement common security standards. Data transmission between multiple vendors—the automaker, dealership, third-party data centers, GPS and onboard diagnostics systems, smart home devices, and others—creates multiple vulnerable points that should be monitored. Hardening the current systems and components with tougher security measures will be crucial to safeguarding the connected automobile.

How is the risk and regulatory environment adjusting?
We have seen a broad set of responses to the risks. Senator Markey introduced the Security and Privacy in Your Car Act of 2015, which would begin the process of developing motor vehicle cybersecurity regulations. Additionally, with Defense Department backing, Mission Secure of Charlottesville, VA, and the University of Virginia are developing a proprietary methodology for identifying the most effective and easiest ways to launch cyberattacks on autonomous systems. They are continuing to explore security vulnerabilities and solutions at events such as the Defense Advanced Research Project Agency’s (DARPA’s) automated vehicles challenges.

The National Highway Traffic Safety Administration (NHTSA) meets regularly with the technical leads at OEMs and Tier 1 suppliers regarding their cybersecurity initiatives, processes, risk assessment and product/process plans to design security into their products. NHTSA also works closely with other federal organizations with interests in automotive cybersecurity like DARPA, the U.S. Department of Homeland Security (DHS), and the National Institute of Standards and Technology (NIST). These activities and partnerships reflect the broader acknowledgement of the changing risk, cybersecurity, privacy and regulatory environment, but there is a lot of work to be done. Cybersecurity is becoming a regular agenda item on many boards as companies seek to understand and manage strategic, reputational and cyber risk.

Next steps
As vehicles continue to expand in complexity, the attack surface of an automobile expands. A single vulnerable device can leave an entire automotive ecosystem open to attack, and the potential exposure ranges from inconvenience to massive safety breakdowns. In the face of such challenges, automakers can remain secure, vigilant, and resilient by taking several steps to safeguard their ecosystems and the data they create. Stakeholders in the new mobility landscape need to be active in shaping a secure future by:

- Expanding the dialogue: Continuing to engage in the regulatory, risk and cybersecurity dialogue to enhance overall vehicle safety, security and privacy.
- Developing talent: Cultivating the industry’s cybersecurity talent, methodologies, expertise and awareness to improve overall vehicle safety and security.
- Securing the product: Building secure product development and software coding regimens to create, maintain and operate critical hardware and software components—with heavy involvement from security professionals.
- Monitoring for threats: Creating robust technology and monitoring capabilities to manage security events and responses—sharing information across the industry on evolving threats and responses.
- Building for resilience: Establishing capabilities within the vehicle, its ecosystem and supply chain for avoiding attacks, repairing vulnerabilities and responding to attacks.

High stakes
In the IoT, the many data-driven components of a car will form a rolling ecosystem. The car itself will be one component in a larger ecosystem. And the whole thing will be moving at highway speed, with people’s lives and their personal information as the cargo. Cyber threats and cybersecurity have paced each other in an arms race for many years. But now, those dual forces have a new field of battle.

The prospects for creating and operating within a seamless, secure network—with or without external partners—may seem daunting. Vulnerabilities exist on all sides. Security cannot be an afterthought—it must be integral throughout the design process. Connected product and services that blend a deep understanding of the myriad of use cases with knowledge of multilayered cyber risk management techniques can create customer experiences that are secure, vigilant, and resilient.
Automotive and technology—Detroit and Silicon Valley—are converging. We are already witnessing the impact on societies around the world resulting from the rapid pace of innovation and disruption. Those very real examples of innovations that have already disrupted mobility also only represent a fraction of what has been imagined. Significant levels of disruptive innovation may be forthcoming, and the speed at which such innovation occurs may continue to increase. Companies will need to keep pace. Many will turn to M&A as a core business strategy. But will traditionally tested and proven M&A methodologies capture the full value—the complete opportunity—of a deal in a mobility ecosystem where transformational forces, industries, and cultures are converging?

Transactions among organizations in this dynamic environment of technology and manufacturing are creating more than new nameplates and stock certificates. This convergence is fueling disruption that ultimately could lead to new business models and nontraditional ways these relationships are created and structured.

Companies that once competed over mechanical and electrical ways to achieve performance, safety, economy, and customer enthusiasm will instead compete over technologically advanced ways to reach new levels of the same standards. And, third-party technology companies, which for decades have provided add-ons to core automotive technology, may find in the future that their technology will be the core. ADAS (automotive advanced driver assistance systems), LIDAR (light detection and ranging), connected vehicles, ride-sharing, and car-sharing are becoming staples of the industry lexicon. Along with that lexicon will likely come new industry opportunities. Well entrenched global industry incumbents may increasingly see the need to evolve their business models. Today’s relatively fixed capital production, and product sales businesses will likely give way to a model centered on providing “personal mobility.” This new model entails partnering, building or acquiring capabilities that can serve the full range of transportation needs of both consumers and enterprises. Companies that once fit into simple categories like supplier or vendor are becoming competitors, enablers, and in some cases, M&A targets.

In this era of profound change, the automobile appears to be emerging as the ultimate consumer electronic device—and the business model that delivers that commodity to the customer is transforming as well. Traditional fixed price agreements are giving way to structures inclusive of corporate venture capital, cross-licensing, in-kind contributions, and revenue sharing models. What cues should deal-makers in Detroit and Silicon Valley take from this shift? And, how might the traditional transaction work like targeting, diligence, and integration evolve as a result?

Change will likely result in new opportunities

The future of mobility will likely be enabled through a complex intersection of talent such as roboticists, signal processing engineers, data scientists and telecommunication specialists. These evolving technology and talent needs of competing companies in this sector have led to uncommon tie-ups between industries. There are already a host of examples spanning telecom, automotive, and emerging mobility businesses to point to as evidence. That trend is likely to continue.

The drivers of value are likely changing and hence we are witnessing a shifting of M&A targets and partnerships to those companies with differentiated intellectual property and to those companies that manage customer relationships and data.

Additionally, as other nascent technologies mature and make their way into the automotive industry, it is expected that they too may become targets for partnerships, acquisitions and corporate venture capital investments. As an example, gamification, virtual reality and augmented reality have barely touched the surface of possibilities in automotive. And, many additional acquisitions may come in the area of “over-the-air” software updates and connected vehicles.

Shifting of power in the automotive ecosystem

Technologies and services built on data analytics and predictive analytics appear to be enabling a power shift in the automotive ecosystem. We are witnessing increasing power by those that own customer relationships, those that own pathways to data, those that own data for anonymized or non-anonymized use, and the system integrators who tie it all together. Acquisition targets may emerge where there is scarcity of companies who provide key competencies and data inputs and those with defensible intellectual property that provides marked improvements in sensing, computing, and communicating.

New data combinations to unlock value

Previously disparate data sets are being combined and integrated with the car to more precisely maintain, value, operate, or insure the vehicle or that could be communicated to the individual to more precisely direct, assist, sell, and communicate to consumers. Different parties like insurers, banks, and maintenance providers will benefit from these data insights and may be motivated to offset consumer data and hardware costs to access this information.

Similarly, advertisers and retail companies could provide location-based services that are dependent upon a unique combination of location, demographics, and even calendaring and wish lists to provide more precision around the optimal time and placement of offers.
Gamification in the automotive industry
Gamification is transcending industry—from education, to healthcare and fitness, to food delivery and agriculture—we are witnessing the infiltrations of gamification. Automotive has likewise begun seeing entrants in this space—entrants, which focus on immersive experiences in the automotive design and build process to virtual reality (VR) training modules for automotive mechanics, VR and augmented reality (AR) have begun to increase in popularity. But this is likely just the starting point of entrants and players in this area of the mobility ecosystem given what is possible as gamification more fully envelops the automotive sector. For instance, could the automobile that we’ve spent over a 100 years engineering begin to train us? How might its evolving network of sensors, cameras, and feedback devices provide us not just awareness when we deviated from a lane, but to proactively perfect how we drive? Might we use augmented reality and virtual reality programs to master cornering, driving in snow or changing lanes? How could new brand-based rental fleets, and car-sharing companies benefit from employing training to people who now may be driving 20 different cars a year? And finally, what companies will enable all of these possibilities?

Companies that are finding new ways to engage with customers through gamification may be interesting partners and investment targets.

Different models of engagement require a different approach to diligence
Most companies are employing a broader toolkit to access innovation today. Given shrinking product development lifecycles and scarcity of talent, a third path beyond organic growth or acquisition is being utilized with increasing frequency. This third path—we call it leveraged growth—builds relationships with companies well in advance of, or in replacement of, an MBA event.

Leveraged growth can take many forms such as corporate venture investment, partnerships and joint development agreements, and it can have many advantages over traditional methods of innovation capture, including the ability to spread finite investment dollars farther through a milestone-based approach where you only invest as the company/partnership meets its objectives. By building an ecosystem through a combination of MBA and leveraged growth, you may be able to impact your market faster, influence a company’s development path in a manner commensurate with your own, and ready your company to act fast if an opportunity to acquire that company, or its competitor, presents itself. Crafting a diligence approach that meets these evolving situations requires up front planning and focus. Our experience shows the following leading practices can help:

• **Make a positive first impression:** What if you show up for diligence and your diligence team is bigger than the headcount of the target? Automotive companies need to tread cautiously around technology investments. A prospective acquirer may think they are demonstrating commitment and being responsive by bringing a large team of specialists. This approach can signal that cultures aren’t compatible and give the target workforce a worrisome first impression of their new partner.

• **Focus on what matters:** Why is the target valuable? Technology, talent, products? Whatever the answer, limit the initial engagement to due diligence specialists in that core area. Bring people that can speak the same language as the target and work directly with their engineering and business development teams in a familiar way.

• **Know the lay of the land:** In finance and legal diligence, bring a team that can work quickly to identify relevant issues—a team that knows topics like software accounting or the intricacies of venture capital funding (e.g., liquidation preferences, equity kickers, and convertible notes). Focus on topics that matter in an emerging company, such as cash burn, revenue model, customer acquisition costs, or product time-to-market.

• **Planning the exit is as important as closing the deal:** New deal constructs such as venture capital investments and partnerships can be executed in as little as two to three months, which presents a time advantage to an acquisition which may take six to nine months or longer. These new deals are subject to exit events—an IPO, a sale to a private equity or strategic buyer, or your acquisition of the business. Hence, scenario planning up front is important. Understanding how the monies flow to the different investor classes in these scenarios and how a joint development agreement is or isn’t impacted by the sale to a competitor are important nuances to consider and negotiate up front.

• **Invest in building trust:** There’s a reason several automakers, Tier 1 suppliers, and emerging automotive technology companies have set up innovation hubs and/or formal scouting programs in Silicon Valley. By maintaining a presence outside of traditional automotive centers, companies can build their own brands within the technology community, work more closely with their technology partners, and get early access and perspectives from market disrupters.

• **Look beyond the dollar signs:** There’s no shortage of liquidity for a good idea, and the competition for great automotive technology companies is coming from new sources such as telecom and technology venture funds, IT and semiconductor companies and media firms. Automotive companies may find bringing financial resources alone isn’t enough to close a deal and that understanding emerging company vernacular and deal constructs is table stakes today. Stress the value and practical product and market experience the automaker can bring to the discussion. For example, rarely will an emerging company have regulatory, quality, and international specialists on staff. Be prepared to discuss what you can bring to fill those holes and get the commitment of your company in advance of the diligence meeting. Show innovators and entrepreneurs flexibility, and be openly excited about the prospect of being better together.
A new business model may bring new challenges
The business model that underpins a technology company differs significantly from a traditional automotive model. The focus on multi-year purchase orders for components, four-year product lifecycles, complex inventory and supply chain management, and a host of other activities that automotive companies have mastered for decades appears to be on the decline.

Technology companies, and software companies in particular, often have unique contracts with each customer. They can provide a variety of goods and services under each agreement, such as hardware, software, professional services, development, and maintenance/support. In many instances there is no “hardware” or tangible, physical product. In addition, many technology companies are very adept at developing partnership agreements and different go-to-market strategies within their ecosystems. Their contracts often allow them to generate ongoing revenue with partners, through partners and for partners. This is uncharted territory for many automotive companies.

The differences between the business models can have a significant impact on the effort and complexity it takes to integrate even a small technology company into an automotive company. Those challenges can be easy to underestimate. For example, revenue recognition is no longer as simple as a shipment to an OEM customer or dealer. A technology company may require finance and IT specialists to properly evaluate, recognize and monitor revenue transactions with customers. In another example, a software as a service (SaaS) business may have thousands of customers, each of which requires its own billing, invoice generation, accounts receivable monitoring and cash application. That’s a big leap from the traditional supplier model, where a company might work with as few as five to 10 significant customers or an OEM might sell into a well-established and stable dealer network.

Integration complexity can also arise in the area of human resources. Many technology employees are not only used to a fluid daily working environment, but also to a rewards system in which employees in all levels of the organization get a large portion of their compensation in the form of stock. They also often live in an ecosystem where stability isn’t always a virtue—business models, companies, and employees come and go.

The compensation, benefits, and work rules that have served the automaker so reliably may not be enough to retain the key talent that will make an entrepreneurial acquisition work. The automaker should consider how to develop a compensation and benefits structure that preserves the incentive-based drive to innovation that fits under the parent structure but doesn’t divide employees in an implicit class system. The value of clearly communicating that strategy, and the intent behind it, can be as valuable as the strategy itself in helping to integrate culture, business models and incentives.

What does the future hold?
The fully autonomous car is in the headlines. When will we see the tipping point that leads to mass consumer adoption? Regardless of when that innovation and others like it reach their full potential, the convergence of the automotive and technology industries is likely to accelerate. Automotive manufacturers that recognize and embrace technology and technology partners will likely have a competitive advantage. Joint ventures, partnerships, investments and acquisitions can unlock and accelerate the development and innovation the industry needs, and the leaders who make those deals should think outside their traditional constraints from the outset.
Want more perspective on IoT in automotive?

The connected vehicle has been the most visible and familiar example of IoT technology. But as cars become increasingly software-driven, the real IoT developments in the automotive industry are behind the scenes. How are automakers and software providers both laying claim to the driver’s seat?

To learn more, visit:
www.dupress.com/us/future-of-mobility