Achieving successful partnerships between automotive and technology companies

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Technology disruption will continue to fuel the growth in the auto sector, and forming successful strategic partnerships will be even more critical to invest for future growth

Technology disruption is fast changing the construct of the traditional car, and the three main drivers – autonomous driving, electrification and connectivity solutions – are becoming the new frontier for auto players. These three drivers are not just influencing new transportation models like Mobility as a Service (MaaS) and growth opportunities but also are spawning several sophisticated features that will soon become the mainstay of auto products (see inserts). Auto incumbents are impacted by increased sophistication of R&D, a complexity shift from hardware to software and shorter product life cycles. They also must now coexist and compete in a high startup density ecosystem. Given that the future automotive products require a high degree of technology differentiation and customization, the incumbents must turn to inorganic strategies and invest in non-auto companies and assets to gain faster access to capabilities, technologies and products.

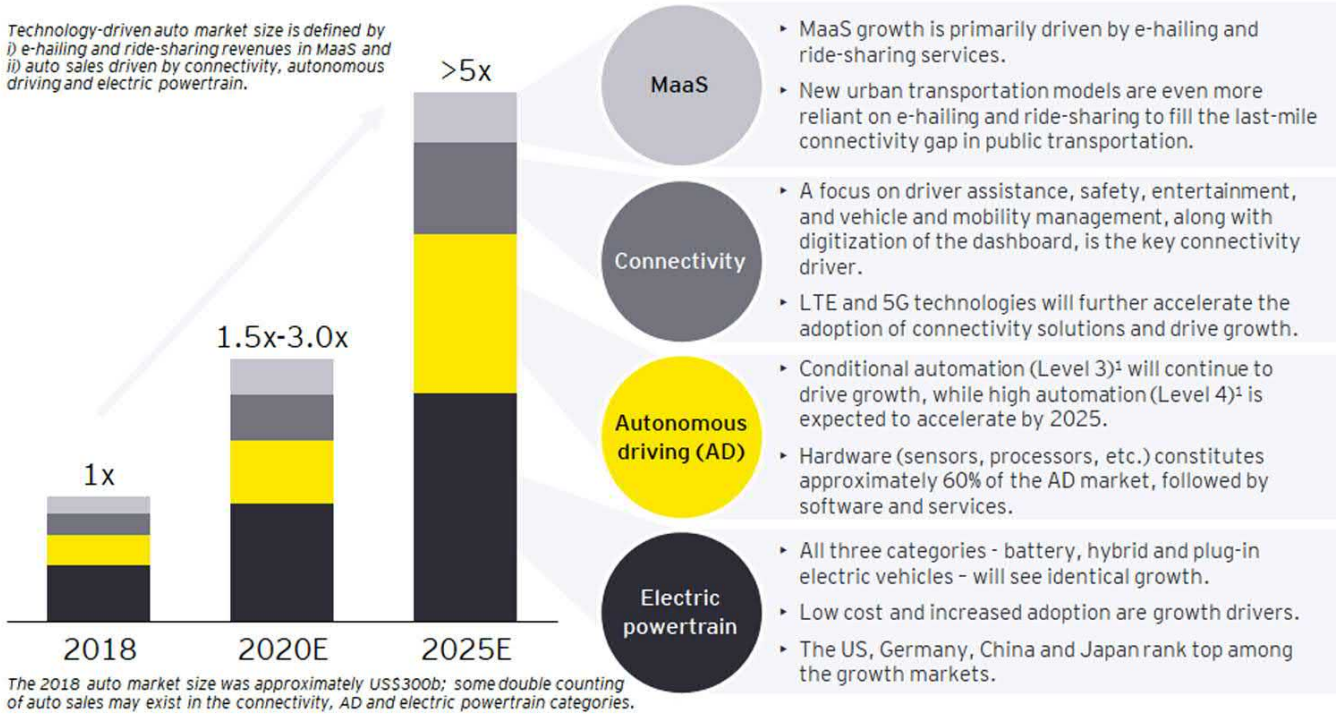
Our analysis of select leading auto original equipment manufacturers (OEMs) and suppliers confirms that inorganic investments have indeed been on the rise across all areas of technology disruption, and partnerships (not full acquisitions) appear to be the preferred choice for inorganic investments.

Given that a partnership is the preferred choice of investment in tech companies, automotive executives face two key questions.

1 **How should partnerships be structured, and what areas should be the focus when negotiating partnerships?**

2 **How should companies operationalize tech partnerships and build an effective governance model to launch differentiated products and services to achieve success?**

Figure 1: Projected global auto market size from technology disruption

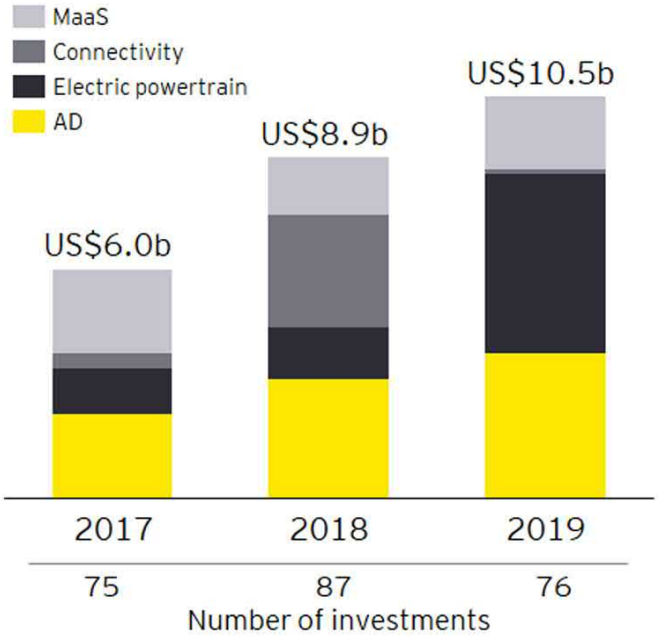


[1]SAE (J3016) automation levels

Source: Allied Market Research

Disruption in the auto sector is not just spawning new segments but also will fuel growth over the next few years.

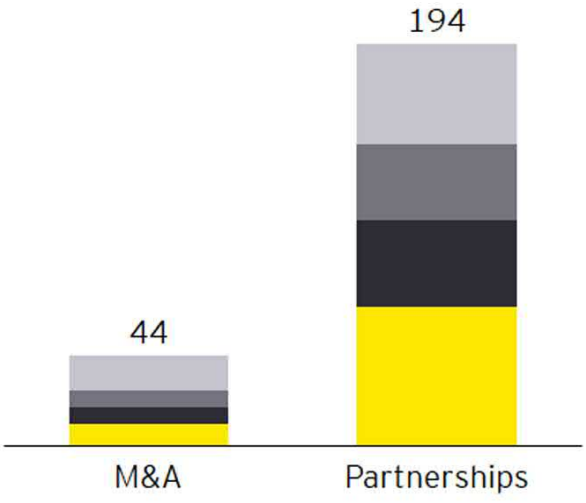
Figure 2: Investments of select OEMs and tier 1 suppliers in tech companies in 2017, 2018 and 2019



Notes: Includes top OEMs and suppliers by revenue in each of the geographies (North America, Europe, Japan) and joint investments by financial and other investors.

Source: Capital IQ, EY analysis

Figure 3: Investment types by select OEMs and tier 1 suppliers in tech companies in 2017, 2018 and 2019



Notes: Includes top OEMs and suppliers by revenue in each of the geographies (North America, Europe, Japan) and includes joint investments by financial and other investors.

Source: Capital IQ, EY analysis

1

Structure the **partnership around an ecosystem of tech players and align early on IP and data ownership rights, capital and resource allocation,** and divorce considerations

Build an ecosystem play vs. a one-off partnership to enable flexibility and scalability of solutions

The technology landscape in the automotive sector is complex, and innovative solutions are possible only when partnerships include an ecosystem of multiple tech players that bring a diverse yet complementary portfolio of technologies, intellectual property (IP), and products and solutions. Finding the right partners is important, but defining the technology partners' role in the ecosystem, setting the expectations up front regarding their contributions and incentivizing them based on how the partnership impacts their base business model are vital steps as well. Otherwise, auto incumbents risk ending up with a model where tech partners default to assuming a dormant role and relying on the auto partner for capital and resource needs. An ecosystem strategy can be effective only when it is formalized by a business model that balances technological, operational and commercial commitments and considerations among the partners.

Define joint IP agreements and align on ownership rights

Technology partners can refuse to commit their unique IP and limit the capabilities of the partnership model. When forming the partnership, auto partners should obtain access to the tech partners' IP portfolios, assess the applicability of the IP portfolios to partnership goals, negotiate the inclusion of other critical IP and jointly develop a vision of how the committed IP could evolve into new technologies and products. This vision should translate into a clear definition of common IP – what belongs to the partnership vs. what will stay with the tech partner. In cases where the products (built on jointly developed IP) are sold to external parties, it is even more important that agreements around licensing and sharing of financial proceedings are made transparent.

Build an efficient partnership structure (capital and resource allocation along with data-sharing rights)

Auto players must be careful to not commit more capital than the agreed fair share. To drive accountability in the partnership model, financial commitments should be staged rather than being made up front. The partnership model should define key program milestones and success criteria so that capital can be injected after evaluating the progress at each stage. Additionally, auto companies should plan for an optimal tax structure and design greater oversight and guardrails around the capital allocation framework to prevent economic leakages in the partnership. Fiscal discipline and planning are even more important in the current economic environment as companies are forced to reassess their investment priorities.

Resource allocation plays a critical role in building an efficient partnership structure. Resource needs and commitment levels should be forecasted as accurately as possible by dividing the project by work stream and sub work streams. This can be accomplished by planning the partnership at both a functional and subfunctional level, along with clear assignment of roles and responsibilities. Auto partners must look at using capital commitments as a form of leverage to ensure that the tech partners contribute their committed share of (human) resources to the partnership. Because the location of these resources is critical, the partnership model should also consider inefficiencies and challenges resulting from geographical separation of the teams.

Data access and sharing mechanisms require attention as they are critical to smooth functioning of the partnership. Ad hoc agreements create inefficiencies and friction. Companies consider access to data and sharing of analyses to be proprietary, and imposing restrictions on partners can be detrimental to the partnership's objectives. As a first step, both parties need to consider data ownership rights, what auto and tech partner data is accessible and to which parties in the partnership, and the implications of a data breach.

Negotiate exit provisions and divorce considerations

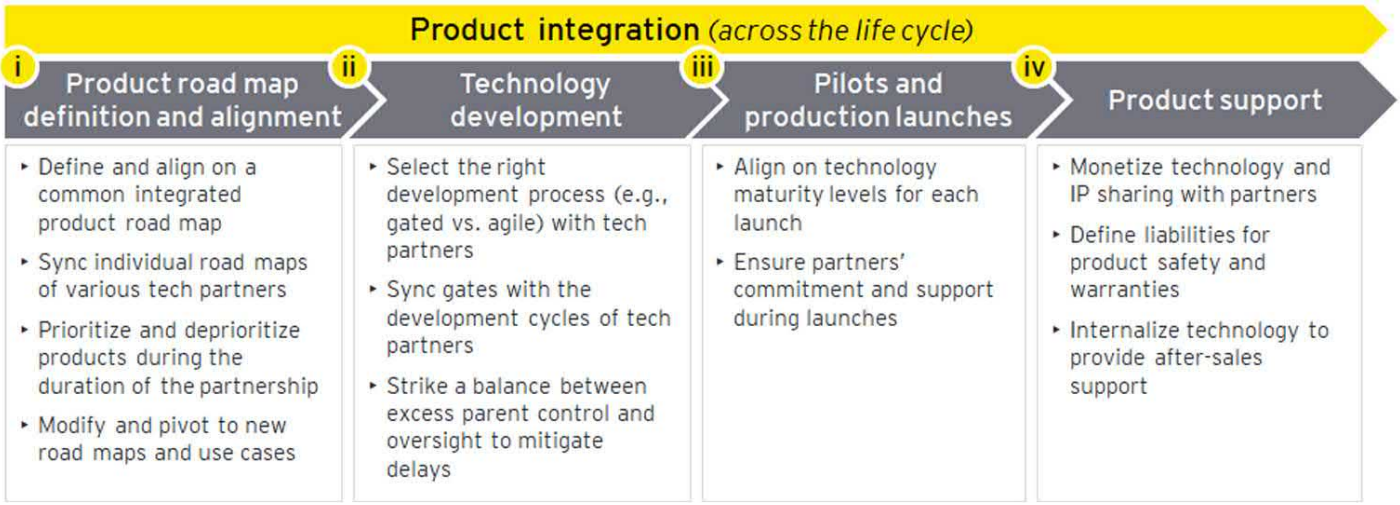
Auto companies must have a clear vision on when to end and how to exit the partnership. Dissolving partnerships without a planned exit strategy can impose unintended costs. Auto partners must formulate exit provisions when forming the partnership and build in plans (negotiation leverage points, budget, etc.) to buy back customer data sets, monetization rights and other related jointly developed technologies. One cannot perfectly anticipate how technologies will evolve and what information becomes critical for future business models. However, having the foresight to identify these developments and finding the right moments in the partnership to pivot to negotiation on these topics are important considerations for the auto partner.

> Leaving exit planning to the end exposes auto partner companies to product support disruptions and business risks.

2

Achieve success by driving the product integration agenda when operationalizing the tech partnership and designing the governance structure

Partnership success is largely correlated to developing technology and products that can be perfectly integrated with the auto partners' products. Therefore, the product integration strategy cannot be one-off planning and should span the entire product life cycle, starting with joint product road map design, identifying joint development processes, developing pilot build strategies to integrate technologies and ensuring product support after launch.



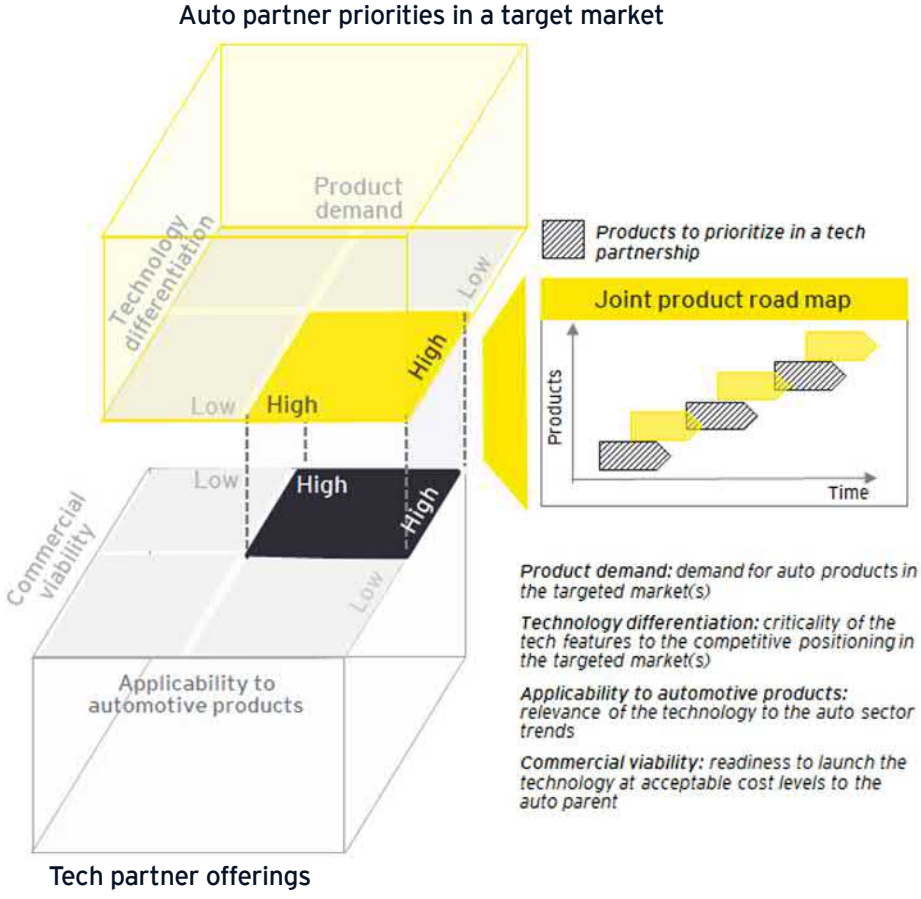
i. Product road map definition and alignment

Road map definition: Joint product road map definition in a partnership is a complex task as both parties can be tempted to pursue their individual agenda. Tech partners whose internal product road maps span industries beyond the automotive sector may want to leverage the partnership to commercialize technologies for non-auto sectors. Meanwhile, auto companies may be eager to adopt a go-for-all approach and leverage the partnership to develop technology for a wider range of platforms, markets and products beyond core. These conflicting interests and go-for-all approach could lead to chaotic decision-making and set up the partnership for failure.

Use partnerships to reimagine the customer experience and prioritize technologies for high-demand products in markets requiring high technology differentiation.

It is thus critical for both parties to find a common denominator. Both parties should allow visibility into each other's planned product portfolio, technology capabilities and gaps. Partnerships should focus on identifying technologies that will be applicable to the auto sector, present attractive product economics and offer the right degree of technological sophistication and customer experience for the targeted market segments. Technologies falling in the intersection of these areas can be immediately prioritized for the partnership. The auto partner must also push for a joint review of the commercialization feasibility of the technologies that are critical to the auto partner's market segments but are economically not attractive. These technologies can be added to the road map once a clear path to improve the product economics is available.

Figure 4: Joint product road map prioritization framework



Technologies that enhance the customer experience must also be prioritized. Customers are more tech savvy and demanding of in-vehicle experiences. Such experiences, enabled by connectivity technologies, driver-friendly interfaces and advanced driving assistance, are becoming central to product offerings. Partnership should be leveraged to reimagine the customer experience and accelerate technology development.

Alignment and staging: Staging the technology road map in sync with the auto product road map is key to product integration. Both parties should define tangible and measurable outcomes over the course of the partnership, and these outcomes must be translated into milestones (at least two to three) by year so that the partnership stays on course to the committed product road map. These milestones should be used as checkpoints to evaluate program success and to adjust the product road map, funding plan, resource allocation, etc. The auto partner must offer partnership freedom to execute the road map while holding it accountable using milestones.

> Anchor the joint product road map to mega-milestones but don't suppress each other.

ii. Technology development

Technology development without a common agreed upon methodology can be an unguided process, which defeats the product integration agenda. Auto companies mostly follow a staged-gate approach, which is based on validation of product design maturity prior to exiting each gate. Technology firms embrace an agile methodology, which is an iterative process and thrives on frequent delivery of product and customer feedback. Forcing the adoption of either methodology risks creating an unharmonized approach, and both parties should offer partnership autonomy in choosing a development process that is based on the best of both gated and agile approaches. Program-level milestones should be used as a guide to set up the partnership work streams. Work streams should be staffed using hybrid teams comprising both auto partners and tech partners in order to facilitate better understanding of each other's development processes and adoption of an integrated approach. Once again, too much auto partner meddling and forcing the partnership to adopt an approach can diminish the unique aspects of the tech partner's IP.

> Appreciate the benefits of an agile framework and let the tech partnership choose its development process.

iii. Pilot testing and product launch

Pilot testing offers a first glimpse at the success of product integration and commercial viability of the jointly produced technologies on the parent's products. Lack of alignment on product maturity levels is often a main reason for pilot failures. These disagreements can be wider for software products, which tend to have more complications when tested on hardware. When forming partnerships, it is critical that technology experts from all sides are engaged to jointly draft the technical specifications and maturity levels. Leaving this to the commercial teams may lead to disconnect among the technical teams and delay technology development. Additionally, all parties should aim to codevelop the testing environment, system interfaces and testing methodologies. Testing advanced technologies on joint back-end system interfaces and simulators will lead to a common understanding of technical problems and joint resolution of software failures. As the program moves closer to production, the nature and frequency of product integration issues can become more complex and support from the tech partner becomes critical. The auto partner must define these commitments in the partnership agreement to lock in the continuity of support at product launch.

iv. Product support

Customer service and product satisfaction are important to car owners who expect low total cost of ownership despite technological improvements in the car. Auto companies should not only plan to minimize customer disruption from technology upgrades but also plan to build a customer support strategy without depending entirely on tech partners, especially in the case of partnerships where auto companies plan to exit upon completion of product development. Therefore, the auto partner should discuss the following areas of product support prior to entering a partnership: – i) transferring customer service responsibilities and appropriate supporting technologies to auto partner, ii) supporting the auto partner's plans to internalize technical services or engage or train third parties to resolve technology issues post product launch and iii) continuing to support product enhancements and software upgrades post auto product launch.

Governance model

Designing the governance model early in the partnership will be key, where the participants need to establish an oversight mechanism with both the partnership management team and with each other to monitor progress, track performance against strategic goals and update the agreed-upon strategy. In the absence of a robust governance design, a partnership could fail due to a lack of clarity in operating responsibilities, decision-making processes and escalation paths.

A governance model for tech partnerships should be built around a product integration agenda to drive innovation, prioritize technology development and enable fast decision-making. Auto and tech partners should avoid starting the journey with an overly complicated governance model where all functions are equally represented. This can lead to overburdening the partnership with misplaced priorities and the wrong agenda. Instead, auto and tech partners should map out the phases in the partnership life cycle, identify key objectives in each phase and design governance models accordingly for each phase. In the initial stages, governance model should be designed primarily around research, product design and integration, and capital approval. Leaders selected to run the steering committees should have an appreciation for the technology nuances across the partners so that they set the right tone for adopting common processes and issue resolution mechanisms. As the partnership evolves and progresses toward commercialization, governance models can be adapted to incorporate a greater representation from other functions, such as finance and sales and marketing.

Throughout the journey, auto and tech partners will need to establish clear rules for maintaining control over the strategic direction of the partnership and key policy decisions that will affect the partnership. However, they must allow partnership management enough freedom to manage the organization on a day-to-day basis without being weighed down by intercompany frictions and overly bureaucratic decision-making processes. This can be a difficult balance but can be achieved by designing the governance model with the right set of guiding principles.

Conclusion

In light of technology disruption, auto players must future-proof their businesses. Partnerships with technology firms are the optimal strategy to gain quick access to critical technologies and capabilities. Tech partnerships must be designed to support the product integration agenda and enhance the customer experience throughout the product life cycle, from joint road map design, to the customer care strategy. A partnership model that is operationalized without detailed planning can be a recipe for failure, as both parties would prefer to impose their choice of practices and methodologies. Instead, both partners should offer autonomy to the partnership and build a model by incorporating the best of both worlds. In the event of conflicts, decisions must be stress tested to check if they support the product strategy and customer experience model of the auto partner. Finally, when setting up the partnership framework, the auto partner should build in the impact of different exit scenarios to protect its investments and future business interests.

EY has in-depth experience in advising clients on negotiating, structuring, operationalizing and exiting all levels of partnership scenarios.

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