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This report outlines the role of tech giants in automotive, detailing their current offerings & partnerships and exploring how equipped they are for expansion. Thorough company profiles establish how competitive, or collaborative, each giant is likely to be with traditional automakers.

#211

Disruptor OEM Guide

The automotive industry has recently seen an influx of new brands, start-ups, and OEMs. While many perceive Tesla to be at the forefront of this movement – having developed a range of vehicles, technologies, and services in a short span of time - a growing ecosystem of new disruptive OEMs is seeking to change this. Many are providing unique offerings, consumer-oriented features, and more affordable solutions in a bid to disrupt the overall automotive landscape.

As this ecosystem develops at an increasingly rapid pace, interest in its players is growing among investors and legacy OEMs. Likewise, while these disruptive OEMs unveil new conceptual vehicles and announce new production-intent models, they are also securing partnerships with companies spanning the automotive landscape. These partnerships scaling from supplier agreements with small start-ups to acquisitions from major OEMs seeking to broaden the scope of their vehicle line-ups or enhance their current offerings.

This report thoroughly profiles new and emerging automakers from around the world and highlights the maturity of their technology, business models, and partnerships. It then identifies which ones have the greatest potential to impact vehicle production and monetization in the future. The regional differences between new and emerging OEMs from China, Europe, the U.S., and other regions are thoroughly assessed.

COVERAGE

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Enabling CASES

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Key questions answered

- > Which new OEMs have the greatest potential to disrupt how cars are made or monetized?
- > How mature are the technologies and business models being developed by disruptor OEMs?
- > Which companies are partnering with disruptor OEMs?
- What regional differences are emerging between new OEMs from China, Europe, USA and other regions?



PRODUCT PLANNERS



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This research supports

Do I have access?

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Disruptor OEM Guide Annual Report for 2022



Excel Database Includes

Disrupti	on Log									
			Laurah	Leventh					Assessment	
Company 🖵	. Disruption 👻	Status 🖵	Launch year 🍸	Launch vehicle	Category	Sub-category 🚽	Image/Video link	New-nes 🚽	Wow-ne	Impact 🔽
Apple	No steering wheel and no pedal	Planned	2025	TBD	Experience	Use	Here	5	3	15
Apple	Expected to opt for in-house chipset developmer	Planned	2025	TBD	Technology	System on Chip	Here	2	2	4
Apple	Innovative battery design	Planned	2025	TBD	Technology	Battery	Here	3	1	3
Apple	Offering a software-defined vehicle	Planned	2025	TBD	Technology	Dynamic Software Stack	Here	4	2	8
Aptera	1,000 mile range	Planned	2022	Aptera	Technology	Battery	Here	5	2	10

Partnership Log

			Тур	oe of p	artners	ship	CA	SES Ana	alysis					Ехр	erience	2					Technology							Business model				
Company	Partner	Reason for partnership	 Joint Venture 	R&D	Proof of Concept	Product development Connected	Autonomous	Shared Mobility	Electric	Secure	Explore	Purchase	Onboard	Load/Storage	Use	Park	Charge	Maintain	Repair	Banawahla	Materials Materials Communication (5G,	Sensing Hardware	System on Chip	E/E platform	Vehicle Platform or	Dynamic Software	Design	Manufacturing	Partnership model	Supply chain model	Annual/monthly payment	Contract manufacturing
Apple	Volkswagen	Apple Self-driving car		Y			Y								Y							Y										
Apple	CATL and BYD	Talks for battery supply			У				У										3	y 🗌												
Apple	LG Magna	LG Magna e-powertrain			у				у															y								

Investme	nt Log																		
					Nature	of investment			Type of in	vestment	Ci	ASES A	nalysis			Expe	rience		
Investing company	Invested in whołwhat	Description	Financial investment	Financial invesment value (USD)	Manpower investment	Number of people	Infrastructure investment	Infrastructure invesment value (USD)	Acquisition	% of stake by investing company	Connected	Autonomous Shared Mobility	Bectric	Secure	Purchase Onboard	Load/Storage	Park	Charge	Maintain Repair
Apple	Finisar	Finisar is a company focused on fiber optic subsystems and network performance test systems.	Y	390 million			_		у	Unknown	Y						Y		
Apple	II-VI	II-VI develops precision products such as infrared optical components and laser-related products for the automotive industry.	y	410 million					y	7%		y							
Apple	Didi	Apple invested on a funding round of Didi, a Chinese ride- hailing service	y	1000 million					y	5%		y					y		

Excel Data Points: 5,000+

New Companies in Automotive Covered: **17**





March 2022
Disruptor OEM Guide



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Example slides from the report



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Five key trends that are defining disruption in the automotive

Quick to market	01	Product time to market Shifting from long to short	New entrants do not have the burden of protecting legacy architecture, giving them a blank page start to create skateboard platforms. EV only focus together with limited platform gives them advantage to evolve and adapt quickly to market competition	Close to 100,000 sales in 3-4 years
Numerous disruptors	02	# of disruptors Growing from one to many	With changing automotive and mobility landscape, OEMs are being challenged by multiple new entrants such as tech giants, manufacturing giants and start-up OEMs, pushing them to compete against multiple dimensions	8 new players established in last 5 years
Regional shift in innovation	03	Regional push Many Asian-led OEMs	Over 50% of new entrants identified are Asian players who are likely to initially focus on specific market and specific vehicle segment. Over time some of these players could potentially expand to different regions	10 out 17 new entrants are Asia based
Ambiguous ecosystem	04	New entrant role Less clarity in the ecosystem	As the ecosystem evolves, deep pocketed firms like Huawei, Xiaomi, Foxconn and Sony are eager to become OEMs as well as suppliers focusing across the value chain. This pushes established OEMs to compete as well as work together with some competitors	4 tech-giants eager to become an OEM
Changing expectations	05	Competitive offering New mainstream player offer innovative unique features	New mainstream OEMs are being fast to bring new experiences and technologies, changing expectations and making them as attractive as premium cars	Xpeng P5 is tech- oriented mainstream EV





Current level of disruption High disruptiveness HUAWEI «= 0 × T R 0 N × P E N G INFAST _()) HiPhi \sim Low disruptiveness aptera 🗞 RIVIAN SONY-Faraday, Future, 日理想 **Consumer Electronics** Manufacturer Start-up OEMs Type of Company

	Capabilities		
	Low	Medium	High
Manufacturing			
Supply chain			
Financial stability			
Retail network			
Brand			
Software			
Automotive milestones			

														-				
Ap	ople	Aptera	<u>Faraday Future</u>	Fisker	Foxtron	<u>HiPhi</u>	Huawei	<u>Li Auto</u>	Lightyear	Lucid	NIO	<u>Niutron</u>	<u>Rivian</u>	Sony	VinFast	<u>Xiaomi</u>	Xpeng	

What makes them unique?

- Faraday Future's offering only includes electric vehicles but targeting multiple segments and multiple use cases. The brand aims to offer Ultra premium electric vehicles for personal use in 2022 as well as providing last mile delivery vehicles by end of 2023.
- The brand seems to adopt different strategy for their two main markets – USA manufacturing plant for vehicle sales in USA while choosing to opt for contract manufacturing for vehicle sales in South Korea.



<u>Note:</u> Only the 4 most relevant disruptions shown. For a full list, please access the accompanying Excel document.

A 27-inch screen drops down on the inside from the center of the roof, just behind the headrest of front seats, providing a tv style screen for rear passengers

Seats with 60° recline with high comfort. Faraday Future states it has the most leg room in its class

Platform between Faraday Future's workforce and consumers to work together and build better products. Some members (called FPOs) are invited to exclusive experiences with FF products and provide feedback on not launched products.

FPOs are rewarded based on the quality of the ideas received in the co-creation process. The reward includes awesome FPO titles to brag about on the FF App, Growth value and Co-creation points, and even future use of FF vehicles.

Faraday Future has a patented battery design with all major battery components submerged in coolant, improving battery safety, extending life and increasing energy density







	Underst	anding the	e new entrants	Lucid -	- Overview													SBD
	Apple	Aptera	Faraday Future	Fisker	Foxtron	<u>HiPhi</u>	<u>Huawei</u>	<u>Li Auto</u>	Lightyear	Lucid	NIO	Niutron	<u>Rivian</u>	Sony	VinFast	<u>Xiaomi</u>	Xpeng	





High



<u>Note:</u> Only the 4 most relevant disruptions shown. For a full list, please access the accompanying Excel document.



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