

Partnership Makers & Shakers

in the Automotive Industry

Partnerships are powering the future of the automotive industry.
Some companies lead the way, while others fall behind.

New Automotive Partnership Overview

Companies are **partnering to advance the future of the automotive industry** at unprecedented rates.

There has been a **198% surge in new automotive partnership deal volumes** in the last 18 months over the prior 18 months.

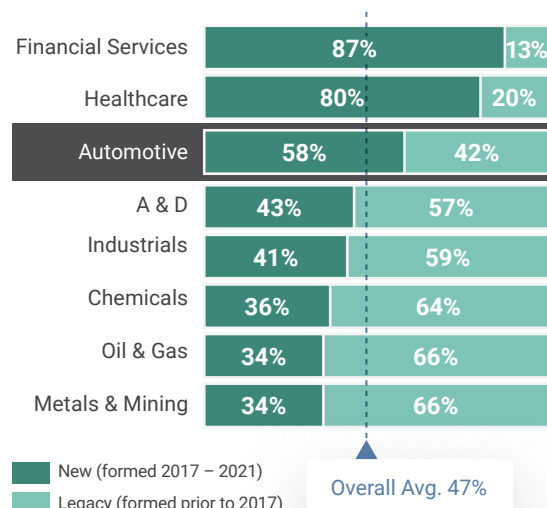
Of the partnerships of 10 leading automotive OEMs, a whopping **58% were formed in the last 5 years**.

Of these new automotive partnerships, **a majority – 56% – revolve around electric vehicles**, though others relate to autonomous vehicles, smart and sustainable mobility, and vehicle manufacturing.

Some companies, like **The Mercedes-Benz Group and Toyota, are doing a high volume of partnership deals** to develop their competencies and gear up their value chain. Others like Tesla and Ford have entered into fewer.

New vs. Legacy Partnerships - Percent

Percent of New (vs. Legacy) JVs and Partnerships
N = 2647 JVs and Partnerships



Source: Ankura Partnership Makers and Shapers Analysis; 2022

New Partnership Formations

Number of new JVs & partnerships, 2016-2021

Company	Number
The Mercedes-Benz Group	39
Toyota	38
Volkswagen	36
Renault	26
Stellantis	26
GM	21
BMW	20
Honda	18
Ford	13
Tesla	7

Source: Ankura Partnership Makers and Shapers Analysis; 2022

Types Of New Automotive Partnerships



Electric Vehicles (EV):

Majority of new automotive partnerships

Many battery and fuel cell partnerships to advance/produce the most expensive, complex EV components



Autonomous Vehicles (AV):

Many deals for trucking services given tight driver supply and high demand

Fewer in 2021 than 2016 (13% of auto partnership deals vs. 30% in 2016)



Smart, Sustainable Mobility:

Includes tech for car-sharing, ride-hailing, connected cars, sustainable manufacturing, and smart urban mobility management

15% of new partnerships in last 5 years

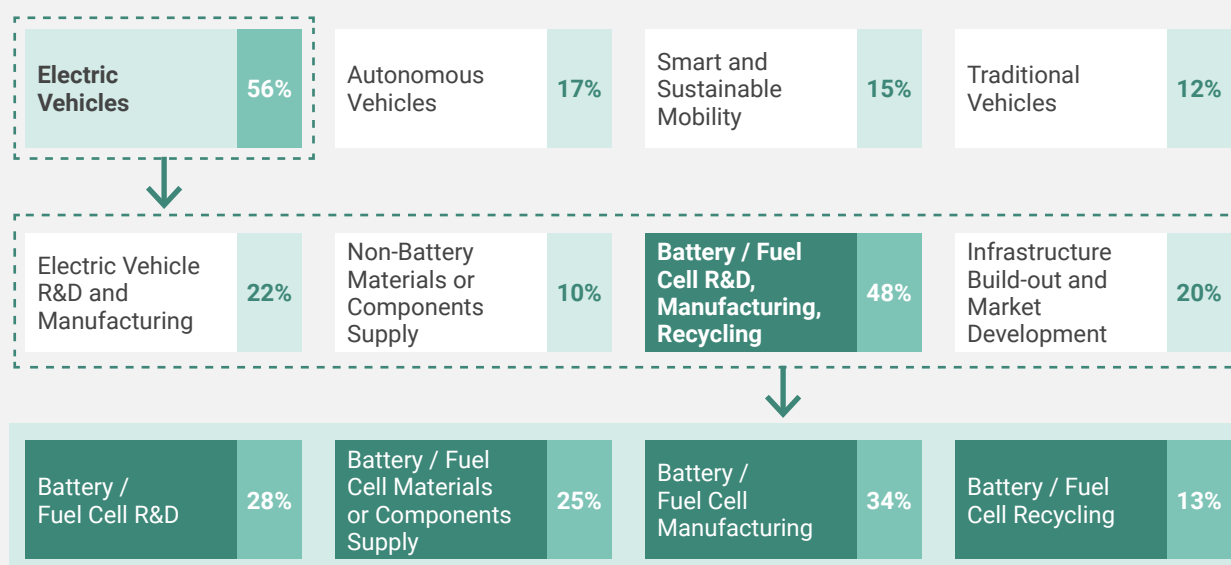


Traditional Vehicles:

Fewer new traditional vehicles JVs in last 5 years than in prior years




New JVs include deals to partially divest wholly-owned assets, or consolidate for synergies

Percent of New Automotive JVs and Partnerships 2016-Q2 2022 (n=315)






Source: Ankura Proprietary Databases

Examples Of New Automotive Joint Ventures

<p>Electrify America</p>  <p>\$2.45 billion U.S. EV charging JV between Volkswagen and Siemens.</p> <p>2022</p>	<p>Basquevolt</p>  <p>\$700 million-plus Spanish venture by Iberdrola, Enagas, CIE Automotive, and others in solid-state batteries.</p> <p>2022</p>	<p>Canopy</p>  <p>JV between Ford and ADT to provide AI-powered connected security cameras and mobile app for vehicles.</p> <p>2022</p>
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<p>General Motors-POSCO</p>  <p>\$633 million battery cathode materials plant JV in North America.</p> <p>2022</p>	<p>Glencore-Britishvolt</p>  <p>JV developing U.K. battery recycling ecosystem.</p> <p>2022</p>	<p>Automotive Cells Co.</p>  <p>\$7 billion-plus JV between Mercedes-Benz, Stellantis, and TotalEnergies/Saft in European battery mfg.</p> <p>2021</p>	<p>Bugatti Rimac</p>  <p>JV between Porsche and Rimac into which Volkswagen hived-off its Bugatti hypercar brand.</p> <p>2021</p>
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<p>HYVIA</p>  <p>JV between Renault and Plug Power to build ecosystem for fuel cell commercial vehicles.</p> <p>2021</p>	<p>Levo Mobility</p>  <p>JV among Evolve, Nuvee, and Stonepeak to develop turnkey solutions for fleets to transition to EVs.</p> <p>2021</p>	<p>Polestar</p>  <p>EV JV between Volvo Cars and Geely that is developing carbon-neutral car in partnership with key suppliers.</p> <p>2021</p>
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<p>Stellantis-Samsung SDI</p>  <p>\$2.5 billion-plus U.S.-based EV battery production venture.</p> <p>2021</p>	<p>Cellcentric</p>  <p>JV between Daimler Truck and Volvo to develop and produce fuel-cell systems for heavy-duty trucks.</p> <p>2020</p>	<p>Hydrovolt</p>  <p>European battery recycling JV between Northvolt and Hydro.</p> <p>2020</p>	<p>Traton-TuSimple</p>  <p>Minority investment and collaboration to develop self-driving trucks.</p> <p>2020</p>
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Automotive Partnership Restructuring Overview

Automotive partnership **exits and restructurings have risen 92%** in the last 18 months over the prior 18 months.

Exits from traditional vehicle manufacturing JVs are driving exits and restructurings.

In the last 5 years, **29% of automotive partnerships restructured** (e.g., change of ownership, operating model).

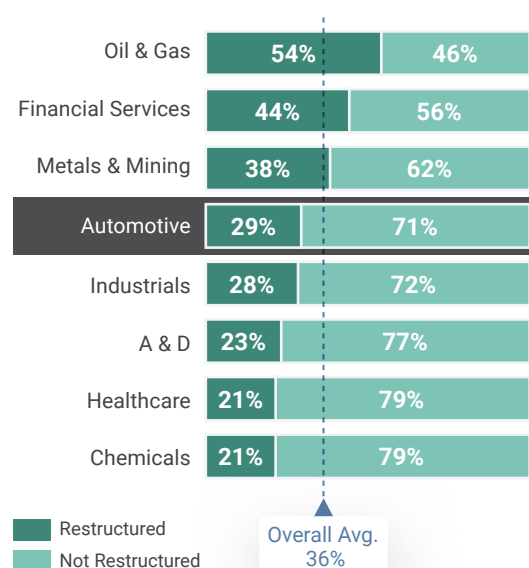
The Mercedes-Benz Group and Toyota exited or restructured more partnerships than other companies reviewed, publicly exiting or restructuring 12 and 10 partnerships, respectively.

Exits and restructurings **are good signs** – showing companies executing strategies or fixing underperforming subsidiaries.

JV Restructurings - Percent

Percent of JVs Restructured in Last 5 Years

N = 2079 JVs¹



¹Does not include non-JV partnerships
Source: Ankura Partnership Makers and Shapers Analysis; 2022

JV Restructurings - Number

Number of JV restructurings, 2016-2021

Company	Number
The Mercedes-Benz Group	12
Toyota	10
BMW	9
Ford	8
GM	8
Stellantis	8
Volkswagen	7
Renault	5
Honda	4
Tesla	1

Source: Ankura Partnership Makers and Shapers Analysis; 2022

About the Data

Ankura analyzed the joint ventures and partnerships of nearly 100 companies across 8 industries to look at:

- New JVs and partnerships since 2017
- JVs and partnerships restructured since 2017
- Stock market returns of target companies after announcements of new or restructured JVs and partnerships

These pages summarize key takeaways from that data related to the automotive industry.

Overall Partnership Portfolio Makers and Shakers

We looked at companies' **relative level of partnership activity** given the size of the company's portfolio and the number and materiality of their new, restructured, or exited partnerships.

These variables **yielded the "Weighted Partnership Activity Scope" for each company**, which we used to rank the most active partnership makers and shakers in terms of their relative portfolio size.

Tesla was the most active partnership portfolio maker and shaker due to the small size of its JV and partnership portfolio and thus large impact on its portfolio of its few new and restructured partnerships over the last 5 years.

Honda was the least active partnership portfolio maker and shaker as it restructured or exited few of its existing JVs and partnerships and, while it entered into several new partnerships in the last 5 years, it entered into fewer that were material than peers.

Weighted Partnership Activity Score

Calculated Score, 2016-2021

Company	Score
Tesla	54
Toyota	37
BMW	36
Stellantis	36
Ford	35
Renault	33
The Mercedes-Benz Group	33
Volkswagen	30
GM	26
Honda	24

Source: Ankura Partnership Makers and Shapers Analysis; 2022

Stock Market Reactions to Partnership Announcements

Material JV and Partnership Announcements (2016-Q1 2022)

N = 2225 announcements

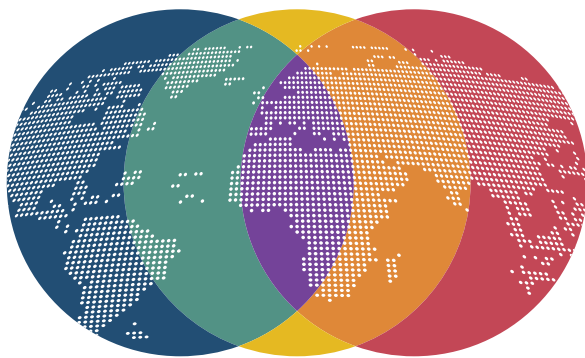
Industry	Positive for at least 1 Partner	Negative for at least 1 Partner	Avg. Positive Abnormal Returns	Avg. Negative Abnormal Returns
New JVs and Partnerships				
Renewable Energy & Power	64%	39%	5.7%	6.2%
Automotive	61%	40%	5.3%	3.8%
Consumer & Retail	59%	48%	4.6%	5.3%
Financial Services	65%	38%	9.2%	4.0%
Healthcare & Pharma	67%	39%	7.7%	3.9%
Industrial & Services	48%	55%	6.2%	3.7%
Metals & Mining	55%	45%	4.4%	4.5%
Oil & Gas	45%	61%	9.4%	7.4%
Chemicals	71%	36%	6.0%	3.4%
Hi-Tech	60%	40%	4.5%	4.3%
Travel & Logistics	58%	42%	4.2%	4.8%
Average	59%	44%	6.1%	4.7%

Source: Ankura JV and Partnership Transactions Database; S&P Capital IQ; Factiva; Ankura Analysis

The **stock market rewarded new JV and partnership deal announcements** in the automotive industry.

Of the announcements for material new automotive partnership deals since 2016 with a statistically significant stock price impact, **61% had a positive impact on at least one partner's share price**, and 40% had a negative impact.

The stock market **reacted to announcements that automotive partnerships had been restructured** – with 72% of such statistically significant reactions having a positive impact on at least one partner's share price and 31% having a negative impact.



Ankura is the world's leading advisor on joint ventures and partnerships. Over the last decade, we have advised clients on JV transactions valued at more than \$700 billion.

We help our clients succeed by drawing on a highly experienced team, proprietary tools, benchmarks, and analysis. We advise across the venture lifecycle, from deal strategy, partner due diligence, valuation and economics to deal structuring, negotiation, launch, governance, and restructuring.