

# Ankura Joint Venture Index®

## Annual 2022

2023





Volkswagen is our pick for dealmaker of the year.

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# About the Ankura JV Index

**PURPOSE:** The Ankura Joint Venture Index® (AJVI) is a barometer of global joint venture and partnership activity and impact. Joint ventures and partnerships are used by companies, organizations, and governments to stimulate growth and serve as key drivers of innovation. At the same time, these ventures help firms reduce costs, capture synergies, and manage mature or non-core businesses. Measuring JV and partnership activity highlights new technologies, products, and markets where we can anticipate future growth or innovation, as well as signals what technologies and markets are experiencing consolidation, stagnation, or decline. Furthermore, the JV Index indicates the level of global, corporate collaboration and can be an added indicator of shifts in the political and economic landscape over time.

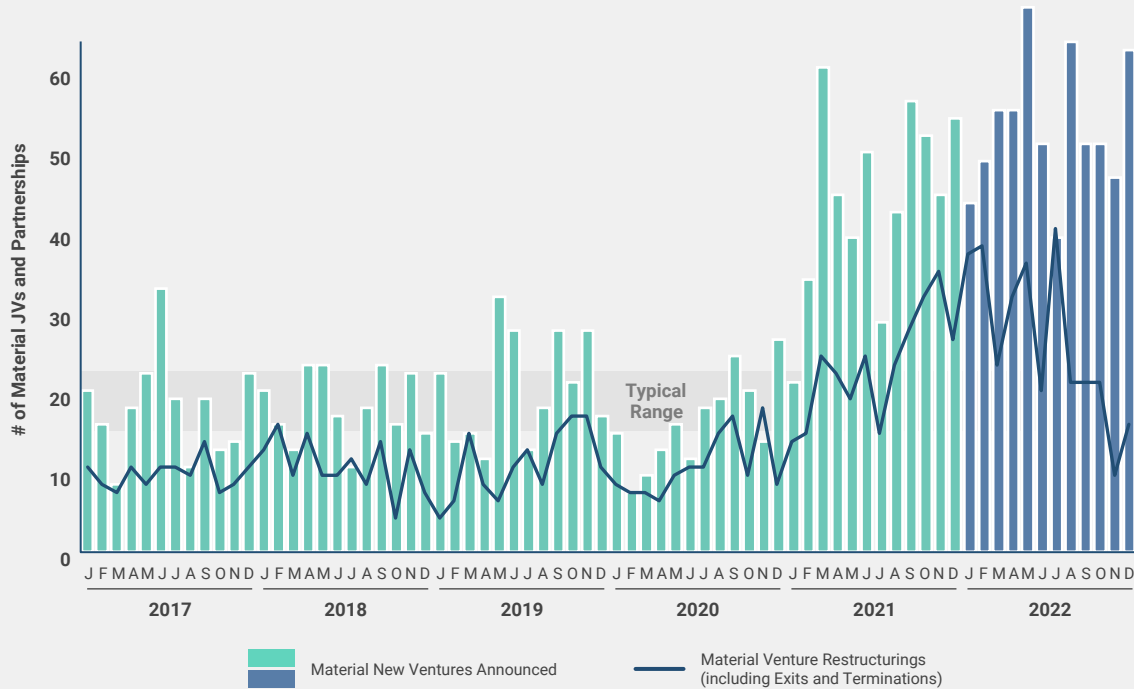
**METHODOLOGY:** The JV and partnership announcements included in the JV Index have been selected using a proprietary methodology to isolate financially and strategically material ventures. Unlike in mergers and acquisitions (M&A), joint venture and partnership values are typically not announced. When they are made public, initial capital commitments rarely reflect future financial outlays or potential impact. This poses a substantial challenge to tracking JV and partnership activity. Because we are interested in the most material ventures globally, we have designed a methodology that leverages information from a basket of major international newspapers and newswires worldwide to provide an initial screen, which we further refine based on additional tests.

**SCOPE AND DEFINITIONS:** The dataset is composed of different types of collaborations, including incorporated and unincorporated joint ventures, non-equity partnerships such as research and development (R&D) or marketing alliances, and minority equity investments – provided that such investments also involve broader corporate collaboration. Ventures between a single strategic investor and one or more purely financial investors have been excluded from the Index unless the venture has one or more commercial arrangements with the financial investor’s other businesses. The Index excludes majority equity investments and M&A.

EXHIBIT 1

JV and Partnership Announcements

JV and Partnership Volumes – New Venture Formations and Restructurings, 2017 - 2022



Source: Ankura JV & Partnership Transactions Database

# THE ANKURA JV INDEX

## 2022 in Review – and Ahead

The heady days and nights of dealmakers working on joint ventures and partnerships show no signs of relenting.

Bucking the year’s massive step-back in M&A,<sup>1</sup> the volume of new joint ventures and partnerships remained strong across the year, with 2022 outpacing 2021, which shattered historic records (**Exhibit 1**). We see no signs of this changing as we enter 2023, where the macro forces driving partnerships remain in place.

The year included some extremely large transactions, including GSK and Pfizer IPO’ing their consumer health joint venture, [Haleon](#), that valued the venture at £30 billion, making it Europe’s biggest listing in a decade. It also saw a series of restructurings and exits, including the rapid unwinding of many joint ventures in Russia, by companies like Ford, Shell, and Uber. And Volkswagen emerged as our Dealmaker of the Year, based on a combination of large new transactions and exits.

Following is our recap of the year that was 2022.

<sup>1</sup> According to Refinitiv, the total value of M&A deals announced globally fell 37% in 2022 from 2021’s record high, in the biggest year-over-year percentage drop since 2001. Source: M&A Is Expected to Pick Up in 2023 as Companies Adapt to Tougher Conditions, Kristin Broughton, Dow Jones Institutional News, 5 January 2023.



## KEY TRENDS

### 1. JV AND PARTNERSHIP VOLUMES INCREASE

The headwinds hitting M&A – including increased financing costs due to higher interest rates, recessionary fears that leave corporate boards hesitant to make large capital outlays, and a disconnect between buyer and seller valuations – are not impacting joint venture and non-equity partnership volumes. Overall, the global volume of material new joint ventures and non-equity partnerships increased by 25% compared to 2021, and enters 2023 with strong momentum. There were large deals in 2022: 35% of last year's joint ventures involved investments or valuations of at least \$1 billion, compared to 25% in 2021. This is a clear indicator that JVs and partnerships remain the preferred transaction structure for sharing investments, spreading risks, making calculated bets on future opportunities, and ultimately, driving performance improvements.

**35%**  
IN 2022

OF JOINT VENTURES  
INVOLVED INVESTMENTS  
OR VALUATIONS OF  
AT LEAST \$1 BILLION  
COMPARED TO

**25%**  
IN 2021

### 2. RESTRUCTURINGS SPIKE

2022 recorded an unprecedented level of venture restructurings, including exits, buyouts, and initial public offerings, which increased by 25% over 2021. In the first half of the year, many restructurings took the form of exits driven by external pressures. Firms like Shell, Equinor, Uber, and McDonald's clamored to cut ties with [Russia and Russian partners](#), and even on unfavorable terms like massive discounts to current valuations, staggered payments, or costly options to buy back their stakes. Meanwhile, Facebook came under intense scrutiny from regulators and lawmakers, and shuttered its ambitious effort in cryptocurrency, The Diem Association, a partnership that had the backing of big shots like Visa and PayPal.

Elsewhere, restructurings were more deliberate and growth oriented. Global miner Rio Tinto, for instance, announced a deal to buy out the public shareholders in a Canadian entity that held its interest in [Oyu Tolgoi](#), a massive copper mine joint venture with the Mongolian government. The data continues to show that venture restructuring is a sign of strength, as firms that put their [partnership portfolios on the move](#) show higher returns on capital, while, paradoxically, those with higher [partner failure rates](#) have higher corporate revenue growth.

### 3. GREEN JV AND PARTNERSHIP DEALS DOMINATE

Deals focused on preventing or mitigating adverse impacts of climate change comprised 67% of new JV and partnership volumes, up from only 19% three years ago. The hydrogen and ammonia value chain, carbon capture and storage, fixed and floating offshore wind, bio-based fuels and materials, and electric vehicles were hubs of intensive green JV and partnership deal activity in 2022, and will continue to dominate deal making over 2023 as companies up the ante on their sustainability commitments and initiatives. [Green hydrogen](#) is spawning a whole series of joint ventures and partnerships by a diverse array of technology start-ups and established energy, power, industrial, and mining players such as Plug Power, BP, Iberdrola, Shell, Siemens, Air Liquide, Equinor, Fortescue, RWE, Osaka Gas, Adani, Repsol, and TotalEnergies. Biomethane (also called RNG or renewable natural gas) attracted a flurry of large partnerships such as the \$1 billion joint venture between Republic Services and BP-owned Archaea Energy to develop 39 projects for converting landfill gas into RNG in the US, and TotalEnergies' partnership with Veolia to co-invest in an international portfolio of biomethane projects spanning more than 15 countries.





4. CERTAIN SECTORS SIZZLE

JV and partnership deal activity heated up several industries, each fueled by major underlying trends (Exhibit 2).

EXHIBIT 2

Financial Services



**In financial services**, banks and payment companies continued to partner with fintechs at exponential rates and in increasingly complex deals, despite regulators advising caution and stringent oversight. J.P. Morgan made a large (48.5%) strategic investment in European cloud-based payments fintech Viva Wallet. Mastercard is making a minority investment in Conferma Pay, a fintech acquired by Sabre, to expand the use of virtual cards for business-to-business travel payments. Four US community banks banded together in a consortium to mint and use stablecoins on a blockchain developed by fintech Figure Technologies.

Automotive & Mobility



**Automotive companies** partnered at a blistering pace to secure supplies of critical battery materials, speed the commercialization of advanced battery technology, build out networks of charging stations, recycle used batteries, and share the multi-billion capex requirements of large-scale production plants. Honda and LG are collaborating on a \$4 billion battery JV in the US. General Motors is taking an equity stake in Australia's Queensland Pacific Metals to source nickel and cobalt for its Ultium battery cells. Foxconn is forming Ceer, a joint venture with Saudi Arabia's Public Investment Fund, to design and manufacture electric vehicles in Saudi Arabia.

Metals & Mining



In metals and mining, predominant deal drivers were electric vehicle and renewable energy metals, electrification of mining vehicles, and steel decarbonization. Shell is leading a consortium of companies, including Worley and Heliox, to develop a commercial solution for electric mining haulage trucks. Vale has established three multi-billion dollar joint ventures for nickel processing in Indonesia with partners including China's Shandong Xinhai and Zhejiang Huayou. Anglo American is collaborating with Thyssenkrupp Steel on the joint research of green steelmaking technologies.

Aerospace & Defense



Fighter jets, electric defense vehicles, urban air mobility, and green hydrogen applications fed aerospace and defense deal volumes. Japan, Britain and Italy are merging their next-generation jet fighter projects in a venture called the Global Combat Air Programme. Acciona is investing \$30 million in Embraer's Eve UAM subsidiary and partnering with the company to develop a global sustainable urban air mobility ecosystem, including vertiports and battery charging solutions. Airbus, in partnership with Renault, is developing advanced battery systems for hybrid-electric aircraft.

Telecommunications



Telecommunication players collaborated for in-country consolidations, network and infrastructure monetization, and satellite to cellphone connectivity. Vodafone launched a \$7 billion-plus fiber broadband joint venture in Germany with Altice, and is in talks with CK Hutchison to consolidate their UK assets into a \$15 billion-plus joint venture. Ericsson, Thales, and Qualcomm are jointly developing a 5G network using low-Earth orbiting satellites to improve connectivity in remote locations.

Oil & Gas



Oil and gas partnerships focused on regional and basin consolidations, exits from troubled geographies, restructurings of conventional asset portfolios, investments in natural gas and carbon capture, and operational efficiency. Schlumberger, Aker Solutions, and Subsea 7 are combining their complementary geographic coverage, technology, and engineering capabilities in subsea construction into a \$3 billion joint venture to assist oil and gas companies in increasing efficiencies and reducing emissions from subsea assets. TotalEnergies, INPEX and Woodside are collaborating on Bonaparte CCS, a major carbon dioxide sequestration project off the northwest coast of Australia. ConocoPhillips is partnering with Semptra to jointly develop the \$10 billion Port Arthur LNG project in the US' Southeast Texas.

Chemicals



Plastics recycling, bio-based materials and processes, green ammonia, and portfolio emissions reduction objectives were predominant themes in chemicals industry partnerships. Scatec, in partnership with Fertiglobe, Orascom and others, is building a multi-billion dollar plant in Egypt to deliver green hydrogen as feedstock for the production of ammonia. LyondellBasell has entered into joint ventures with Shakti Plastic, 23 Oaks, and Genox to build and operate plastics recycling plants. Braskem is establishing a joint venture with Sojitz to produce and sell bio-based intermediate chemicals.

Healthcare



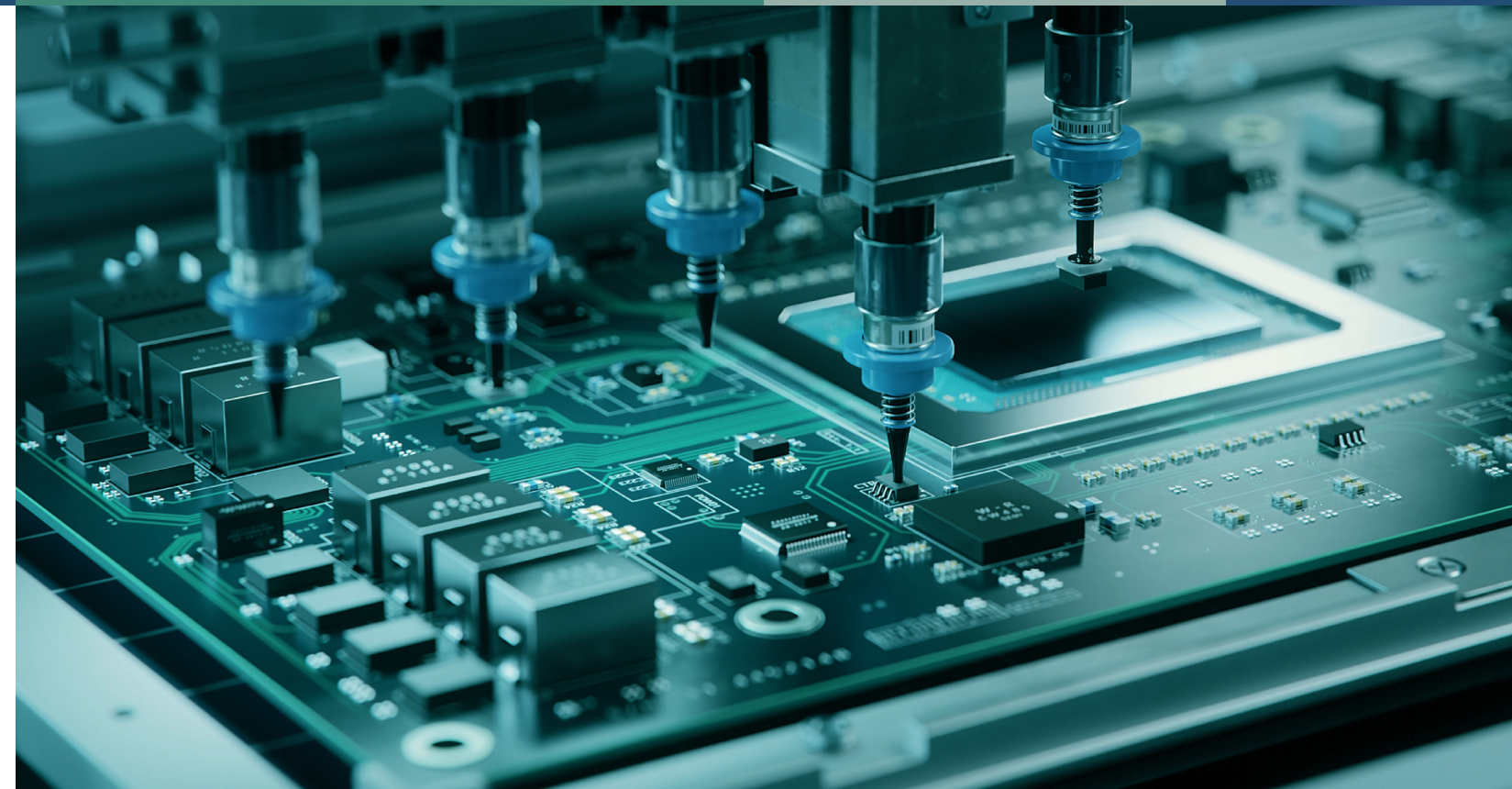
Pharma and biotech companies struck partnerships for mRNA-based therapeutics, cancer treatments, AI-powered drug discovery and development, and molecular glue therapies for protein degradation. Sanofi is partnering with Atomwise to use its AtomNet AI platform for the computational discovery and research of drug targets. McKesson and HCA Healthcare are combining their oncology clinical trials and research units into a joint venture to build a fully integrated research organization and offer a broader portfolio of clinical trials. BioNTech has entered into collaborations with Pfizer for an mRNA-based shingles vaccine, and with Crescendo Biologics and Medigene in immuno-oncology.

Source: Ankura Analysis

Source: Ankura Analysis

## 5. SOME PARTNERSHIPS FIZZLE

Facebook's The Diem Association wasn't the only blockchain partnership that bit the dust in 2022. There were other high-profile partnership experiments in blockchain that collapsed. B3i, a consortium of 15 insurance and reinsurance companies, including Allianz and Munich Re, that aimed to reduce inefficiency in premium and claims settlement by placing contracts on blockchains, filed for insolvency. As did We.trade, a blockchain consortium of 12 banks including Deutsche Bank and HSBC focusing on trade finance. Maersk and IBM are winding down TradeLens, a supply-chain blockchain solution for shipping and freight operators, citing commercial unviability. These failures coincide with the broader crisis in the crypto sector (that uses blockchain as the underlying technology) which culminated with the collapse of FTX, causing companies to question the technology's potential and underlying risks. Another hyped technology with once frenzied partnership activity and enthusiasm that is now waning amidst a wider industry shake-up is autonomous vehicles. Ford and Volkswagen pulled the plug on Argo AI, their joint effort in self-driving technology, with Ford taking a \$2.7 billion loss on its investment, and stating that the large-scale profitable commercialization of self-driving vehicles is further out than expected. Softbank exited its investment in General Motors' Cruise partly because financial returns were a long way off, while truck manufacturer Navistar and autonomous trucking technology company TuSimple scrapped their co-development partnership, leaving TuSimple struggling to achieve commercial viability without a major OEM partner.



## 6. PARTNERSHIPS PROP SUPPLY CHAINS

Shortages in electric vehicle materials and semiconductors, and sanctions on Russian oil and gas severely strained supply chains in 2022. Partnerships provided relief. In semiconductors, leading US manufacturers Intel, Micron, and Analog Devices joined MITRE Engenuity's Semiconductor Alliance to maintain US competitiveness in semiconductor innovation and supply chain security. Japanese companies including NEC, Sony, Toyota, and Softbank have established Rapidus to strengthen their supply chain for next-generation semiconductors that support artificial intelligence and quantum computing. South Korea, home to LG Energy, Samsung SDI and SK On, which together control nearly a quarter of the global EV battery market, has launched a government-backed alliance to bolster supply chain stability in key battery materials. Germany is going full steam ahead on building infrastructure to import LNG from non-Russian sources, with major projects including the Fluxys and Dow-backed Hanseatic Energy Hub progressing rapidly.



TOP DEALS OF THE YEAR

Here’s our take on fifteen largest or coolest deals of the year (Exhibit 3).

EXHIBIT 3

Partnership  
“Top Deals of  
the Year”

Boeing and Northrop Grumman		Boeing and Northrop Grumman formed Deep Space Transport, a joint venture to provide an estimated \$80 billion in launch services to NASA for Artemis missions to the moon or other deep-space destinations.
Orange and MasMovil		Orange and MasMovil entered into a \$19 billion 50:50 joint venture to combine their fixed and mobile telecommunications operations in Spain.
Renault and Geely		Renault entered into a 50:50 gasoline engine and hybrid technology joint venture with Chinese automaker Geely that will manage 17 production plants and 5 R&D centers on three continents, and employ 19,000 people.
GSK and Pfizer		GSK and Pfizer IPO-ed their consumer health joint venture, Haleon, in Europe's biggest listing in a decade.
Lanxess and Advent International		Lanxess and Advent International entered into a 40:60 JV to jointly acquire DSM's engineering materials business, and combine it with Lanxess' high-performance materials unit into a \$7 billion business.
Repsol and EIG		Spanish energy company Repsol entered into a \$19 billion joint venture with EIG for its entire global upstream oil and gas business.
Mubadala, TAQA, ADNOC, and Borealis		In the UAE, local state-owned powerhouses Mubadala, TAQA, and ADNOC consolidated their renewable energy and green hydrogen efforts into two joint ventures under the Masdar brand, while ADNOC and Borealis listed their polyolefins joint venture in Abu Dhabi's largest-ever IPO.
QatarEnergy, Shell, ExxonMobil, TotalEnergies, ConocoPhillips, and Eni		Across the gulf, QatarEnergy formed joint ventures with Shell, ExxonMobil, TotalEnergies, ConocoPhillips, and Eni to undertake a \$50 billion expansion of the North Field, as global demand for liquefied natural gas soars in the wake of the Russian invasion of Ukraine.

Stora Enso, Northvolt, and Voodin Blade		Finnish pulp, paper, and forestry company Stora Enso entered into a partnership with Northvolt to develop batteries from forestry byproducts, and another partnership with Voodin Blade to develop wind turbine blades from wood.
Kraft Heinz and TheNotCompany		Kraft Heinz entered into a joint venture with TheNotCompany to develop plant-based meat and dairy alternative versions of Kraft products.
Holcim and Magment		Swiss building materials giant Holcim made an investment in and expanded its partnership with German startup Magment to develop a magnetizable concrete technology for road surfaces that will allow electric vehicles to recharge wirelessly while in motion.
Bosch and IBM		Bosch and IBM entered into a partnership to use quantum computing and simulation technology to find alternatives to the rare earths and battery metals needed for electric vehicles.
Siemens Energy, Thales and Trumpf, and Marvel Fusion		Siemens Energy, Thales and Trumpf are jointly developing a nuclear fusion technology with German start-up Marvel Fusion that, if commercially viable, could produce a virtually limitless energy supply with no long-lasting radioactive waste.
Baker Hughes, Continental Resources, INPEX and Chesapeake		Baker Hughes, in partnership with Continental Resources, INPEX and Chesapeake, has established the Wells2Watts consortium to explore technologies that can transform non-productive oil and gas wells into geothermal wells capable of generating renewable electrical power.
The European Space Agency and Eumetsat		Meteosat Third Generation (MTG), a collaboration between The European Space Agency and Eumetsat is launching Europe's next generation of weather satellites that will provide 50 times more data than currently possible to improve the accuracy of forecasting imminent storms.

## DEALMAKER OF THE YEAR

Volkswagen is our pick for dealmaker of the year. The German automaker announced several partnerships across the electric vehicle value chain and in autonomous vehicles in 2022. VW is selling a minority stake in its US electric vehicle recharging business to Siemens at a valuation of more than \$2 billion. It plans to install 8,000 fast-charging spots across Europe by 2024 in a partnership with BP. Its joint venture with Enel plans to build 3,000 high-speed charging points across Italy by the end of this year. The company is teaming with Nevada startup Redwood Materials to recycle batteries in the US, forming joint ventures with Huayou Cobalt and Tsingshan Group to secure nickel and cobalt supplies for electric vehicles in China, and planning a joint venture with Bosch in battery production systems. It is also considering a partnership with Foxconn in electric vehicle manufacturing in North America. In autonomous vehicles, the company scrapped its partnership with Argo AI, while expanding its collaboration with Mobileye and entering a nearly \$3 billion joint venture with one of China's leading designers of artificial intelligence chips, Horizon Robotics, to accelerate the development of AI-assisted and driverless cars.



JV and partnership transactions have shifted into a new gear, achieving and sustaining unprecedented velocity over the last 24 months. Partnerships have emerged as the transaction vehicle of choice for companies to access and commercialize innovation, with an explosion of recent partnership activity most notable in financial services, consumer goods, and food and agriculture – joining sectors like life sciences, healthcare, and hitech which have long relied on partnerships to generate new products and technologies. JVs and partnerships have also become central to developing more sustainable businesses, as we see automakers using partnerships to build electric vehicle value chains from scratch, and oil companies using partnerships to move into renewable energy, including wind, solar, and hydrogen. The frenzy will continue.

## Authors

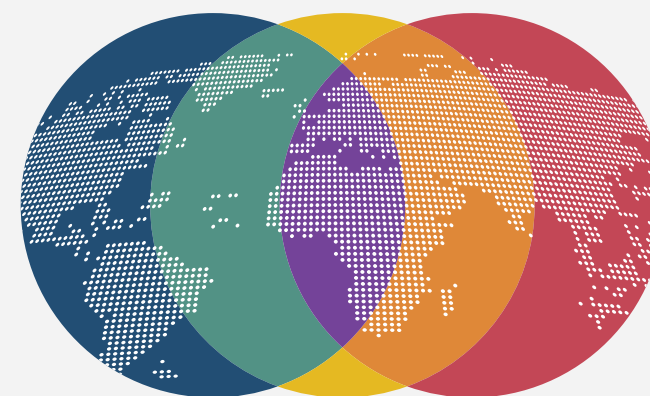
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**Ankura is the world's leading advisor on joint ventures and partnerships. Over the last decade, we have advised clients on JV transactions valued at more than \$700 billion.**

**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.**



Ankura Consulting Group, LLC is a global provider of a broad range of consulting services in the areas of strategy and performance; transactions, finance, and governance; data and technology; risk, forensics and compliance; disputes and economics; and turnaround and restructuring.

**We help clients protect, create, and recover value.** Ankura has over 1,500 employees and more than 30 offices worldwide.

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