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Autonomous Akin



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Our newsletter reflects the focus of Akin's cross-practice autonomous systems and advanced mobility team on developments in the regulatory, policy, trade, intellectual property, and cybersecurity and privacy spaces. Autonomous Akin brings you the latest news and developments so that you can keep a pulse on what is happening in government and industry that is impactful for your business. For our new readers, you can subscribe to future issues of this newsletter [here](#). Thank you!

In this issue

- [Unmanned Aircraft Systems \(UAS\)](#)
- [Advanced Air Mobility](#)
- [Technology, Environment and Legislation](#)
- [Autonomy & Electric Vehicles](#)
- [Akin Thought Leadership](#)
- [Events](#)

Akin Spotlight

Autonomous Systems & Advanced Mobility: 2023 Trends & Predictions

We are excited to share this piece to guide you through the new trends and legal developments of the autonomous systems and advanced mobility space.

[Click here to download the report](#)

Unmanned Aircraft Systems (UAS)

Volocopter Completes Production Setup for Electric Air Taxis - *sUAS News*

Volocopter, the pioneer of urban air mobility (UAM), announced yesterday the opening of its production facilities in Bruchsal. The company marked this milestone with the opening of a new hangar that will host the company's final assembly line with an airfield to conduct development flight tests as well as quality checks. All company-owned production sites, which will manufacture the first EASA-certified electric air taxis, will ramp up into full operation in April. From this facility, electric air taxis made in Germany will be deployed across the world, offering commercial services starting next year.

[Read the Article](#)

Making Drones Suitable for Cities - *Tech Xplore*

Unmanned aerial vehicles will make their way into urban skies only if the safety of people below can be ensured. The Spanish resort town of Benidorm is known for its sandy beaches with clear waters, a skyline dominated by towering hotels and tourists from northern Europe. But one day in February, it also served as a testing ground for European society's future with drones. Since the local economy depends on tourism during the summer, Benidorm is relatively empty in winter—and that's a plus when it comes to safety while testing unmanned aerial vehicles (UAVs). The tall buildings that dominate the skyline also stand in nicely for those of a big city. In sum, it's an ideal place to try out new drone technology. And an EU-funded project called DELOREAN has done just that—testing new types of satellite tracking for drones on 9 February.

[Read the Article](#)

Burgum: Northern Plains UAS Test Site Leverages Vantis, Grand Sky in Response to Flood Emergency - *Office of Gov. Burgum*

The Northern Plains UAS Test Site (NPUASTS) is preparing to support statewide emergency response efforts following Gov. Doug Burgum's emergency declaration for spring flooding.

The NPUASTS administers Vantis, North Dakota's statewide unmanned aircraft system (UAS) beyond visual line of sight network at the Grand Sky Business Park near Grand Forks. The NPUASTS will enhance recovery efforts through flood level monitoring, community awareness tools and a 24/7 Mission Network and Operations Center (MNOC).

[Read the Press Release](#)

How Scalable UAVs and Mobile Robotics Can Do Good in The World - *Forbes*

At the start of 2023, in "Are Drones The Flying Personal Computers Of The 1980s?" I shared the arc of drone development and a thesis that's becoming increasingly apparent to those working in mobile robotics. Namely, we're at an inflection point where powerful technologies—including AI-driven supercomputing, distributed data analytics, 5G network connectivity, cloud and edge computing and open standardization and interoperability—are all being leveraged to transform uncrewed aerial vehicle (UAV) software, hardware and market ecosystems.

[Read the Article](#)



Dutch Refinery to Feed Airlines' Thirst for Clean Fuel - VOA

ROTTERDAM, NETHERLANDS – Scaffolding and green pipes envelop a refinery in the port of Rotterdam where Finnish giant Neste is preparing to significantly boost production of sustainable aviation fuel. Switching to non-fossil aviation fuels that produce less net greenhouse gas emissions is key to plans to decarbonize air transport, a significant contributor to global warming. Neste, the largest global producer of SAF, uses cooking oil and animal fat at this Dutch refinery. Sustainable aviation fuels (SAF) are being made from different sources such as municipal waste, leftovers from the agricultural and forestry industry, crops and plants, and even hydrogen.

[Read the Article](#)

NASA Explores the Future of an Airspace Filled with Flying Taxis - *Federal News Network*

Aviation is changing thanks to the emergence of new types of manned and unmanned aircraft. NASA's Advanced Air Mobility Mission seeks, in its words, to help emerging aviation markets operate safely. The program pulls in many public and private partners. Joining the Federal Drive with a flyover view, NASA research and test pilot Gerrit Everson.

[Read the Interview](#)

The Aerospace Industry Needs Climate-Friendly Fuel. Can WA Help? - *Herald Leader*

Snohomish County and Washington State University have partnered to establish a center in Everett, Washington, to help develop fuels that will allow the commercial aerospace industry to grow as carbon emissions restrictions begin to bite in the decade ahead. The so-called sustainable aviation fuels, or SAF, are mostly distilled animal fats, cooking oil, inedible crops, wood debris or municipal waste. While such fuels still release greenhouse gases, their effects on the climate are much smaller than traditional aviation fuel. The project is designed to boost efforts to begin large-scale SAF production – a goal that has consistently receded into the future.

[Read the Article](#)

Why Europe is Emerging as a Green Aviation Test Bed - *Bloomberg*

Getting an 80-ton Airbus A320 off the ground requires huge amounts of energy, with a fully fueled aircraft capable of flying 4,800 kilometers (3,000 miles) loading up on more than 20,000 liters (5,283.4 gallons) of keroVersVersene, almost 10 times the annual gasoline consumption of an average car. Long-distance journeys are even more polluting: A flight from Frankfurt to New York on a Boeing 747 jumbo jet emits around the same amount of carbon dioxide as heating 440 German homes for a year (roughly 2,000 kilograms, or 4,400 pounds, per passenger).

[Read the Article](#)

Enabling Advanced Air Mobility: Insights from the FAA, Honeywell, and ANRA - *Avionics*

This week, a panel of experts discussed the challenges and opportunities associated with cooperating internationally on advanced air mobility, or AAM. Jessica Orquina, Manager of the Implementation Branch for the FAA's Safety & Integration Division in the UAS Integration Office, served as the moderator for the panel discussion. "AAM is a new aviation ecosystem that will be enabled through innovative technology," Orquina remarked. "At FAA, we have a long history of safely bringing new technologies into aviation. We are committed to safely integrating AAM as well as drones into our aviation system in line with our safety standards."

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Technology, Environment and Legislation



Solar, Wind and Battery Projects Throng US Grid Connection Queue - *Bloomberg*

The US power grid includes everything from 100-year-old hydro dams to brand-new batteries. It's evolving as coal power diminishes, wind and solar rise and energy storage smooths out operations. But those changes are a shadow of what might come next. Lawrence Berkeley National Laboratory released a study on the project connection queue for the nation's grids, showing just how much new power companies want to build, what type of power and where. In other words, it's a glimpse at the future of US electricity. Today, developers of more than 10,000 energy projects are asking grid operators for permission to connect to their networks. All told, the projects represent more than 2 terawatts of total power generation – about 50% more than current generation capacity. Almost all of this is wind, solar or battery energy storage.

[Read the Article](#)

EU Lawmakers Adopt Vast Carbon Market Reform - *The Economic Times*

The European Parliament adopted sweeping climate measures on Tuesday aimed at massively cutting EU greenhouse emissions, and including the introduction of a carbon border tax on imports. The legislative step crystallizes an ambitious EU plan to reform Europe's carbon market by broadening an emissions trading scheme to more industries and lowering quotas of allowable polluting gases.

[Read the Article](#)

How to Sell a Power Generator No One Has Heard Of - *Bloomberg*

Two generators thrumming in a cramped Silicon Valley parking lot represent a clean power technology so new that most potential customers don't know it exists. For Adam Simpson

and his startup, Mainspring Energy Inc., that's both a curse and an opportunity. Inside the generators, steel cylinders wrapped with magnets race back and forth through copper coils 12 times per second, generating electricity. There's fuel involved, but no combustion: Nothing burns. The generators' fast, muffled drumming—about as loud as traffic on the Bayfront Expressway a few yards away—makes them sound like engines, but they aren't.

[Read the Article](#)

How the World is Spending \$1.1 Trillion on Climate - *Bloomberg*

Big money — from the three biggest economies in the world, as well as scores of ambitious venture capitalists — is suddenly flying toward startups promising to help the world build a carbon-free future. It's a shift from the world of software into the actual world, following the trajectory of a tech founder like Peter Reinhardt, who sold a software company for \$3.2 billion in 2020 and now leads carbon-storage company Charm Industrial. The newer startup, which he co-founded in 2018, turns carbon-rich biomass into sludge that can be safely buried underground. “We need to rebuild almost all the infrastructure around us to eliminate fossil fuel emissions and return the atmosphere to pre-industrial CO2 levels,” Reinhardt says. “That will require a tectonic shift.”

[Read the Article](#)

Autonomy & Electric Vehicles



E.P.A Lays Out Rules to Turbocharge Sales of Electric Cars and Trucks - *New York Times*

The Biden administration on Wednesday proposed the nation's most ambitious climate regulations to date, two plans designed to ensure two-thirds of new passenger cars and a quarter of new heavy trucks sold in the United States are all-electric by 2032. The new rules would require nothing short of a revolution in the U.S. auto industry, a moment in some ways as significant as the June morning in 1896 when Henry Ford took his “horseless carriage” for a test run and changed American life and industry. The government's challenge to automakers is monumental; Last year, all-electric vehicles were just 5.8 percent of new cars sold in the United States. All-electric trucks were even more rare, making up fewer than 2 percent of new heavy trucks sold.

[Read the Article](#)

Stellantis, BMW in talks with Panasonic over new EV battery plants - *Wall Street Journal*

Stellantis NV and Bayerische Motoren Werke AG are talking to Panasonic Holdings Corp. about teaming up to build electric-vehicle battery plants in North America, people familiar with the talks said. Panasonic specializes in cylindrical batteries, which resemble an oversize version of the AA batteries commonly used in consumer devices. Over the past decade, Japan-based Panasonic has churned out billions of cylindrical cells for its main car-making customer, Tesla Inc. Car and battery makers are spending tens of billions of dollars to build capacity for EV batteries and making choices on technology now that could shape

the future of the industry. One choice is between cylindrical batteries and the rectangular pouch or prismatic shapes preferred to date by most legacy auto makers. Cylindrical batteries tend to be smaller, meaning that thousands need to be strung together to power a vehicle. That can raise costs and the potential for manufacturing defects. On the flip side, the cylindrical type can pack more power and is seen as relatively safe.

[Read the Article](#)

In Ohio, Electric Cars Are Starting to Reshape Jobs and Companies - *New York Times*

Erick Belmer has seen how tough the car business can be. He was working at a General Motors plant in Lordstown, Ohio, when it shut down in 2019, devastating the community. Mr. Belmer, an industrial mechanic, got another job at a G.M. transmission factory in Toledo, but his commute is now 140 miles each way. His schedule gives him just a few hours with his family and a few hours of sleep. Yet far from being bitter, Mr. Belmer says he is excited. G.M. is converting his factory to produce electric motors, part of an industrial transformation that will redefine manufacturing regions and jobs around the world. G.M., Ford Motor and other carmakers announced investments of more than \$50 billion in new factories in the United States last year, according to the Center for Automotive Research in Ann Arbor, Mich. All but a small fraction of that money was to build and retool plants for electric vehicles and batteries.

[Read the Article](#)

Autonomous Cars Could Help Bring Millions of People with Disabilities into the Workforce, Reduce Federal Spending - *Society for Human Resource Management*

A lack of reliable transportation makes getting to and from work challenging for employees with disabilities. It has also served as a significant barrier to employment for many of them, contributing to an unemployment rate double that of individuals without disabilities. However, a recent report suggested that the widespread availability of autonomous vehicles (AVs) could alleviate this ongoing issue, boost employment for people with disabilities and strengthen the broader economy. The study, by the National Disability Institute (NDI), revealed that widely available, reliable and affordable self-driving cars would bring 9.2 million more workers into the workforce. This includes 4.4 million direct jobs for individuals with a disability.

[Read the Article](#)

Where is Automotive Cyber Security Headed? - *Automotive World*

Deloitte recently forecast that electronic systems will account for 50% of a new vehicle's total cost by 2030. It's no coincidence that the automotive cyber security market is projected to reach a value of US \$13.9 bn in the same year, according to a report by market research firm Meticulous Research. Semiconductor supply chain disruption in the automotive industry has highlighted the extent to which modern cars rely on computing power. The number of ECUs in a single vehicle is now typically in the range of 100-150, depending on the exact systems equipped, and a car can comfortably feature 150 million lines of code.

“Once, software was a part of the car. Now, software determines the value of a car,” said Manfred Broy, emeritus professor of informatics at Technical University, Munich, in an article published by IEEE Spectrum. “The success of a car depends on its software much more than the mechanical side.”

[Read the Article](#)

Akin Thought Leadership

[Autonomous Systems & Advanced Mobility: 2023 Trends & Predictions](#) (May 5, 2023)

[Kayo Sustainable Infrastructure Webinar Recording](#) - Passcode: Fm%IX07T (April 19, 2023)

[New Federal Funding Opportunity Announced to Supercharge Electric Vehicle and Alternative Fuel Infrastructure Development](#) (March 20, 2023)

[Safe Integration of Automated Driving Systems for Equipped Commercial Motor Vehicles](#) (February 9, 2023)

Events

[AUVSI XPONENTIAL 2023](#)

May 8-11, 2023
Denver, CO

Akin partner Rubén Muñoz is speaking on a panel around patent licensing and litigation issues.

[Law-Tech Connect Energy Drone + Robotics Workshop](#)

June 12, 2023
Houston, TX

Akin partner Jennifer Richter will be speaking on a panel titled “A Holistic Approach to Securing Energy Infrastructure” and Akin counsel Christopher Treanor will be speaking on a panel titled “Clearing the Air - How Advanced Tech Contributes to Methane Compliance.”

Questions?

If you have any questions please contact your regular Akin lawyer or advisors or:



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