

Bird & Bird

Sector & Practice AI



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The practice continues to advise on a number of high-value cross-border disputes and transactional matters, with an increasing amount of matters involving digital assets, rights and artificial intelligence.

Legal 500

Aviation

The aviation industry is no stranger to advanced systems that support, and at times replace, the need for human input. This notwithstanding, recent advancements in AI have had a profound impact across the industry; AI is being deployed to design more efficient airframes and engines, invent new composite materials, and to enhance safety, fuel efficiency and overall performance.

In the area of predictive maintenance, AI systems are able to analyse vast amounts of real time data from aircraft and engine sensors, combining this with its analysis of historical maintenance records to predict potential failures before they occur. This helps airlines to optimise their maintenance schedules and thus reduce downtime and improve fleet availability.

In air traffic management, AI optimises route planning, airspace operation, and traffic flow, allowing for more efficient use of airspace thus minimising delays, reducing fuel burn and emissions.

In and around airports, AI systems are deployed in a variety of scenarios too, from passport and security checks to baggage handling, as well as enhancing the passenger experience through a more bespoke service.

While these AI applications are having a positive impact on the industry, the use of AI is increasingly subject to stringent requirements, in part due to the grave consequences that could occur if an AI system is compromised or fails to function properly.

Bird & Bird has decades of experience working with clients in the aviation industry. Combining this experience and expertise with the firm's expertise in technology, we are advising many aviation businesses with business-critical matters.

We can provide wide-ranging support in this area, including:

- Impact assessments for AI systems (including based on the AI Act, the Data Act, GDPR and domestic laws)
- Strategic advice on the procurement of new technology and AI use cases
- Engagement with regulators and other stakeholders regarding AI systems and similar technological innovations

[For more information, please contact our AI team.](#)



Defence and security

AI has changed the way many countries identify and mitigate threats to their national security. From advanced surveillance systems that can analyse massive amounts of data in real-time to autonomous drones capable of strategic decision-making, AI is enhancing the overall efficiency and effectiveness of military operations.

AI systems are being used to sift through vast amounts of information, identifying patterns and anomalies that might go unnoticed by human analysts, enabling proactive responses to emerging threats.

However, the integration of AI in defence also raises ethical and strategic concerns. The development of autonomous weapons and the potential for AI-driven cyberattacks

pose new challenges that demand careful consideration. Operators in the defence sector deploying AI systems will want to do so responsibly, in a manner which safeguards against misuse.

Advances in technology will often mean new entrants into a sector. For AI systems, for example, developers who previously operated only in the civilian space may decide to offer their products to governments for defence applications and find themselves in the unfamiliar world of defence procurement.

We can provide wide-ranging support in this area, including:

- Advice on governance frameworks for robust and efficient decision making on the responsible deployment of AI systems
- Advice on regulatory and legal requirements and mitigation strategies in relation to cyber risk
- Assisting clients in navigating defence procurement (and the associated regulatory frameworks) and contractual negotiations with government bodies

[For more information, please contact our AI team.](#)

Life sciences and healthcare

We have already seen enormous growth in application of AI in the life sciences and healthcare sectors.

In life sciences, AI is being applied at all stages of medicine development; from the identification and validation of potential targets, predicting efficacy and safety, and serving as a tool for clinical trial design, clinical data monitoring/analysis and patient selection. Production facilities and supply chains are also set to benefit from AI driven innovation. AI is also making waves in healthcare, speeding up diagnosis, supporting patient engagement and assisting healthcare professionals save time and improve the quality of care they provide to patients.

The law is moving rapidly to keep up. Regulatory bodies including the FDA in the US, EMA in the EU and MHRA in the UK are focusing on the regulation of AI in drug development and the EU is pursuing reforms to pharmaceutical legislation with AI in mind. The EU AI Act will impose new conformity obligations on AI medical devices and other high risks uses of AI, the Data Act will require data access and sharing for connected devices and the forthcoming EHDS Regulation will have a significant impact on health data sharing and digital health services and products.

Existing regulation continues to play an important role. Data access is critical to AI systems and often engages a range of data protection and localisation issues, alongside patient confidentiality rules. Commercial and IP issues also play an important role in data access for AI development and use. The importance of these issues to organisations operating in the life science and healthcare industries has been turbocharged with the arrive of large language models (LLMs), which create both opportunities for growth and challenges to existing liability and contractual frameworks.

With the landscape moving fast, Bird & Bird's international and multidisciplinary life sciences and healthcare team are experts in the legal issues arising from AI development and deployment and are here to support you.



We can provide wide-ranging support in this area, including:

- Advising on Data Protection issues relating to AI development and use including:
 - Enabling lawful data collection and re-use of existing datasets for AI training
 - Managing personal data consent and notice requirements where personal data will be used for AI training or AI systems will be used to deliver services to individuals
 - Data Protection Impact Assessments (DPIAs)
- Advising on the evolving regulatory framework for AI including:
 - Navigating emerging rules for the use of AI in medical devices
 - Assessing the impact of the AI Act and Data Act on the use of AI and connected devices in your organisation
 - Applying clinical trials regulations to the use of AI at the various stages of medicine development
- Advising on contracting for AI systems, including key issues such as:
 - Framing permitted uses to avoid increased regulatory obligations
 - Data and data licensing arrangements, including rights to customer data
 - Warranties and other commitments in relation to AI systems, including around training, the accuracy of the outputs and freedom from bias and unlawful discrimination
 - Testing and acceptance in the context of any development or fine-tuning for a particular use case
- Advising on acquisitions and investments, and other forms of corporate transactions involving AI technology:
 - Undertaking due diligence on key AI technologies and datasets used by an organisation
 - Advising on the current and future regulatory barriers which could limit the potential value of an AI technology

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Energy and utilities

One of the key contributions of AI lies in optimising energy production, consumption and trading, thereby enhancing overall efficiency and sustainability. Advanced AI algorithms are employed to analyse massive datasets, enabling predictive maintenance of energy infrastructure, optimising power grid operations, dispatch of production, consumption and storage assets, and identifying opportunities for energy savings. There are many AI use cases across the entire energy value chain from time series forecasting, market analysis, optimised bid selection, anomaly detection, failure prevention and consumption pattern recognitions. AI technology plays a crucial role in minimising greenhouse gas emissions and addressing climate change. Systems powered by AI can pinpoint the most effective approaches for utilising captured carbon, model and predict climate change and weather patterns, and help design greener smarter cities and more energy-efficient buildings.

Whilst the transformative force of AI in the energy and utilities sector is clear, as with any disruptive technology, there are a wide range of regulatory and legal implications to consider. For example, the use of AI

involves the collection and processing of large amounts of data, raising concerns regarding data privacy and security, and so a robust data strategy will be key. This is particularly important where data involves end consumers of energy in the form of personal data. An important legal consideration is the protection of critical systems from cyberattacks. This is the subject of the EU Network Code on Cybersecurity, due to enter into force later this year. Possible exploitation routes include the AI that operates the network.

Companies using open and public generative AI systems also need to consider the confidentiality issues. Other current hot topics include the evolution of the regulatory framework for the use of AI, including specific guidance from energy regulators. The implementation of AI also gives rise to environmental, social and governance risks, including those resulting from the potential increase in energy consumption due to AI system processing power. The impact of AI on the workforce, considering possible influences/biases or errors in data, or miscorrelations due to insufficient training, data or coding mistakes also require consideration.

One specific legal issue being considered at the European level (through sandbox projects and consideration of the proposed AI Liability Directive) is the issue of liability where AI systems are used in energy-related activities, for example, the trading of energy. The revised REMIT Regulation, the relevant parts of which [took] effect in May 2024, impose additional reporting and governance obligations on those engaging in energy trading using algorithms. Algorithms can also be vulnerable to being exploited, or can unintentionally lead to incorrect orders being placed, so ensuring supplier liability for regulatory enforcement in such cases is important. The complexities of these issues demand careful monitoring and comprehension of the evolving legislation and regulator guidance, which may shape the framework of AI governance.

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We can provide wide-ranging support in this area, including:

- Regulatory monitoring, advice and analysis to ensure appropriate AI governance and compliance
 - Comparative advice on existing frameworks and the requirements of new regulations affecting the energy sector
 - Input and drafting of AI policy
 - Checklists and risk assessments
 - Conducting AI regulation impact assessments on energy-consuming businesses
- Investigations by regulators – into the use and misuse of AI, including in the context of algorithmic trading
- Contracting for AI
 - Including localisation of contracts due to cross-jurisdiction conflicting approaches to AI regulation
 - Input and drafting of AI addendums, services agreements, and general terms and conditions
- Data privacy and accuracy
 - Advising on the legal aspects of using data analytics to understand customer energy usage and provide customers with information regarding how they can reduce their energy consumption
- Advice in specific areas
 - Including advice regarding intellectual property rights and cybersecurity obligations

Cybersecurity

AI has provided new technologies that have proven beneficial across various industries, however, it has also opened the door for the occurrence of cyberattacks. Cybersecurity teams must enhance collaboration with various stakeholders, including business units, regulators, customers, and partners, to explain and align their security strategies. Companies will need to adhere to heightened regulatory obligations, to demonstrate they have sufficient cybersecurity capabilities, performance enhancement, and can identify and manage risks.

The integration of machine learning introduces both vulnerabilities and advancements in cyberattacks. Areas of concern encompass data poisoning, ransomware, phishing, zero-day attacks, and model stealing. AI and machine learning will help to advance cybersecurity and aid cyber teams in analysing vast datasets, detecting threat patterns and anomalies, and accelerating the learning process through feedback mechanisms. It is important for businesses to protect themselves against any cyberattacks and comply with the latest regulations.

The AI Act aims to ensure a level of cybersecurity appropriate to the risks. Suitable measures, such as security controls, should therefore be taken by providers of high-risk AI systems and underlying ICT infrastructure. Determining whether an AI-system can be classified as a high-risk system needs careful consideration and legal advice.

We can provide wide-ranging support in this area, including:

- Advice on the interplay between the AI Act and cybersecurity regulations
- Advice on the development and implementation of cyber resilience programmes
- Advice on dealing with a cyber incident

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Data

Data plays a critical role in AI-driven solutions, impacting their accuracy and effectiveness. As organisations increasingly use AI for competitive advantage and innovation, careful consideration of the legal implications of data use is essential. Effective data governance is essential for the responsible use of AI, ensuring accuracy, privacy, ethics, security and compliance.

Strict data protection and privacy laws around the world govern the use of identifiable data (e.g. personal data in the EU or personally identifiable information in the US), requiring organisations to address issues of bias, fairness, transparency, and accountability for responsible and accountable AI use. Compliance not only avoids penalties, but also builds trust with stakeholders and prevents reputational damage, loss of business opportunities, and legal liability.

Similarly, the use of non-identifiable data, such as business-related information that includes financial and technical details, strategic expertise and proprietary knowledge, may also be subject to legal restrictions. In addition to being protected by intellectual property rights, such data may be considered confidential information under local laws or contractual agreements, making its mishandling potentially subject to civil and criminal penalties.

It is important for all companies to ensure that they are complying with the obligations of the various countries in which they operate.

We can provide a wide range of support in this area, including:

- Advise on compliant data governance strategies to manage data throughout its lifecycle
 - Establishing policies and procedures to ensure compliance with relevant data-related laws, regulations and industry standards
 - Ensuring fairness, transparency and accountability in AI decision-making processes and mitigating risks of bias or discrimination
 - Drafting and negotiating contracts and commercial agreements related to data and AI
 - Data sharing agreements
 - Data processing agreements
 - Data licensing agreements
 - Data provisions in service agreements with AI vendors or providers
- Assisting organisations in navigating industry-specific regulations that impact the use of data in AI, such as those in healthcare, finance or telecommunications
 - Addressing legal and regulatory challenges related to cross-border data transfers, international data protection laws, and jurisdictional issues in global AI deployments
 - Provide guidance on the latest data regulations and their practical implications for AI

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