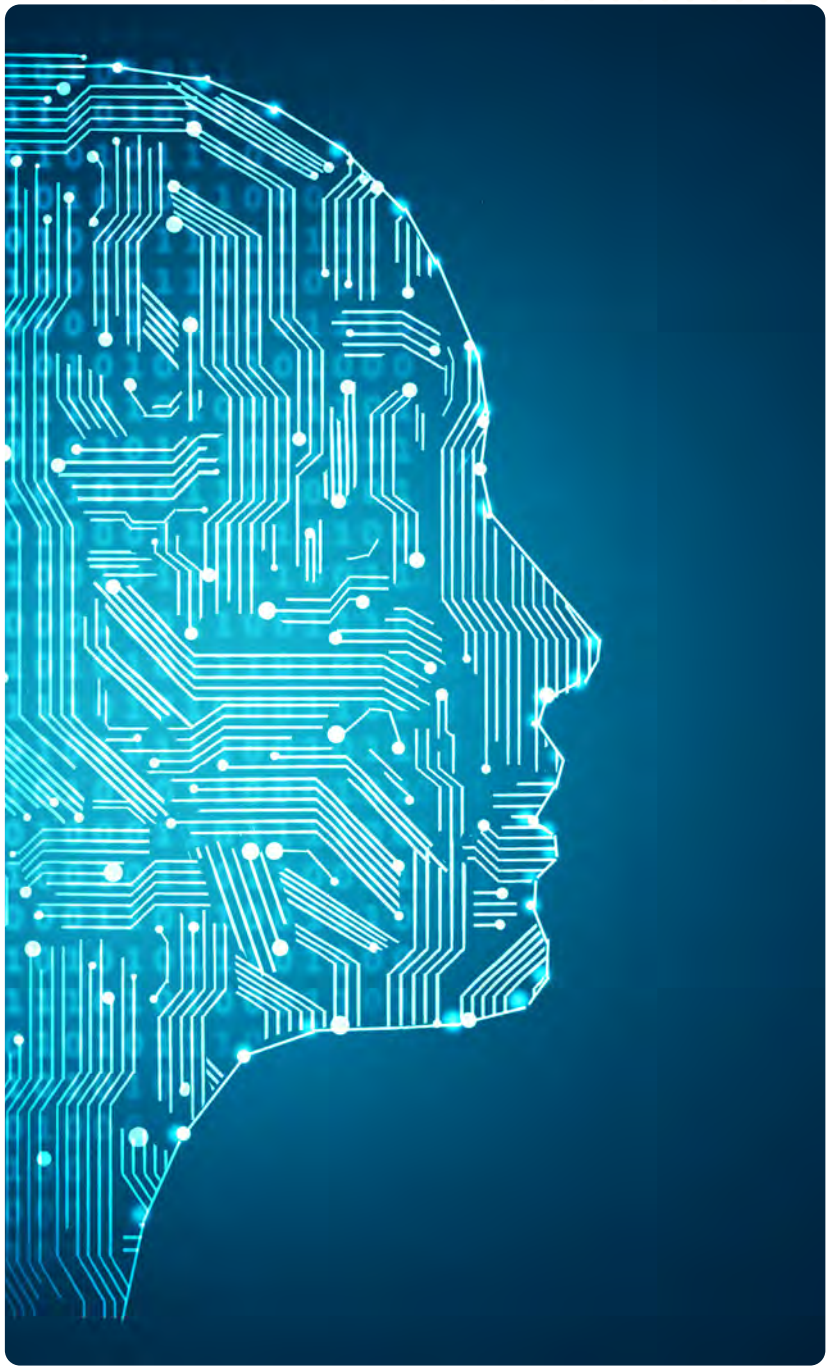

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ARTIFICIAL INTELLIGENCE 2022

Global interview panel led by Lisa Peets, Sam Jungyun Choi and Jiayen Ong of Covington & Burling LLP

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Global trends

Lisa Peets leads the technology regulatory practice in Covington & Burling's London office and is a member of the firm's management-committee. Ms Peets divides her time between London and Brussels, and her practice embraces regulatory counsel and legislative advocacy. In this context, she has worked closely with leading multinationals in a number of sectors, including some of the world's best-known technology companies. Ms Peets counsels clients on a range of EU law issues, including data protection and related regimes, content moderation, copyright, e-commerce and consumer protection, and the rapidly expanding universe of EU rules applicable to existing and emerging technologies.

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Artificial intelligence (AI) has the potential to change our lives. The possibilities offered by AI-driven technologies have led to a rapid uptake of AI across a range of sectors, including pharmaceuticals, medical devices and healthcare, financial services, education and employment, energy, transportation and logistics. AI has been recognised as a power to achieve good, from helping hospitals to diagnose and treat illnesses to mitigating the impact of climate change to protecting us from fraud. At the same time, policymakers in many jurisdictions are also concerned about how to mitigate potential harms arising from the use of AI, including discrimination and bias. This Market Intelligence report will detail the ways in which different jurisdictions are regulating AI, including through both the introduction of new legal and policy frameworks and the application of existing ones.

A review of the AI policy and regulatory developments in the United States, European Union, Middle East and China point to several trends, among them the following.

- Recognising the potential value of AI. Governments worldwide are beginning to recognise the significant potential benefits of AI. Many governments have developed AI strategies focused on increasing investment in AI innovation and building capacity through training and education.
- Managing the potential risks of AI. Policymakers are also becoming increasingly sensitive to the potential risks of using AI technologies in certain contexts, particularly where AI could cause harm to individuals' health and safety or affect their rights. Some jurisdictions are considering new legislation to regulate certain applications of AI. Others are taking a 'softer' approach, publishing guidance or encouraging the development of industry best practices.
- Addressing AI-related harms. In many jurisdictions, AI technologies are already regulated to some extent through existing laws, including data protection laws. In the past


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"Most governments have developed AI strategies focused on the growth of AI innovation."

year, there has been an increased interest by data protection regulators in the use of AI systems in areas such as the use of facial recognition technology. We anticipate that data protection regulators will continue to take a close interest in AI applications that process personal data.

In this Global Trends chapter, we will discuss each of these three trends in further detail.

Recognising the potential value of AI

In each of the jurisdictions surveyed in this Market Intelligence report, governments have recognised the potential value of AI. Most governments have developed AI strategies focused on the growth of AI innovation in their respective jurisdictions.

The EU has been at the forefront of seeking to drive this innovation. In 2018, the European Commission (EC) launched its Coordinated Plan on AI, which sets out a joint commitment by the EC and the member states to work together to encourage investments in AI technologies, develop and implement AI strategies and programmes, and align AI policy to reduce fragmentation across jurisdictions. According to the 2021 review of the Coordinated Plan on AI, the European Innovation Council, which supports AI start-ups, provided over €1 billion in grants and equity for start-ups and SMEs with a focus on deep tech. In addition to this form of direct investment, the EC plans to continue funding various initiatives relating to AI through Horizon Europe, and establish a number of European AI partnerships to engage both private and public partners.

The United States has been similarly focused on driving AI innovation. In 2019, the then President Trump launched a coordinated federal government strategy for AI, which set out five key areas of focus: investing in AI research and development, unleashing AI resources, setting AI governance standards, building the AI workforce, and engaging internationally and protecting the US AI advantage. In

> "Although policymakers recognise the benefits of AI technologies, they are concerned about the potential risks of AI, particularly when used in contexts where it could cause physical or psychological harm, or impact human rights."

January 2021, the US National Defense Authorization Act (NDAA) established the National AI Initiative to coordinate ongoing AI research and development. The NDAA mandates the creation of a National Artificial Intelligence Initiative Office to undertake AI Initiative activities, and a National Artificial Intelligence Advisory Committee to coordinate federal activities. To support these efforts, Congress appropriated US$400 million to the National Institute for Standards and Technology (NIST), and authorised $1.2 billion for a Department of Energy (DOE) artificial intelligence research programme through 2025.

China has also been active in supporting the use of AI by encouraging integration of AI in various industries, and releasing AI-related guidance and standards. In 2022, China published guidance that identifies a list of sectors and scenarios where AI application is actively encouraged, including suggestions to facilitate the development of AI in those use cases.

There is no single harmonised strategy in the Middle East on AI or related data sharing. However, many countries in the Middle East have published national AI strategies and initiatives. Saudi Arabia, for example, has published its Vision 2030, which anticipates the establishment of AI-specific legislation, and UAE plans to become a global leader in the responsible use of AI by 2031. Other countries, including Qatar, Jordan, Egypt and Bahrain, have also developed AI policies.

Managing the risks of AI

Although policymakers recognise the benefits of AI technologies, they are concerned about the potential risks of AI, particularly when used in contexts where it could cause physical or psychological harm, or impact human rights. Different jurisdictions take different approaches to managing the risks of AI. Some jurisdictions have introduced or are considering legislation that will regulate certain types of AI systems. Others are taking a more industry-driven approach, choosing to rely on non-binding guidance and encouraging the development of industry standards on best practice.

The EU is one of the first jurisdictions to consider a comprehensive law to regulate AI. In April 2021, the EC proposed a Regulation Laying Down Harmonised Rules on Artificial Intelligence (the AI Act Proposal). If adopted in its current form, the AI Act Proposal will require providers of 'high-risk' AI to undertake a pre-market conformity assessment prior to putting such systems into service or making them available in the EU. The AI Act Proposal would also ban certain types of AI systems outright, such as AI systems that materially distort a person's behaviour or exploit the vulnerabilities of specific groups where physical or psychological harm is likely to occur. The AI Act Proposal will also require providers of certain types of non-high-risk AI systems to make mandatory disclosures to individuals interacting with such systems.

More recently, the EC has also proposed (in September 2022) a Directive on Adapting Non-Contractual Civil Liability rules to Artificial Intelligence (the AI Liability Directive Proposal). The AI Liability Directive Proposal seeks to make it easier for claimants to bring non-contractual fault-based civil claims for damages caused by AI systems, by imposing certain disclosure obligations on providers of high-risk AI systems and harmonising the rules on burden of proof. See the EU chapter for a more detailed discussion of this development.

Both the AI Act Proposal and AI Liability Directive Proposal are still under review by the EU institutions, and have not yet been adopted.

The UK government's approach in regulating AI is set out in the UK Office for Artificial Intelligence policy paper published in July 2022 called 'Establishing a Pro-Innovation Approach to Regulating AI'. In this policy paper, the UK government announced that it will adopt an innovation-friendly and flexible approach to regulating AI. The

UK government does not currently intend to follow the EU's plans to adopt AI-specific legislation. Instead, the UK government will adopt a set of high-level AI principles (based on the OECD's Principles on AI). UK regulators in various sectors and domains (eg, the Information Commissioner's Office, the Competition and Markets Authority, Ofcom, the Medicine and Healthcare Regulatory Authority and the Equality and Human Rights Commission) will interpret and implement these AI principles as appropriate to their sectors, and provide sector-specific guidance.

The United States has taken a middle path between the EU and UK in its approach to AI-specific legislation. There are currently no comprehensive laws that specifically regulate AI. At the federal level, while various AI-specific legislative proposals have been introduced in Congress, no laws have yet to be adopted. However many US government agencies and regulators, including the Federal Trade Commission (FTC), have published guidance on the use of AI and algorithms, highlighting the existing laws that apply to these technologies. In addition, at the state level, certain states, including Colorado and Illinois, have enacted legislation that applies to the use of AI in certain contexts, such as to make decisions in insurance or e-recruitment.

In China, there is currently no law that comprehensively or specifically regulates AI. However, in August 2021, the Chinese government published Guidelines for Establishing the National New Generation Artificial Intelligence Standards Mechanism. These guidelines set out the fundamental principles that will underpin future Chinese national and industry standards on AI. The Chinese government has also set itself the goal of developing and adopting best practice standards for data, algorithms, systems and services by 2023. To this end, in August 2022, the Chinese Association for Standardization released a draft standard regarding the use of AI technologies to collect and process consumers' 'visual representation data' (ie, biometric identification data). It is anticipated that additional standards for other AI applications will be adopted by 2023.

In the Middle East, most countries in the region are still in the early stages of developing and implementing their AI strategies, and have not yet proposed legislation to regulate AI. One exception is Egypt's new FinTech Law. The FinTech Law requires organisations engaging in non-banking financial activities utilising 'financial technology' – including AI systems – to obtain a licence from the Financial Regulatory Authority.

Addressing specific harms of AI

Although most of the markets surveyed in this Market Intelligence report have yet to adopt AI-specific regulation, there has been increased scrutiny of certain applications of AI under existing laws – particularly data protection and privacy laws. Facial recognition technology (FRT) is one example of an application of AI that is under scrutiny. For example, various regulators in Europe, UK and Australia have taken enforcement action against Clearview AI for its practice of scraping images of people from social media and other online accounts to train its FRT. Most recently, in 2022, the Greek and French data protection authorities have each imposed administrative fines of €20 million on Clearview AI, and ordered the company to delete the personal data of individuals residing in Greece and France, respectively, from its systems.

The US FTC has also indicated that FRT is an area of enforcement interest. In January 2021, the FTC settled an investigation of Everalbum regarding the use of FRT by its photo- and video-storage app, Ever App, to automatically sort and tag users' photos and videos (the *Ever App* case). Everalbum was required to delete the models and algorithms that it developed using users' photos and videos, and subsequently had to obtain express consent from its users before using its FRT.

In contrast to Europe and the United States, China has taken a more permissive approach to FRT. The Chinese government has set ambitious goals on the development of FRT, recognising that this technology will result in efficiencies in the delivery of both public and private services. For example, facial recognition was widely used in China to contain covid-19 by verifying identity without the need for person-to-person contact. The current rules governing the use of FRT in the public sector in China more generally encourage greater use of FRT. Although there have been some enforcement cases in China relating to FRT, it is unclear whether FRT rules would be enforceable where government agencies or state-owned enterprises providing utilities and essential services deploy the technology.

Looking ahead

The global AI policy and legislative landscape is changing rapidly, with governments around the world announcing new policies, legislative proposals, and guidance each year. These new measures reflect a broad consensus on how AI technologies should be regulated -- whether that be through 'hard' law or 'soft' guidance. This consensus is reflected in, and often draws from, multilateral initiatives aimed at agreeing broad principles applicable to the development and deployment of AI, such as the OECD's Principles on AI, which state that AI should be developed and deployed in a way that is: inclusive and sustainable; human-centric; transparent and explainable; robust, secure and safe; and enables accountability. The key question is how these high-level principles will be implemented into specific laws and policies, applicable to both AI systems generally (as in the EU) and to specific applications, such as in autonomous vehicles or AI-driven medical devices.

Companies that develop AI technologies or that plan to use AI systems in their products and services should monitor developments in AI regulation and policy in key markets closely. Given the complexity of the technology, it is also important that AI innovators provide input to policymakers and industry associations on the development of new laws and industry standards, to ensure that any measures ultimately adopted are workable.

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China

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QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

There are no laws or regulations specific to AI in China. However, the Chinese government has encouraged usage of AI in various industries in recent years to increase efficiency and enhance policy implementation, safety and law enforcement.

The Chinese government has set ambitious goals in the development of facial recognition technology, as evidenced by many policy documents issued by various government agencies. For example, the Ministry of Civil Affairs and the National Development and Reform Commission explicitly promoted the application of AI in civil affairs in the 13th Five-Year Plan for the Development of Civil Affairs. The National Development and Reform Commission also stipulated in the Notice on the Organization and Implementation of the New Generation of Information Infrastructure Construction Project, and the Internet Plus Major Project in 2017, that facial recognition infrastructure should be strengthened. The Ministry of Industry and Information Technology's AI strategy, issued in 2017 (Three-Year Action Plan to Develop a New Generation of the Artificial Intelligence Industry), stated that, by 2020, the effective detection rate in complex dynamic scenarios should exceed 97 per cent and the correction rate should exceed 90 per cent.

Like other jurisdictions (eg, the European Union and the United States), China is in the early stages in developing legislation, although China has been more willing to encourage the use of AI technology and may strike a different balance when assessing how to regulate technology that may intrude on individual rights.

Using facial recognition as an example, while China has some generally applicable privacy rules, including the Personal Information


Yan Luo

Protection Law and a number of national standards that address the collection and use of biometric data, it is unclear whether these rules are enforceable in cases where government agencies or state-owned enterprises providing utilities and essential services are deploying the technology. Individuals usually have limited ability to opt out of such collection and use, and it is hard to obtain relief if there is misuse or harm. Despite the lack of use parameters and specific guidance, current Chinese rules governing use of facial recognition in the public sector generally encourage greater use and integration of the technology.

"In 2022, the Ministry of Science and Technology released the Opinion on Strengthening the Governance of Science and Technology Ethics, that aims to provide high-level guidance on ethics."

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

The State Council released a national strategy on 8 July 2017, entitled the New Generation Artificial Intelligence Development Plan (the AI Development Plan). With respect to data sharing arrangements, the AI Development Plan generally encourages collaboration in the development of AI and AI infrastructure. For example, the AI Development Plan proposes open-source platforms that encourage sharing of algorithms and other tools to improve innovation in the field of AI, as well as establishing a national data sharing exchange platform to support data infrastructure. However, no specific programmes or initiatives were mentioned in the AI Development Plan, and the implementation of this plan is not clear. The Standardization Administration has released its Guidance for Building the National Standardization System for New Generation Artificial Intelligence, pursuant to its 2017 development plan to establish China as a leading AI power. The guidance calls on the Chinese government to develop more than 20 key AI standards by 2030, covering both hardware and software in 16 identified sectors.

The National Standardization Administration, Office of the Central Cyberspace Affairs Commission, National Development and Reform Commission, Ministry of Science and Technology and Ministry of Industry and Information Technology released the Guideline for Establishing the National New Generation Artificial Intelligence Standards Mechanism on 8 August 2021. The Guideline sets out fundamental principles for drafting national standards, industry standards and organisation rules about AI. According to the Guideline, the goal is to complete initial steps and formulate standards for key issues such as data, algorithms, systems and services by 2023.

On 20 March 2022, the Ministry of Science and Technology released the Opinion on Strengthening the Governance of Science and Technology Ethics, which emphasises the need to stipulate ethical rules in key industries such as AI.

On 29 July 2022, the Ministry of Science and Technology, Ministry of Education, Ministry of Industry and Information Technology, Ministry of Transport, Ministry of Agriculture and Rural Affairs and the National Health Commission released the Guiding Opinions on Accelerating the High-level Application and Scenario Innovation of Artificial Intelligence to Facilitate the High-quality Economic Growth. The Guiding Opinions set out sectors and scenarios where the government encourages the application of AI technologies, such as manufacturing, agriculture, finance, healthcare or education. The Guiding Opinions also provide suggested means to facilitate the development of AI, including for instance, providing AI related courses in college and developing computing platforms and common technical platforms.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

The AI Development Plan notes that the continued development of AI will necessitate policies that include:

- research on AI ethics;
- an ethical framework that incorporates collaboration between human beings and computers in the decision-making process; and
- the establishment of an ethical code of conduct for AI products.

In response, government-backed trade associations started issuing self-regulatory guidance. For example, the Payment and Clearing Association of China released the Self-Regulatory Conventions for Facial Recognition Within the Offline Payment Sector (trial) (the Facial Recognition Conventions) on 20 January 2020, which applies to all entities that facilitate payments via facial recognition. Importantly, the Facial Recognition Conventions incorporate consumer protection provisions, from general cybersecurity protections, such as physical and network security that satisfy security requirements under national and finance-specific regulations, to preservation of user rights, which include channels for complaint and disclosure of use for collected facial information.

Under the Facial Recognition Conventions, entities facilitating payments via facial recognition are required to notify consumers of the purpose, methods and scope of the data collection and to obtain consent. In addition, stored original facial recognition data must be encrypted.

In 2022, the Ministry of Science and Technology released the Opinion on Strengthening the Governance of Science and Technology Ethics, that aims to provide high-level guidance on ethics governance to government entities as well as other individuals or organisations

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within the science and technology area. The opinion describes the roles of entities with respect to how to improve the science and technology ethics governance and requires regulators to set up ethics review and monitoring systems.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

We are unaware of specific policies or strategies of Chinese regulators regarding national security and trade implications of AI. However, AI has been frequently mentioned in the ongoing trade discussions between the United States and China.

"China, via its China Electronics Standardization Institute, has been an active member of the ISO/IEC JTC 1/SC 42 subcommittee that develops international standards for the AI industry."

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

The Supreme People's Court released the Provisions of the People's Court on Several Issues Concerning the Application of Law in the Trial of Civil Cases Involving the Processing of Personal Information Using Facial Recognition Technology in July 2021, which serves as guidance for judges hearing civil cases involving personal information processing activities using facial recognition technology.

In order to protect the interests of individuals and entities, the Cyberspace Administration of China, Ministry of Industry and Information Technology, Ministry of Public Security, and State Administration for Market Regulation released the Provisions on the Management of Algorithmic Recommendations for Internet Information Services to regulate network information service providers that use recommendation algorithms.

The Cyberspace Administration of China also released the draft Provisions on the Management of Deep Synthesis in Internet Information Service for public consultation, which imposes several general obligations on deep synthesis service providers to safeguard information security.

The Personal Information Protection Law, which took effect on 1 November 2021, requires the Cyberspace Administration of China to coordinate relevant departments to formulate specialised rules and standards for the protection of personal information in regard to new technologies and applications, such as facial recognition and AI.

Biometric data is listed as an example of sensitive personal information in the Personal Information Protection Law. However, the law does not define what should be considered to be biometric data. Controllers can only process sensitive personal information when the processing has a specific purpose and is necessary, and they must adopt strict protection measures. Meanwhile, before processing sensitive personal information, the Personal Information Protection Law requires the controller to (1) obtain separate consent from individuals; (2) inform individuals of the necessity of processing and impacts on the individuals' rights and interests (unless otherwise provided by the law); and (3) carry out a personal information protection impact assessment.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

Since the Personal Information Protection Law just took effect, there are no instances of enforcement. However, the first dispute about facial recognition technology in China was resolved in 2021. In that case, the defendant, a zoo, admitted annual pass members by using

facial recognition, without notifying members of the change. The plaintiff claimed that this was a breach of contract and a fraud. The Intermediate Court opined that biometric information is sensitive personal information and the controller should be more cautious in retaining such data.

In April 2021, the Ningbo City Administration for Market Regulation imposed administrative fines on three real estate companies. The companies installed facial recognition devices at sales centres, which captured facial images of their clients and uploaded images to their systems.

7 Has your jurisdiction participated in any international frameworks for AI?

China, via its China Electronics Standardization Institute, has been an active member of the ISO/IEC JTC 1/SC 42 subcommittee that develops international standards for the AI industry. In addition, Chinese regulators have established the Artificial Intelligence Industry Alliance, which seeks to develop industry standards for certification of AI products and services. China is not a signatory to the Organisation for Economic Co-operation and Development or its published Principles on Artificial Intelligence.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

During the past year, local governments have been active in promulgating rules to regulate AI while facilitating the innovation of AI technologies.

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- On 4 January 2022, the Cyberspace Administration of China, Ministry of Industry and Information Technology, Ministry of Public Security, and State Administration for Market Regulation released the Provisions on the Management of Algorithmic Recommendations for Internet Information Services. The Provisions aims to regulate the abuse and misuse of algorithmic recommendation technologies and to protect the legitimate interests and rights of users. The Provisions lay out principles for using algorithmic recommendation technologies by the 'algorithmic recommendation service provider'.
- On 28 January 2022, the Cyberspace Administration of China released the draft Provisions on the Management of Deep Synthesis in Internet Information Service. The draft Provisions imposes general obligations to safeguard information security. It applies to activities that use deep synthesis technologies to provide 'Internet information services', as well as to activities that provide technical support to deep synthesis services carried out in the territory of China. Deep synthesis technologies are defined

as technologies that utilise algorithms, such as deep learning and virtual reality, to synthesise or generate text, photo, audio, video or virtual scenes.

- On 5 September 2022, Shenzhen passed the Provisions on Facilitating the Artificial Intelligence Industry in Shenzhen Economic Zone. Similarly, on 22 September 2022, Shanghai passed the Shanghai Provisions on Facilitating the Artificial Intelligence Industry. These provisions aim to facilitate the innovation of AI technologies by protecting the intellectual property rights of AI technologies and encourage the development of the AI industry.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

In China, AI-based products involving processing of facial recognition and biometric data have developed most rapidly. The Chinese government, in recognition of the efficiency gains from facial recognition in both the public and private sectors, has attached great importance to research and development, deployment and commercialisation, of these technologies. As a result, facial recognition touches upon almost every aspect of an individual's life in China – for example, facial recognition was widely used in containing covid-19 by verifying identity without person-to-person contact.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

While there are no pending or proposed AI legislative or regulatory initiatives at the national level, the AI Development Plan explicitly states that, as the field of AI evolves, China aims to develop laws, regulations and ethical norms that promote the development of AI, while maintaining accountability, such as with privacy protections and an ethical code of conduct for AI products.

The Personal Information Protection Law also requires regulators to adopt AI and facial recognition related personal information protection rules. The Guideline for Establishing the National New Generation Artificial Intelligence Standards Mechanism aims to adopt national standards for key AI issues by 2023. On 15 August 2022, the China Association for Standardization released the draft national standard regarding the application and collection visual representation data from consumers by using AI technologies.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

It is important to monitor national strategies and pending legislation in China, particularly as AI is being deployed at a rapid rate. While no legislation specific to AI has been promulgated as yet, companies should adhere to more broadly applicable laws and regulations, such as China's Personal Information Protection Law, and establish technical and operational controls with respect to personal information.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

At Covington, we take a holistic approach to AI that integrates our deep understanding of technology and our global multi-disciplinary expertise. We have been working with clients on emerging technologies for decades and we have helped clients navigate evolving legal landscapes, including at the dawn of cellular technology and the internet. We draw on this expe-rience and our deep understanding of technology, and leverage our international and multi-disciplinary approach. We also translate this expertise into practical guidance that clients can apply in their transactions, public policy matters and business operations.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

The development of AI technology is affecting virtually every industry and has tremendous potential to promote the public good, including to help achieve the UN Sustainable Development Goals by 2030. For example, in the healthcare sector, AI may play an important role in mitigating the effects of covid-19, and it has the potential to improve outcomes while reducing costs, including by aiding in diagnosis and policing drug theft and abuse. AI also has the potential to enable more efficient use of energy and other resources, and to improve education, transportation, and the health and safety of workers. We are excited about the opportunities presented by AI.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

AI has tremendous promise to advance economic and public good in many ways and it will be important to have policy frameworks that enable society to capitalise on these benefits while safeguarding against potential harms. Also, as this publication explains, several jurisdictions are advancing different approaches to AI. One of the great challenges is to develop harmonised policy approaches that achieve desired objectives. We have worked with stakeholders in the past to address these challenges with other technologies, such as the internet, and we are optimistic that workable approaches can be crafted for AI.

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Egypt

Mohamed Agamy is the founder and managing partner of Links & Gains Law Firm. Mr Agamy is a bilingual lawyer and a driven professional legal consultant with a proven track record of 20 years of leading successful international legal transactions during which he has developed a vast area of expertise across North Africa and the Middle East. He was appointed to expert cross-border associate exclusively for Egypt, particularly in M&As, corporate transactions, commercial litigation; and has expertise in aviation, shipping, logistics and taxation. Mr Agamy was feted as one of the top 50 lawyers in litigation in 2019, and as energy lawyer of the year in 2020 (Leaders in Law).

Chaden Soliman is an attorney-at-law and a member of the legal research unit at Links and Gains law firm, where she works with international clients in the industrial, FMCG and logistics sectors. Soliman is fluent in Arabic, English and French, and has attained practical legal knowledge in many disciplines and branches of law, such as public international law, international investment law and competition law.

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

Egypt is steadily moving towards the integration of new technological advancements, among which is AI, in its regulatory and legal framework. For instance, a law regarding Anti-Cyber and Information Technology Crimes (Law No. 175/2018) was passed in 2018, and a law on the Protection of Personal Data (Law No. 151/2020) was passed in 2020.

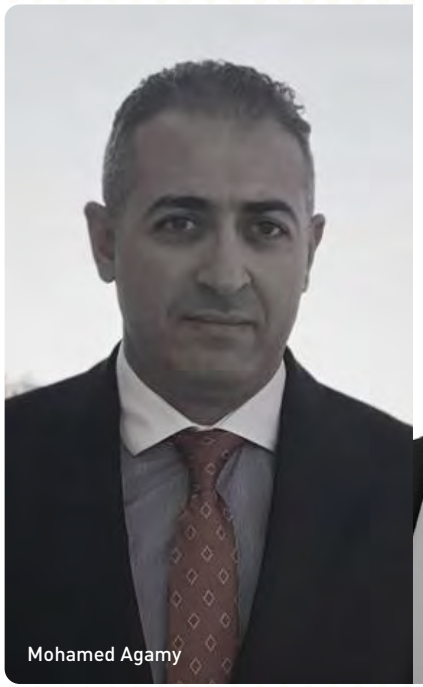
Ministerial Decree No. 2889/2019 established the National Council for Artificial Intelligence (NCAI), which adheres to the Egyptian Cabinet and is presided by the Minister of Communication and Information Technology with representatives of various ministries that include the Ministry of Defence, the Ministry of Education and Scientific Research, and the Egyptian General Intelligence Agency.

The decree gives the NCAI the responsibility of outlining and executing the Egyptian AI Strategy by empowering it to issue policies and recommendations to develop the legal framework of AI and to make recommendations as to AI-related laws and regulations.

This is demonstrated by the progress Egypt has made in the Government AI Readiness Index by Oxford Insights and the International Research Development Centre; as it went from an overall score of 45.520 in 2020 to an overall score of 49.75 in 2021.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

The National AI Strategy was released by the Egyptian government in 2019. This National Strategy aims at using AI technologies to achieve Egypt's sustainable development goals and at having Egypt play a central role in the regional and international efforts of the promotion of AI.


Mohamed Agamy


Chaden Soliman

Accordingly, the strategy relies on four main pillars: automating governmental processes and integration of AI in decision-making (AI for government); utilising AI to develop economic sectors in Egypt and increase economic growth (AI for development) ;increasing the public's awareness of AI and providing technical training and education of AI to the Egyptian population (capacity building); and promoting cooperation and playing a key role in the coordination of regional and international efforts in the development and integration of AI (international relations).

The Egyptian government is conscious of the fact that international coordination and cooperation are only possible through research and

"To apply adequate protection of national security and important data; a 'data classification' strategy has been implemented. Data is therefore categorised from top secret to confidential, all the way to unclassified, per its sensitivity."

participation in discussions on an international and regional scale. The National AI Strategy further emphasises the importance of technological exchanges or consultations between governments and their populations, between the public and private sectors, and among international governments.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

On a national level, Egypt has released a 'National Strategy for Human Rights' for the years 2021-2026. The Human Rights' Strategy addresses key issues related to the deployment of AI, including the right to privacy, free speech, non-discrimination and the freedom of peaceful assembly. The strategy is issued by The Egyptian Supreme Standing Committee for Human Rights, which is responsible for monitoring and accessing new human rights issues, among which those raised by the deployment of AI.

Notably, the NCAI works as an adviser for the government regarding the issues of ethical and legal use of AI, it is also responsible for establishing guidelines for the responsible and ethical use of AI and coordinating with the competent bodies to issue the necessary legislation and regulations and educate professionals.

On an international level, Egypt participated in United Nations Educational, Scientific and Cultural Organization (UNESCO)'s Intergovernmental Meeting of Experts to Draft Recommendation on AI Ethics in April 2021, which eventually led to the adoption of the Recommendation on the Ethics of Artificial Intelligence by UNESCO's General Conference in November of that same year.

The Egyptian Ministry of Communications and Information Technology (MCIT) has additionally participated in drafting one of the most internationally well-known instruments that address human rights' intersection with AI: the Organisation for Economic Co-operation and Development's (OECD) Recommendations on the responsible use of AI. Egypt was the first Arab and African country to formally accept the implementation of the recommendations.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

To apply adequate protection of national security and important data; a 'data classification' strategy has been implemented. Data is therefore categorised from top secret to confidential, all the way to unclassified, per its sensitivity and the damage its disclosure would cause to national security. This classification ensures that each category of data is met with a sufficient level of protection.

A relevant entity would be the Egyptian Computer Emergency Readiness Team, which responds to attacks targeting the Egyptian information infrastructure and cyber threats.

Law No. 151/2020 on the Protection of Personal Data is also noteworthy since it contains provisions that protect data transfer outside the country unless provided with an adequate degree of protection, and prior authorisation by the Data Protection Centre. Its Executive decree, which would inevitably add provisions regarding the practical application of the law, is expected to be issued by the end of 2022.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

The Egyptian government is highly aware of the importance of facing AI-related privacy issues, especially in the most critical sectors; notably fintech, the banking sector, the medical sector and the telecommunications' sector.

Law No. 151/2020 on the Protection of Personal Data sets data collection and processing conditions. The law further prohibits collecting, transferring, saving or processing sensitive data without a prior licence from the Personal Data Protection Center.

Additionally, the Cybercrime Prevention Law No 175/2018 sanctions unauthorised access to websites and information systems, electronic payment tools hacking and the unlawful interception of information. Such sanctions generally include both imprisonment and the payment of hefty fines.

Most notably, The Egyptian Supreme Standing Committee for Human Rights, in cooperation with The Arab Organisation for Human Rights, launched a conference on the challenges to the right to privacy amid

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the rapid development of artificial intelligence in July 2022. The conference addressed privacy issues arising from the use of AI, the determination of the responsibility falling upon the state and the private sector to protect data and citizens' right to privacy and the need for legislation to govern the protection of data.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

Since the implementation of the AI National Strategy is primarily entrusted to the NCAI, which plays a central role in the enforcement and the monitoring of AI deployment rules; it is responsible for recommending legislation and amendments to current legislations that are necessary for the development of AI in Egypt. It is also

responsible for the issuance of recommendations to put in place the technical, legal and economic framework of AI application.

As for compliance of AI with human rights in particular, the Egyptian Supreme Standing Committee for Human Rights plays an important role in monitoring the compliance of recommendations issued by international and regional human rights' bodies, which includes those relating to AI. Additionally, the 'General Administration for Human Rights' established within the Egyptian Public Prosecution Office receives and studies complaints and reports relating to human rights and is the competent body responsible for monitoring compliance with international and regional human rights-related rules issued by international and regional bodies.

The compliance of companies to the obligation of joining the E-invoices system is naturally enforced by the Egyptian Taxation Authority and the Ministry of Finance, as its violation is considered tax evasion.

7 Has your jurisdiction participated in any international frameworks for AI?

Playing a key role in international and regional efforts of development of frameworks for AI is in fact one of the main goals of Egypt's National Strategy.

Egypt is an active participant in the field of AI, taking part in initiatives launched by international and regional organisations such as the OECD, the UNESCO Ad Hoc expert group, the International Telecommunication Union AI summit, the African Union Working Group on AI, the Working Groups of the Global Partnership on Artificial Intelligence and the League of Arab States' Working Group on AI.

"Playing a key role in international and regional efforts of development of frameworks for AI is in fact one of the main goals of Egypt's National Strategy."

Most recently, Egypt participated in the First Session of the Working Party on AI Governance of the OECD held in May of this year. Egypt has also been a part in the 2021 UNESCO Intergovernmental Meeting of Experts to Draft Recommendation on AI Ethics.

In 2021, Egypt chaired both the Second and the Third Session of the Arab Artificial Intelligence Working Group, which included discussions about AI-enabled Arabic-language processing and building a Common AI Arab Strategy.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

Perhaps the biggest development of all is the launch of the platform Digital Egypt, offering access to a majority of governmental services including procedures pertaining to electricity, notarisation and real estate registration, among many others. Links and Gains finds Digital Egypt especially useful in the registration and follow-up of claims for its clients. The launch of 'Digital Egypt' coincides with the launch of e-services by the Ministry of Interior on its website, which allows citizens to initiate and follow up on proceedings such as the issuance of work permits.

Another noteworthy development in the field of investment; is the E-voting system 'E-Magles' used by a number of companies and law firms, namely Links and Gains. Recognised by the Egyptian Exchange and the General Authority for Investment and Free Zones, E-Magles facilitates the decision-making process within companies through enabling shareholders and board members to attend and monitor meetings and vote remotely, while ensuring its transparency and efficiency.

AI additionally plays an important role in fintech; the official website of 'Fintech Egypt' powered by the Central Bank of Egypt, highlighted some recent AI innovations in the field of fintech that included credit scoring models, advanced analytics, and quick and scalable graph platforms among others.

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On another note, and with cooperation being one of the main objectives in the National AI Strategy, the Egyptian government is initiating several major projects in cooperation with industry giants and foreign governmental entities and universities such as France and Singapore. Most recently, a memorandum of understanding was signed between the Egyptian MCIT and the French company Thales to implement Egypt's national AI Strategy through the development of applications and the integration of AI in different sectors such as transportation, smart villages, digital infrastructure and digital governance. The cooperation extends to training locals, encouraging creativity as well as supporting companies working in the AI field.

On a similar note, the Egyptian Computer Emergency Readiness Team launched a security awareness campaign, under the direction of the National Telecom Regulatory Authority in October 2022.

QUESTIONS

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

Financial services have been the subject of great advancements through the launch of 'E-Finance', a digital financial platform playing a key role in the digitalisation of the Egyptian government, with its primary major project The Egyptian Government Financial Network, which processes millions of governmental payments and collections. Next to its e-payment services, the platform also offers operations management, technical support, incident management, field services and consultancy as well as infrastructure, platform and software. E-Finance is therefore involved in many programmes, for example; the development of the digital infrastructure of the Ministry of Agriculture and Land Reclamation, the digitisation of the financial structure of social insurance and pension programmes in addition to many other projects.

Agriculture and tourism certainly come to mind as well, since applications using AI technologies have recently been launched by the government in these sectors; the former capitalises on AI to facilitate communication, distribute information and offer consultations to farmers. As for the latter, this new application uses AI to guide visitors of the Egyptian Postal Museum, facilitate their access to relevant information and offer answers to their questions. An illustration of Egypt's success is the Egyptian Post Office winning the 2021 Excellence Award for the Best Arab Postal Institution in Digital Transformation during its participation in the 'Compliance Challenges and Strengthening Correspondent Banking Relationships Forum organised by the Union of Arab Banks.

Development of AI in the health sector is also remarkable; according to a member of the health committee in the Senate, covid-19 has accelerated the digitisation of the healthcare system and the move towards AI integration; through early remote diagnosis, health insurance administration and distribution of patients to hospitals. The Ministry of Health recently unveiled its plans of digitising the healthcare system through the integration of AI hospitals, and the MCIT is collaborating with Alexandria University to use AI for detection of certain diabetes complications.

> "A proactive legal structure that prioritises security and addresses all aspects of the implementation of AI and that responds rapidly and attempts to anticipate new risks raised by the deployment of AI remains crucial."

It is noteworthy that AI education has been a focal point in the implementation of the National AI Strategy; the Egyptian government has concluded several agreements, with companies that include tech giants such as Dell and IBM, to improve the general awareness of citizens and to provide necessary training and education for students as well as those employed in several vital sectors, for example, health, agriculture, irrigation and planning.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

Since the first phase of the National AI Strategy is expected to be concluded this year, the launch of the second phase, with all of its accompanying legislation and regulations, is highly anticipated. This phase, expected to start in 2023 and last for three years, will focus on expanding the implementation of AI to other key sectors, which include education and banking or financial services. The second phase will further move towards the 2030 vision of a 'paperless, collaborative and smart' government and further integrate AI education to students on all levels to provide the market with experienced professionals in preparation for the third phase.

It should be added that, according to the NCAI official website, Egypt is currently working towards adopting the Egyptian Charter on Responsible AI, which would detail Egypt's plan to 'adapt the OECD Principles of Responsible AI, and other AI international instruments to its local context and priorities'.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

Due to it being a field still in development; new risks and issues being brought to the surface as a result of the deployment of AI are surely expected.

Therefore, developing adequate monitoring systems to constantly trace and foresee these risks is recommended. And most importantly, a proactive legal structure that prioritises security and addresses all aspects of the implementation of AI and that responds rapidly and attempts to anticipate new risks raised by the deployment of AI remains crucial. Protective provisions need to address resulting implications of AI deployment such as the need for unified identification of users on an international scale, and ensure the protection of remote and freelance workers.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

With Links and Gains being an international law firm that consistently handles a multitude of practices and issues of different backgrounds and several jurisdictions across the globe; our team has developed a skillset and accumulated practical experience on an international scale that allow us to navigate AI-related issues to guarantee its use to serve our clients in the best way possible.

Adapting quickly to change, critical thinking and the ability of preforming advanced legal research are skills that have definitely been useful for the Links and Gains team to have when dealing with AI.

Our firm is rapidly integrating technological systems and services in all areas of its business; from the implementation of services used in legal research, those used in legal drafting all the ways to relying on AI systems in the internal management of the firm.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

The continuous deployment of AI in the governmental sector and the current efforts made to use it to facilitate legal proceedings are certainly the most interesting to us as a law firm. In fact, Links and Gains has been an active follower of deployment of AI that would serve its clients through fostering strong partnerships with new technologically advanced services such as E-Magles.

With Egypt putting AI education and training to all in the forefront of its AI deployment plan, opportunities in all sectors and areas are definitely expected, especially with the government being conscious of the possibility of incidental unemployment and deploying its best efforts to avoid it and to provide equal opportunities for everyone.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

Since AI is complex technology, challenges to its deployment can range from challenges in collecting the necessary data, to ensuring that the new programs offer all the features needed by their users all the way to designing such programs in a user-friendly way.

Challenges to AI deployment on a societal level would include dealing with ethical and human rights issues, providing adequate training to senior employees and preventing unemployment.

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European Union

Lisa Peets leads the technology regulatory practice in Covington & Burling's London office and is a member of the firm's management committee. Her practice embraces regulatory counsel and legislative advocacy. In this context, she has worked closely with leading multinationals in a number of sectors, including some of the world's best-known technology companies. Ms Peets counsels clients on a range of EU law issues, including data protection and related regimes, content moderation and consumer protection, and the rapidly expanding universe of EU rules applicable to existing and emerging technologies.

Sam Jungyun Choi is an associate in the technology regulatory group in the Brussels office. Her practice focuses on European data protection law and new policies and legislation relating to innovative technologies such as artificial intelligence, online platforms, digital health products and autonomous vehicles. Ms Choi advises leading technology and life sciences companies on a wide range of matters relating to data protection and cybersecurity issues.

Madelaine Harrington is an associate in the technology regulatory group in the London office. Her practice covers a wide range of regulatory and policy matters at the cross-section of privacy, content moderation, artificial intelligence and free expression. Ms Harrington has in-depth experience with regulatory investigations. She routinely counsels clients on compliance within the EU regulatory framework.

Jiayen Ong is an associate in the technology regulatory group in the London office. She has experience across a broad range of technology regulatory issues, with a focus on European data protection law and recent policies and legislation regarding innovative technologies.

QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

Currently, the European Union does not have laws or regulations that specifically regulate AI systems. However, there are a number of existing laws and regulations – both horizontal and sector-specific – that apply to AI technologies and applications. Perhaps most important is the EU's General Data Protection Regulation (GDPR), which sets out a range of prescriptive obligations that apply to the processing of personal data, including personal data processed in the context of training, testing and deploying AI applications.

The GDPR also includes transparency and other obligations relating to automated decision-makings. Other EU laws in this vein include the Better Enforcement Directive, which requires traders to inform consumers when prices of goods and services have been personalised based on automated decision-making and profiling, and the Platform-to-Business Regulation, which requires that online intermediation service providers and search engine providers be transparent about the algorithms used to rank business users and corporate websites on its services.

Other EU legal frameworks that may apply to AI applications, depending on the context, include medical devices rules, financial services regulations, cybersecurity laws, copyright and other intellectual property rules and consumer protection law.

As described below, the EU is currently considering AI-specific legislation. In that regard, the EU is fairly advanced in its consideration of the unique legal issues that can arise in the context of the development and deployment of AI systems.


Lisa Peets


Sam Jungyun Choi


Madelaine Harrington


Jiayen Ong

"In May 2022, the EC published the proposed Regulation for the European Health Data Space. If adopted, this proposal will create a common EU data space for health data."

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

European strategy on AI

In 2018, the European Commission (EC) published a Coordinated Plan on Artificial Intelligence, which set out a joint commitment by the EC and the member states to work together to encourage investments in AI technologies, develop and act on AI strategies and programmes, and align AI policy to reduce fragmentation across jurisdictions.

In April 2021, the EC conducted a review of the progress on the 2018 Coordinated Plan, and adopted an updated plan with the following additional policy objectives:

- set enabling conditions for AI development and uptake in the EU;
- make the EU the place where excellence thrives from the lab to market;
- ensure that AI works for people and is a force for good in society; and
- build strategic leadership in high-impact sectors.

The EC has also proposed that the EU invests at least €1 billion per year from the Horizon Europe and Digital Europe programmes in AI.

At the national level, a 2022 review found that 24 of the 27 EU member states have adopted national strategies on AI – and that the remaining member states are working on national strategies that are expected to be published soon.

The EU has also been actively considering legislation that will regulate AI technologies. These include the following (discussed later in this chapter):

- the proposed Regulation Laying Down Harmonised Rules on AI (the AI Act Proposal); and
- the proposed Directive on Adapting Non-Contractual Civil Liability rules to Artificial Intelligence (the AI Liability Directive Proposal).

European data sharing policy

European policymakers recognise that access to data is an important requirement to enable the growth of AI technologies. In 2020, the EC published a Communication on Shaping Europe's Digital Future and a European Strategy for Data. The Communication recommended enhancing regulatory frameworks to, among other objectives, encourage and enable data sharing.

Over the past year, the EC has adopted legislation aimed at furthering the European strategy for data:

- In June 2022, the EU adopted its Regulation on European Data Governance (the Data Governance Act). The Data Governance Act includes a range of measures designed to promote the reuse of

public sector data and establishes a European Data Innovation Board, among other things.

- In September 2022, the EU adopted its Regulation on Contestable and Fair Markets in the Digital Sector (the Digital Markets Act). The Digital Markets Act introduces measures to regulate online 'gatekeepers'. One of the obligations in the Digital Markets Act requires gatekeepers to make available to business users data 'provided for or generated in the context of' the business user's use of the gatekeeper's services.

The EU institutions are currently reviewing several additional legislative proposals that are also aimed at furthering the European strategy for data. These include the following:

- In February 2022, the EC published the proposed Regulation on Harmonised Rules on Fair Access to and Use of Data (the Data Act). The Data Act includes provisions designed to give users of certain specified products and related rights to access and port data generated by their use. The Data Act also seeks to lower the barriers to users for switching between different data processing services.
- In May 2022, the EC published the proposed Regulation for the European Health Data Space. If adopted, this proposal will create a common EU data space for health data, with the ultimate aim of (1) empowering individuals to control and utilise their own health data in their home country and in other member states, and (2) furthering research, innovation, policy-making and regulatory activities within the health sector.

UK's innovation-friendly approach

Separate from the EU, the UK government in September 2021 adopted its own National AI Strategy. The UK government's strategy is focused on adopting an innovation-friendly approach to AI regulation. The UK government followed this Strategy, in July 2022, with a proposal for

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a new AI rulebook that sets out six AI-related principles. These 'core principles' will require developers and users of AI to:

- ensure that AI is used safely;
- ensure that AI is technically secure and functions as designed;
- make sure that AI is appropriately transparent and explainable;
- consider fairness;
- identify a legal person to be responsible for AI; and
- clarify routes to redress or contestability.

The UK government envisages that these core principles will form the basis for sector-specific guidelines to be developed by industry, academia and regulators.

QUESTIONS

"At the member state level, national strategies on AI address the ethical and human rights implications of AI. Like the EC, many member states have established independent bodies tasked with advising on ethical issues raised by AI."

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

In April 2021, the EC published its proposal for an AI Act. The AI Act Proposal is the first EU legislative proposal that is designed specifically and exclusively to regulate the development, deployment and use of AI systems. The AI Act Proposal adopts a risk-based approach to regulation, imposing the most extensive obligations on providers of 'high-risk' AI systems – and prohibiting certain types of AI outright. Certain types of non-high-risk AI systems will also be subject to transparency obligations.

The AI Act Proposal has been the subject of significant scrutiny and debate during the legislative process, and while the final Act is likely to broadly track the EC Proposal, it is likely to have some meaningful differences in the obligations it imposes.

Prohibited AI systems

The AI Act Proposal would ban certain types of AI systems from being placed on the EU market, put into service or used in the EU. These include AI systems that either deploy subliminal techniques (beyond a person's consciousness) to materially distort a person's behaviour, or exploit the vulnerabilities of specific groups (such as children or persons with disabilities), in both cases where physical or psychological harm is likely to occur. The AI Act Proposal would also prohibit public authorities from placing on the market, putting into service or using AI systems in the EU for 'social scoring', where this leads to detrimental or unfavourable treatment in social contexts unrelated to the contexts in which the data was generated, or is otherwise unjustified or disproportionate. Finally, the AI Act Proposal bans law enforcement from using 'real-time' remote biometric identification systems in publicly accessible spaces, subject to limited exceptions (eg, searching for specific potential victims of crime, preventing imminent threats to life or safety or identifying specific suspects of significant criminal offences).

High-risk AI systems

The AI Act Proposal would also classify certain AI systems as high-risk, and subject those systems to more extensive regulation. Prior to placing a 'high-risk AI system' on the EU market or putting it into service, providers are required to conduct a conformity assessment procedure (either self-assessment or third-party assessment depending on the type of AI system) of their systems. To demonstrate compliance, providers must draw up an EU declaration of conformity and affix the CE marking of conformity to their systems.

The types of AI systems considered high-risk are enumerated exhaustively in Annexes II and III of the AI Act Proposal, and include AI systems that are, or are safety components of, certain regulated products (eg, medical devices, motor vehicles) and AI systems that are used in certain specific contexts or for specific purposes (eg,

biometric identification systems, systems for assessing students in educational or vocational training).

The AI Act Proposal also requires that providers of high-risk AI systems ensure that their AI systems meet certain substantive obligations. Among them, providers must design high-risk AI systems to enable record-keeping; allow for human oversight aimed at minimising risks to health, safety or fundamental rights; and achieve an appropriate level of accuracy, robustness and cybersecurity. Data used to train, validate or test such systems must meet quality criteria, including for possible biases, and be subject to specified data governance practices. Providers must prepare detailed technical documentation, provide specific information to users and adopt comprehensive risk management and quality management systems.

The AI Act Proposal also imposes obligations on importers and distributors of AI systems, to ensure that high-risk AI systems have undergone the conformity assessment procedure and bear the proper conformity marking before being placed on the market, as well as obligations on users of such systems.

Non-high-risk AI systems

The AI Act Proposal would also introduce transparency obligations on certain non-high-risk AI systems, as follows:

- Providers of AI systems intended to interact with natural persons must develop them in such a way that people know they are interacting with the system.
- Providers of 'emotion recognition' and 'biometric categorisation' AI systems must inform people who are exposed to them of their nature.
- Providers of AI systems that generate or manipulate images, audio or video content must disclose to people that the content is not authentic.

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For other non-high-risk AI systems, the AI Act Proposal also encourages providers to create codes of conduct to foster voluntary adoption of the obligations that apply to high-risk AI systems.

Member state guidance on AI ethics

At the member state level, national strategies on AI address the ethical and human rights implications of AI. Like the EC, many member states have established independent bodies tasked with advising on ethical issues raised by AI. These include Germany's Data Ethics Commission and France's National Consultative Committee for Ethics. In the UK, the UK's Centre for Data Ethics and Innovation and the UK government's Office for AI publish guidance relating to AI ethics.

QUESTIONS

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

On 9 September 2021, the EU's recast of the Dual-Use Regulation entered into force. While export controls under the previous EU dual use regulation applied to certain AI-based products, such as those that use encryption software, and any AI products that are specifically designed for a military end use, the updated Dual-Use Regulation broadens the scope of the controls and implements more extensive requirements for cyber-surveillance related goods, software and technology, and military-related technical assistance activities.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

The GDPR applies to all processing of personal data, including in the context of AI systems. The GDPR imposes, among other obligations, requirements on data controllers to be transparent about their processing, identify a legal basis for the processing, comply with data subject rights, keep personal data secure and keep records to demonstrate compliance with the GDPR.

Notably, the GDPR includes specific requirements on fully automated decision-making (ADM) that has legal or similarly significant effects on individuals (article 22). This provision is likely to be particularly relevant to AI-based algorithmic decision-making processes. Under the GDPR, individuals have the right not to be subject to ADM unless the processing is based on the individual's explicit consent, is necessary for performance of a contract between the organisation and the individual or is authorised by member state or EU law. Even when these conditions are met, organisations must provide individuals with 'meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing' (article 13(2)(f)). Organisations carrying out ADM must also implement safeguards, including, at a minimum, the right to contest the decision and obtain human review of the decision (article 22(3)).

> "Any cross-border transfers of personal data from within the EU to outside the EU will also be subject to the GDPR's rules."

The GDPR will also govern the sharing of personal data between multiple organisations where sharing of personal data is required to develop or deploy an AI application. These rules include ensuring that any joint controllers of the personal data set out their respective roles and responsibilities for compliance with the GDPR in a transparent way (article 26), and also require that controllers put in place data processing agreements with their processors (article 28). Any cross-border transfers of personal data from within the EU to outside the EU will also be subject to the GDPR's rules on international data transfers (Chapter V).

In addition, the development and deployment of AI technologies in certain contexts may also trigger the requirement to carry out a mandatory data protection impact assessment (article 35), which will require organisations to carry out an in-depth review of their data protection compliance specific to the project.

A number of member state data protection authorities (DPAs) have taken an interest in the application of the GDPR to AI. In May 2022, for example, the European Data Protection Board, which brings together all 27 member state DPAs, published guidelines on facial recognition technology in the area of law enforcement, which is awaiting adoption following a public consultation. The UK Information Commissioner's Office (ICO) has also published guidance documents regarding the application of data protection principles to AI. Other DPAs, including the French CNIL, the Norwegian Datatilsynet and the Spanish AEPD, have issued guidance on AI and data protection.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

As there is currently no AI-specific legislation in Europe, government authorities do not yet have the power to enforce and monitor compliance with AI-specific legislation. However, once the AI Act Proposal is implemented, violations of the AI Act Proposal may be subject to fines of up to €30 million or 6 per cent of a company's worldwide annual turnover (whichever is higher).

To the extent that existing laws and regulations apply to AI applications, government authorities have been exercising their powers under these rules in relation to AI applications. As noted in question 5, some member state DPAs have issued AI-specific guidance in relation to data protection law compliance. Infringements

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of GDPR could result in fines of up to €20 million or 4 per cent of a company's worldwide annual turnover (whichever is higher), depending on the provisions infringed.

Further, a number of DPAs have recently taken enforcement actions focused on specific AI use cases, particularly relating to facial recognition technology (FRT) used for surveillance purposes. For example, the Swedish DPA in February 2021 fined the Swedish police for using FRT to identify individuals, and in August 2019 fined the Skellefteå municipality for using FRT to track student attendance in a state school.

In the UK, the use of FRT systems by law enforcement for policing and security purposes was also the subject of a human rights challenge before the English High Court (*R (Bridges) v Chief Constable of South Wales Police* [2019] WLR (D) 496 (UK)) and Court of Appeal (*R (Bridges) v Chief Constable of South Wales Police* [2020] EWCA Civ 1058), and led the UK ICO to subsequently issue an opinion on the use of live FRT by law enforcement in public places. In November 2021, the UK

"The EC announced an international outreach for human-centric AI project (InTouchAI.eu) to promote the EU's vision on sustainable and trustworthy AI."

ICO concluded an investigation into Clearview AI's facial recognition technologies, and fined Clearview AI more than £7.5 million for privacy violations (a reduction from the provisional fine of £17 million). The ICO also ordered the company to delete the data of UK residents from its systems. Subsequently, (1) the French CNIL similarly found that Clearview AI's facial recognition software breached GDPR and imposed a fine of €20 million and ordered Clearview AI to cease data collection in France, (2) the Italian DPA fined Clearview AI €20 million and ordered the deletion of data of Italian citizens, and (3) the Greek DPA fined Clearview AI €20 million and ordered the deletion of data of Greek citizens. Since many AI applications involve the processing of personal data, we expect DPAs to play an important role in monitoring AI applications.

7 Has your jurisdiction participated in any international frameworks for AI?

The EU has been a thought leader in the international discourse on ethical frameworks for AI. The AI HLEG's 2019 AI Ethics Guidelines were, at the time, one of the most comprehensive examinations on AI ethics issued worldwide, and involved a number of non-EU organisations and several government observers in its drafting. In parallel, the EU was also closely involved in developing the OECD's ethical principles for AI and the Council of Europe's Recommendation on the Human Rights Impacts of Algorithmic Systems. The EU also forms part of the Global Partnership on AI (GPAI).

At the United Nations, the EU is involved in the report of the High-Level Panel on Digital Cooperation, including its recommendation on AI. The EC recognises that AI can be a driving force to achieve the UN Sustainable Development Goals and advance the 2030 agenda.

The EC states in its 2020 AI White Paper that the EU will continue to cooperate with like-minded countries and global players on AI, based on an approach that promotes the respect of fundamental rights and European values. Also, article 39 of the EC's AI Act Proposal provides a mechanism for qualified bodies in third countries to carry out conformity assessments of AI systems under the Act.

On 1 September 2021, the EC announced an international outreach for human-centric AI project (InTouchAI.eu) to promote the EU's vision on sustainable and trustworthy AI. The aim is to engage with international partners on regulatory and ethical matters and promote responsible development of trustworthy AI at a global level. This includes facilitating dialogue and joint initiatives with partners, conducting public outreach and technology diplomacy

and conducting research, intelligence gathering and monitoring of AI developments. Also, at the first meeting of the US–EU Trade and Technology Council on 29 September 2021, the United States and EU 'affirmed their willingness and intention to develop AI systems that are innovative and trustworthy and that respect universal human rights and shared democratic values'. The participants also established 10 working groups to collaborate on projects furthering the development of trustworthy AI. This collaborative approach continued in the second meeting of the US–EU Trade and Technology Council on 15–16 May 2022, where the United States and EU agreed to develop shared methodologies for measuring AI trustworthiness and risks.

The EU member states have also been active in the Council of Europe. On 3 November 2021, the Council of Europe published a Recommendation on the Protection of Individuals with regard to Automatic Processing of Personal Data in the context of profiling, which defines 'profiling' as 'any form of automated processing of personal data, including machine learning systems, consisting in the use of data to evaluate certain personal aspects relating to an individual, particularly to analyse or predict that person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements'. The recommendation encourages Council of Europe member states to promote and make legally binding the use of a 'privacy by design' approach in the context of profiling, and sets out additional safeguards to protect personal data, the private life of individuals, and fundamental rights and freedoms such as human dignity, privacy, freedom of expression, non-discrimination, social justice, cultural diversity and democracy.

The UK is also actively participating in the international discourse on norms and standards relating to AI. It continues to engage with the OECD, Council of Europe, United Nations and the GPAI.

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8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

On 28 September 2022, the EC published its proposal for a Directive on adapting non-contractual civil liability rules to artificial intelligence (the AI Liability Directive Proposal). The AI Liability Directive Proposal sets out harmonised rules on (1) the disclosure or preservation of information regarding high-risk AI systems and the standard of proof required to compel the same, and (2) the burden of proof, and corresponding rebuttable presumptions, applicable to claim for damages caused by AI systems.

The AI Liability Directive Proposal gives courts the power to order providers or users of high-risk AI systems to disclose (or preserve) information about their systems to persons who seek this information to initiate (or decide whether to initiate) redress proceedings against the provider or user. A court may issue such an order upon the request of (1) a 'potential claimant', who has already

> "The use of computer vision to power FRT systems for surveillance, identity verification and border control has been a notable development."

requested this information directly from the provider or user but not received it, or (2) a claimant who has initiated proceedings. The requestor must present facts and evidence 'sufficient to support the plausibility of a claim' that the high-risk AI system caused the alleged damage.

Courts will only order a provider or user to disclose as much information as is necessary and proportionate to support a (potential) claim for damages. The court will take into account the legitimate interests of all parties, including any trade secrets. If a disclosure order covers information that is considered a trade secret which a court deems confidential pursuant to the EU Trade Secret Directive, the court may take measures necessary to preserve the confidentiality of that information during the proceedings. If the provider or user does not comply with the court's order to disclose information, the court may assert a rebuttable presumption that the provider or user breached a duty of care, including that they failed to comply with the provisions of the AI Act that the requestor alleges were violated.

In addition, the AI Liability Directive Proposal identifies a number of circumstances in which a court may presume a (causal) link between (1) the fault of the provider or user of any AI system (whether high-risk or not), and (2) the output produced by the AI system or its failure to produce such an output. For high-risk AI systems, this presumption applies if the claimant has demonstrated the provider or user's non-compliance with certain obligations under the AI Act, subject to certain exceptions and restrictions. For example, the presumption will not apply if the court finds that the claimant has sufficient evidence and expertise to prove a causal link.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

AI uptake has increased across the EU market in a range of sectors, including in the health and transport sectors and by law enforcement.

The use of computer vision to power FRT systems for surveillance, identity verification and border control has been a notable development in the EU, raising a number of data protection law-related concerns, as discussed in the response to question 6. The use of other biometric identification systems, such as voice recognition technology, has also proliferated. Biometric identification technology can be seen in many forms – from voice authentication systems for internet banking to smart speakers for home use.

The digital health sector has also seen an increase in AI-powered solutions, including apps that diagnose diseases, software tools for those with chronic ailments, platforms that facilitate communication between patients and healthcare providers, virtual or augmented reality tools that help administer healthcare and research projects

involving analysis of large data sets (eg, genomics data). The advances in autonomous vehicles would not be possible without the development of AI systems, and autonomous vehicles must implement multiple, complex interrelated AI systems to deal with the different aspects of autonomous vehicles (eg, localisation, scene understanding, planning, control and user interaction) in order to improve safety, mobility and the environment.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

As discussed above, the EU is currently considering two significant AI-related legislative proposals, the AI Act and the AI Liability Directive. The AI Act was proposed in April 2021, and is far advanced in the legislative process, with adoption possible in 2023. The AI Liability Directive was proposed in September 2022, and is still in the early stages of the legislative process.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

Companies developing or deploying AI applications in the EU should be mindful that a number of laws and regulations may apply to their AI application – including, but not limited to, those discussed in the preceding responses. Companies would be well advised to ensure compliance with these laws and look to government authorities that are responsible for enforcement in their sector for any sector-specific guidance on how these laws apply to AI applications. Companies should also closely monitor legislative developments, and consider participating in the dialogue with policymakers on AI legislation to inform legislative efforts in this area.

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QUESTIONS

QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

At Covington, we have been working with leading technology and internet companies for decades, and we have a deep understanding of the sector and of technology and digital products and services. Throughout that period, we have helped clients navigate the full range evolving legal landscapes applicable to their innovations. We take a multi-disciplinary approach, and as a firm, we are also focused on collaboration across our lawyers and on bringing the best team to any given matter; this is essential when advising on AI-related projects, because those projects often raise issues under multiple legal regimes. We also work closely together across offices, which again is important given the global nature of our clients' services and solutions.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

The development of AI technology is affecting virtually every industry and has tremendous potential to promote the public good. In the healthcare sector, for example, AI will continue to have an important role in helping to mitigate the effects of covid-19, along with potentially improving health outcomes while reducing costs. AI also has the potential to enable more efficient use of energy and other resources and to improve education, transportation, and the health and safety of workers. We are excited about these and many other opportunities presented by AI.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

AI has tremendous promise to advance economic and public good in many ways and it will be important to have policy frameworks that allow society to capitalise on these benefits and safeguard against potential harms. As this publication explains, several jurisdictions are advancing different legal approaches with respect to AI. One of the great challenges is to develop harmonised policy approaches that achieve desired objectives. We have worked with stakeholders in the past to address these challenges with other technologies, and we are optimistic that workable approaches can be crafted for AI.

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Germany

Mareike Gehrmann is a salary partner at Taylor Wessing. As a certified specialist lawyer for IT law, she guides her clients through the change in digitalisation. Companies and authorities appreciate her advice. With proven expertise from numerous digitisation projects, she advises her clients on data protection, cybersecurity and IT contract law. By doing this, she has already advised several clients on the use of AI, for example, in the use of intelligent recruiting tools or intelligent product owner software. She is an expert in solution-oriented work with medium-sized companies and global players, especially in the insurance, health and personal services sectors. She also works across borders, especially with the Dutch team at Taylor Wessing and primarily advises Dutch companies on entering the German market. Since 2021, she has been a lecturer at the Niederrhein University of Applied Sciences for administrative and IT law in the degree programme in cybersecurity management.

Fritz-Ulli Pieper is a salary partner at Taylor Wessing. As a certified specialist lawyer for IT law, Fritz-Ulli Pieper advises national and international clients on IT, telecommunications and data protection law. He has particular experience in legal issues relating to digitisation and artificial intelligence. His main tasks include drafting IT contracts and general terms and conditions and accompanying complex data protection projects as well as advising telecommunications providers or their contractual partners on infrastructure projects and product launches. He also advises the public sector on large-volume IT and infrastructure projects, in particular the Federal Ministry of the Interior, for Building and Home Affairs and its downstream areas.

QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

There is currently no law or other specific regulation in force in Germany that explicitly and exclusively deals with AI. The closest thing to that has been section 1a of the German Road Traffic Act since 2017, which regulates that vehicles with highly or fully automated (note: not autonomous) driving functions are permitted. Beyond that, applicable law forms the framework for the development and use of AI systems. A large number of laws can therefore play a role when developing and using AI systems. The following areas are particularly noteworthy.

Both the training of AI systems and their actual use regularly involve the automated processing of personal data. Aside from the European GDPR, the German federal as well as state data protection acts must be observed. Moreover, the individual systems grouped under AI could be protected by national copyright law as computer programs, whereas it is also discussed in legal literature how their output (such as digital art) may also be deemed protectable. Furthermore, when placing products on the market that contain AI components and those are deficient, there are specific product liability regulations as well as general liability regulations that may be applicable. It is also discussed in legal literature how the parameters of legal transactions (particularly contracts) are applicable in case an AI system is deployed and involved in the legally relevant activities. Regularly, it is deemed that the current contract law is rather fitting, whereas this is discussed in the case of ever more autonomous AI systems.

Beyond that, there are hardly any court rulings with specific relation to AI, but the number is slowly but continuously growing, for example, with regard to algorithmic decision-making. For instance, according to a recent decision by the Higher Regional Court of Dresden, the malfunction of an algorithmic based filter software cannot be attributed to the operator if the mistake is duly rectified (Decision dated 5 October 2021, ref. 4 U 1407/21).


Mareike Gehrmann

Fritz-Ulli Pieper

The lack of a comprehensive (federal) law regarding AI and the resulting application of other laws that prevails in Germany is not uncommon and can also be encountered in other countries (eg, the United States). The uniform legal framework created by the General Data Protection Regulation (GDPR) in the EU is an important achievement for AI development by working towards a level playing field within the EU. The same is expected from the EU Artificial Intelligence Act, which was proposed in April 2021 by the European Commission.

> "There are hardly any court rulings with specific relation to AI, but the number is slowly but continuously growing, for example, with regard to algorithmic decision-making."

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

On 15 November 2018, the federal government released the 'Artificial Intelligence Strategy'. It was prepared under the joint leadership of the Ministry of Education and Research, the Ministry for Economic Affairs and the Ministry of Labour and Social Affairs. Against the backdrop of the dynamic development of this technology field, this strategy is intended as the federal government's framework for action. It is part of the federal government's digitisation implementation strategy. The AI Strategy pursues three main goals: to make Germany and Europe a leading location for the development and application of AI technologies and to secure Germany's future competitiveness, to ensure responsible and public good-oriented development and use of AI, and to embed AI ethically, legally, culturally and institutionally in society within the framework of a broad societal dialogue and active political shaping. The Strategy focuses on 12 fields of action, in which funding programmes, initiatives, collaborations, etc, are started to make Germany a leading location for AI. In December 2020, the AI Strategy was updated to respond to new developments in the field of AI.

Also, in its so-called bureaucracy relief package, the German government decided on 13 April 2021 to examine in the future for each law whether regulatory sandboxes can be made possible by including an experimentation clause. These experimentation clauses – which have yet to be enacted – may allow AI to be tested in specified circumstances.

Recently, on 31 August 2022, the government presented its newly developed national digital strategy, which shall be the 'guidepost for the digital awakening'. It formulates goals that the government wants to be measured against by 2025, many of which concern the development and deployment of artificial intelligence. As a major goal, the strategy points out the strengthening of the start-up ecosystem and supporting SMEs and start-ups in the use of AI applications and the development of data-driven business models. Furthermore, it sets various other goals, such as using AI for more efficient public administration and transport, assistance at the workplace, or to combat disinformation. Moreover, the government wants to continue its support for autonomous driving, at the national and European level, and promote better accessibility and use of data for AI. At the same time, while Germany is striving to be a global leader in AI with an innovation-friendly environment, the government emphasises its human-centred approach. It plans to expand educational and informational offers, and aims to support more initiatives and projects of the civil society. The digital strategy also refers to the national AI strategy, stating that its implementation will make 'AI made in Germany' a globally recognised seal of quality.

Beyond that, the federal government also generally supports the European initiatives to regulate AI on European level, especially the AI Act, and is involved in the lawmaking process on various levels.

In general, owing to the fundamental importance of data sharing for the creation of AI systems, there are many different efforts to facilitate and improve data sharing, both in the private and in public sectors. Furthermore, data sharing is mentioned in various federal strategies such as the Data Strategy, the Open Data Strategy and the AI Strategy, whereby rather only declarations of intent are made for the promotion and creation of data spaces.

However, there is currently no further concretisation of data exchange specifically for AI. There are also no detailed legal regulations on the exchange of AI data. Therefore, the only remaining option is to apply the existing regulations. If the question is whether there are national efforts to share data with exclusive reference to AI developments, the answer is also in the negative.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

On the one hand, these issues are addressed in the federal government's AI strategy. There, the federal government states to rely on an 'ethics by, in and for design' approach throughout the process of AI development and application. Although the current jurisdiction and regulations are considered as a stable ground in the AI strategy, the federal government wants to review the regulatory framework for gaps in algorithm- and AI-based decisions, services and products and, if necessary, adapt them to make them reviewable with regard to possible inadmissible discrimination.

To develop standards on ethical aspects, the federal government is in dialog with national and international bodies such as the German

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'Data Ethics Commission' or the EU Commission's 'High-Level Expert Group on AI' and stated it would consider their recommendations. The federal government also wants to examine how transparency, traceability and verifiability of the AI systems can be made transparent and verifiable to ensure effective protection against distortions, discrimination, manipulation or other misuse, especially when using algorithm-based forecasting and decision-making systems. Therefore, the establishment or expansion of government agencies and private review institutions for the control of algorithmic decisions is planned to be examined. Lastly, the federal government states its support for the development of innovative applications that promote self-determination, social and cultural participation as well as the protection of citizens' privacy.

Besides that, a Data Ethics Commission was set up by the federal government in July 2018. The Data Ethics Commission is an independent and autonomous body of experts, which delivered its final report in October 2019. Among other things, it proposes a risk-based regulatory approach for algorithmic systems. This should include

"To develop standards on ethical aspects, the federal government is in dialog with national and international bodies such as the German 'Data Ethics Commission' or the EU Commission's 'High-Level Expert Group on AI' and stated it would consider their recommendations."

control instruments, transparency requirements and traceability of the results as well as regulations on the allocation of responsibility and liability for the use of algorithmic systems.

Likewise, the Enquete Commission 'Artificial Intelligence – Social Responsibility and Economic, Social and Ecological Potential' also dealt with the topic. The German Parliament appointed the Commission on 28 June 2018 at the request of various parties of the parliament. The Commission consisted of members of the parliament and experts proposed by the parties. It was mandated to examine the opportunities and potential of AI as well as the associated challenges and to develop answers to the multitude of technical, legal, political and ethical questions in the context of AI. The final report was submitted on 28 October 2020. The Commission places its elaboration under the guiding principle of 'human-centred AI'. The focus on people means that AI applications should primarily be geared towards the well-being and dignity of people and bring societal benefits.

In addition, Germany is actively involved in the development of international ethical standards for AI use.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

In its AI strategy, the federal government aims to increase the attack security of AI systems and further expand AI as a basis for general IT security. Ensuring IT security is seen as a key prerequisite for the product safety of AI applications or products that use AI. The current focus on operators of critical IT infrastructures, for example, in the IT, health or energy sectors, is seen as no longer sufficient in view of the federal government. Therefore, an adequate obligation for hardware and software manufacturers is aspired that promotes the principle of security by design.

The Federal Office for Information Security (BSI) plays a pioneering role here. The BSI established an AI unit in 2019. As a first result of work, the unit published an AI Cloud Service Compliance Criteria Catalogue (AIC4), which helps the users to evaluate the safety of AI-systems in a cloud. In addition, the BSI conducts basic research and develops requirements, test criteria and test methodologies that are both needs oriented and practical to make the use of AI safe for the benefit of the general public.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

As already mentioned, the data protection requirements also apply to the processing of personal data by AI. In particular, sections 31, 54 of the German Federal Data Protection Act, which prohibit automated decisions and regulate 'scoring', should be emphasised. The question of whether these requirements are sufficient for the processing of personal data by AI systems or whether new regulation is necessary has been addressed by various entities.

The federal government announced in the AI strategy to review the legal framework for the use of data for application of AI technology. Related to this, a roundtable was convened with data protection supervisory authorities and business associations to discuss AI-specific application issues of the GDPR and to establish a regular exchange. The constituent meeting was on 29 September 2019, another followed in January 2020. The results of these meetings were not published. The further procedure is also not known.

The Enquete Commission considers the specifications to be a solid legal basis under data protection law for the processing of personal data by AI systems. However, there would not yet be a secure, uniform interpretation and application of the legal provisions when

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assessing individual use cases in connection with the training or use of AI systems.

In the Hambacher Declaration, issued on 3 April 2019, the German 'Data Protection Conference' (a body formed by the German data protection supervisory authorities) has set out seven data protection requirements for artificial intelligence:

- AI must not treat people like objects;
- AI may only be used for constitutionally legitimised purposes and not override the purpose limitation requirement;
- AI must be transparent, comprehensible and explainable;
- AI must avoid discrimination;
- the principle of data minimisation applies to AI;
- AI needs accountability; and
- AI needs technical and organisational standards.

The declaration represents a recommendation by the authorities, which, although not legally binding, can serve as an aid to

interpretation and can as such, for example, also be used by the courts.

In addition, the German data protection supervisory authorities are regularly of the opinion that a data protection impact assessment must be carried out for a large number of application areas of data processing using AI. Indeed, article 35 GDPR provides that in the case of data processing likely to present a high risk to the rights and freedoms of natural persons by virtue of the nature, scope, context and purposes of the processing, the controller must carry out a prior assessment of the impact of the envisaged processing operations on the protection of personal data. To concretise this obligation, the Data Protection Conference has published a Black List, which lists the corresponding use cases, for example, the use of artificial intelligence to process personal data to control interaction with the data subject or to evaluate personal aspects of the data subject.

An impact of the AI-related data protection issue on national efforts to launch data exchange programmes is not apparent. However, the general mood in the market, judging by various comments made by companies and business associations submitted as part of a consultation by the federal government on the AI strategy, seems to be that the high data protection requirements are an obstacle to AI-related innovation and a competitive disadvantage compared to countries, which process and use data for AI in a GDPR-non-compliant way. The GDPR is perceived as a law with numerous undefined legal terms and high bureaucratic hurdles, whose subsequently still high implementation costs would rather contribute to negative effects on innovations and digital business models.

"Accompanying the lack of a comprehensive legal regulation of AI, there is no sole responsibility of one federal level, authority or ministry."

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

Accompanying the lack of a comprehensive legal regulation of AI, there is no sole responsibility of one federal level, authority or ministry. Thus, different federal authorities may be responsible depending on the area of application. For example, the Federal Office for Information Security (BSI) may be responsible if operators of critical infrastructures use AI or the Federal Financial Supervisory Authority (BaFin) if AI is used in decision-making processes by financial service providers. The states alone can regulate the use of AI in their administrative bodies.

Digitisation as a whole is the responsibility of both the Federal Ministry for Economic Affairs and Climate Action and the Federal Ministry of Digitalization and Transport. However, both ministries have so far avoided issuing independent frameworks for AI.

The federal government's AI strategy is merely a framework for action for the federal government itself, consequently, it lacks enforceability

7 Has your jurisdiction participated in any international frameworks for AI?

The German government is, inter alia, actively involved in the work of the G7 and G20, the European Council, the OECD and the Global Partnership on AI (GPAI) initiated by Canada and France, of which Germany is also a founding member.

The GPAI is a global initiative to promote responsible and people-centred development and use of AI. With the GPAI, a body of experts

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is being created to regularly monitor AI developments and to bundle global debates on the topic of AI (economy, work and society). The aim of the initiative is to facilitate and coordinate international cooperation in the field of AI. The GPAI will bring together experts from research, politics, business and civil society from around the world to monitor developments in the field of AI and to independently develop recommendations for policy makers.

In May 2019, the OECD adopted recommendations on artificial intelligence, which were adopted by the G20 countries as joint, non-binding AI principles.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

Significant developments were already mentioned in the above answers. Even more notable developments in AI have probably taken place in the area of autonomous driving.

"Responsible stakeholders in the AI field should be aware of the fragmentation and uncertainty surrounding the regulation of AI. Many specific questions of application have not yet been clarified by the legislator and case law."

Already on 21 June 2017, the Automated Driving Act (amendment of the Road Traffic Act) came into force. The core of this was changed rights and obligations of the vehicle driver during the automated driving phase. This means: automated systems (level 3) are allowed to take over the driving task under certain conditions. A driver is still necessary, however, who is allowed to switch off automatic vehicle control and assume control of the vehicle. Now with a new law on autonomous driving, which came into force on 28 July 2021, the legal framework has been created for autonomous motor vehicles (level 4) to be able to drive in regular operation in defined operating areas on public roads.

This will make Germany the first country in the world to take vehicles without drivers out of research and into everyday use.

Also, the Federal Motor Transport Authority (KBA) granted the world's first type-approval in the field of automated driving for an Automated Lane Keeping System (ALKS) for a model of the German manufacturer Mercedes-Benz. The automatic lane-keeping system is assigned to automation level 3. Thus, Mercedes-Benz is the first vehicle manufacturer in the world to receive approval for highly automated driving. This marks a significant step in the development of AI-based technology taken to real-world use.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

Along with the lack of all-round competence in the area of AI, there is no breakdown of the sector-specific development of AI-related products or services. However, the applied AI initiative publishes an annual 'German AI Startup Landscape', which shows all companies founded since 2009 that focus on or significantly use machine learning. The 2021 landscape shows a continuous growth of AI

start-ups in the following key industries: manufacturing, transport and mobility and healthcare.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

So far, there is no pending or planned draft legislation regarding a uniform AI law. Considering the proposal for an Artificial Intelligence Act (the AI Act) by the European Commission in April 2021, it is unlikely that there will be any drafts for national laws or regulations beforehand.

In the 2020 Update of the AI Strategy, the federal government expressed its preference for a draft of EU-wide harmonised principles and mentioned its active participation in the processes and initiatives that have already been launched. The coalition agreement of the new federal government (from November 2021) also mentions support for the AI Act.

The AI Act seeks to achieve the following objectives: to ensure that AI systems placed and used on the Union market are safe and respect existing fundamental rights and EU values. It also aims to ensure legal certainty to promote investment in AI and innovative AI. It aims to strengthen governance and effective enforcement of existing law to uphold fundamental rights, as well as security requirements for AI systems, as well as to facilitate the development of a single market for legally compliant, secure and trustworthy AI applications and prevent market fragmentation. The draft follows a risk-based approach, according to which AI applications are grouped into four categories according to their potential risk: 'unacceptable risk', 'high risk', 'low risk' and 'minimal risk'. While the draft provides for strong interventions with the prohibition of systems with unacceptable risk and the extensive regulation of systems with high risk, other AI applications, namely those with low or minimal risk, should deliberately remain largely unregulated according to the intention of the EU Commission to create innovation-friendly conditions.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

Responsible stakeholders in the AI field should be aware of the fragmentation and uncertainty surrounding the regulation of AI. Many specific questions of application have not yet been clarified by the legislator and case law.

A company that wants to use AI should first consider the purpose for which it wants to use the AI. To avoid risks, the scope of application should be narrowly defined. This is especially true for sensitive areas where discrimination can quickly occur, such as recruiting. It is very important to understand the AI used. For this, an understanding should be built up within the framework of an AI deployment management for the entire company. The company must also develop a sense of responsibility for the AI, put protective measures in place and ensure it is also possible to shut down the system in an emergency – including an AI governance and compliance scheme, particularly taking into account legal requirements.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

The willingness to further educate oneself owing to constant further development is a basic requirement in IT law in general, and is especially true for legal questions concerning AI.

We follow technical developments very closely and regularly exchange views with our clients on this. It is important to understand the advantages and disadvantages to be able to regulate and advise the issues appropriately and understandably. We appreciate the challenge of often applying 'old law' to 'new technologies' and developing legal solutions for which there is no pattern.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

AI can be a great asset to society. From the healthcare sector to early detection systems in disaster response, there are countless examples of the benefits of AI, so it is hard to single out specific developments.

If we had to choose, we would say that we are most excited about the developments in the field of autonomous driving, or in smart homes. Especially in view of our ageing society, AI could lead to us being able to live at home and be independent in old age, as AI makes our everyday lives easier.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

Striking a balance between data protection aspects and technical innovation will be a major challenge for the developers of AI systems. In addition, we need to ensure that a basic understanding of AI systems prevails in society to ensure that citizens have faith in new AI systems.

With regard to recent developments in China (eg, Draft Cross-Border Data Rules; Shanghai Data Exchange) and the EU (eg, Draft Data Governance Act) developers will have to develop a strategy on how they can acquire, import or export data to use to train AI. Data protection issues and data export may, for example, require the use of synthetic data.

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Ireland

Anne-Marie Bohan is the head of Matheson's technology and innovation group. She has over 25 years' experience in technology related legal matters and has acted in some of the largest value and most complex IT and telecommunications systems and services outsourcing contracts, including advising on a number of the largest and highest value financial services outsourcings in Ireland. Anne-Marie's practice includes advising a broad range of clients on data protection, privacy issues and cybersecurity issues. Anne-Marie has lectured on IT, data protection and financial services in the Law Society of Ireland, the National University of Ireland Maynooth, and more broadly.

Rory O'Keeffe is a partner in Matheson's technology and innovation group. Rory has extensive experience on a broad range of international and domestic technology and business transformation deals. Based in London, he brings together significant in-house and practical experience in advising on technology and commercial legal issues, with a particular specialism in cloud, AI, robotics, IoT, cybersecurity and complex technology contracting. Prior to joining Matheson, Rory worked as Senior Legal Counsel in a Fortune Global 500 company. He spent over 10 years in London advising on complex, high value, fast-paced, multi-jurisdictional deals. Rory is also committee member of the Society of Computers and Law, specifically supporting the Inclusion and Diversity group. He regularly presents on topics, most recently on cybersecurity, blockchain, NFTs and AI.

QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

The current state of law and regulation governing artificial intelligence (AI) in Ireland is similar to the other EU countries. At present, there are currently no rules or regulations that apply specifically to AI in Ireland. However, Ireland has published a National AI Strategy titled AI-Here for Good (see further comments below). In addition, at European-level, there are a range of laws and regulations that regulate AI. The regulations are as follows:

- The General Data Protection Regulation (GDPR) – AI is not explicitly discussed in the GDPR; however, many of the provisions in the GDPR apply to the processing of personal data in an AI context.
- Data Protection Act 2018 – the DPA is the principal national data protection legislation in Ireland. The Act supplements the GDPR in Irish law.
- The Platform-to-Business Regulation – this regulation applies to online search engines providers and online intermediation service providers.
- European Union (Copyright and Related Rights in the Digital Single Market) Regulations 2021, amending the Copyright and Related Rights Act 2000 – this Act affords limited protection to ownership of content created by an AI system. Under section 30 of the Act, protection is specifically afforded to computer-generated work for 70 years from the date it is first made available to the public.

On 21 April 2021, the European Commission submitted its proposal for the first-ever Artificial Intelligence Regulation (AI Act). The regulation represents the first attempt at an EU level to regulate AI horizontally. The aim of the AI Act is to establish a standard for the harmonisation

of AI that would lay down rules on the use and governance of AI systems, the risks associated with AI and the development of AI. The AI Act aims to establish the European Union as a trustworthy central hub for the ethical use of AI on a global scale by adopting a risk-based approach. It proposes addressing the legal and commercial risks generated by using AI. The AI Act divides AI systems into three categories: unacceptable-risk AI systems, high-risk AI systems and limited and minimal-risk AI systems, and places different obligations on providers depending on the AI systems and their level of risk.

On 28 September 2022, the European Commission proposed updated liability rules on products and new liability rules on artificial intelligence. The updated Product Liability Directive and new AI Liability Directive are to complement the AI Act.

QUESTIONS

"The Irish National AI Strategy aims to address the ethical and human rights issues raised by the deployment of AI."

The proposed AI Act and these directives will go through the European legislative process where the European Parliament and the Council of the European Union will have the ability to propose amendments to the European Commission's proposals.

There is not much AI-specific legislation in other jurisdictions. For example, like the EU, the United Kingdom is yet to adopt any AI-specific legislation. The UK government is currently reforming UK data protection laws (most recently under the UK Data Protection and Digital Information Bill). In July 2022, the UK government published an AI Action Plan, following on from the UK National AI Strategy (September 2021). By comparison with the AI Act, the UK appears to be taking a decentralised approach to AI regulation.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

On 8 July 2021, the Irish government released Ireland's first National AI Strategy titled AI – Here for Good. The National Strategy sets out how Ireland can be an international leader in using AI to benefit our society. The strategy focuses on educating people on the potential of AI and creating an ecosystem that promotes trustworthy AI. The National Strategy proposes seven strands of actions that aim to: (1) build public trust in AI and leverage AI for economic and societal benefit; (2) foster a desirable regulatory environment; (3) foster public sector leadership in the adoption of AI; and (4) increase productivity by enabling AI technology adoption by Irish enterprises.

At present, the legislative framework underpinning the Irish government's strategy includes, the Data Sharing and Governance Act 2019 (DSG Act) and the Public Service Data Strategy (2019–2023), which provide guidance to companies sharing data in the public sector and places certain obligations on public sector bodies to improve their data management and data sharing processes. The Irish Department of Public Expenditure and Reform established the Data Governance Board on 22 December 2021 whose function is to oversee data sharing arrangements under the DSG Act.

The Irish Data Protection Commission (DPC) has recommended that all data sharing arrangements in the public sector should generally:

- have a clear basis in primary legislation or alternatively, in secondary legislation (provided a primary legislative basis exists) thereby ensuring there is no room for confusion in relation to the nature of the arrangement;
- have a clear justification for each data sharing activity;
- inform individuals in relation to the sharing of their data and the purpose for which it is shared;

- contain how the sharing of the data will impact the individual concerned; and
- inform individuals on the retention period and the disposal process of the shared data.

The DPC welcomed the decision of the Court of Justice of the European Union (CJEU) in *Bara & Others* (C-201/2014), which placed a strong focus on public sharing arrangements. On the basis of the decision, the DPC has reiterated the importance of keeping data subjects informed on how their personal data is being processed (this includes the sharing of the personal data).

The final provisions of the DSG Act came into force on 31 March 2022, which meant section 38 of the DPA 2018, which supplements article 6 of the GDPR, could no longer be relied on as a valid legal basis for data sharing arrangements between public bodies.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

The Irish National AI Strategy (discussed in question 2) aims to address the ethical and human rights issues raised by the deployment of AI. The strategy aims to serve as a roadmap to more ethical and trustworthy development of AI in Ireland. The government is focused on promoting an ethical and trustworthy approach in driving the adoption of AI in both the private and public sector. One of the ethical issues raised by the deployment of AI is in relation to the human consequences of developing AI-based systems that could impact the availability of jobs and change livelihoods.

The AI Act also aims to address fundamental human right issues and ethical issues raised by the AI deployment. The AI Act follows a risk based approach and seeks to address the risks caused by the use of

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AI through a structured set of rules. The AI Act provides four types of AI systems depending on level of risks involved.

Prohibited or unacceptable risk AI systems

There are some AI systems that are considered an unacceptable risk to individuals and as a result are prohibited. For instance, the AI Act explicitly prohibits subliminal, manipulative or exploitative AI systems that are likely to cause physical or psychological harm. It prohibits practices that manipulate individuals through subliminal techniques beyond their consciousness or practices that seek to exploit vulnerable persons such as persons with disabilities or children in order to distort their behaviour in a manner likely to cause harm to them or others and AI that evaluates a persons' level of trustworthiness based on their social behaviour or personal traits. The AI Act also prohibits the use of AI systems by public authorities for 'AI-based social scoring'. Furthermore, subject to very limited exceptions, the placing into the market or the use of 'real time' remote biometric identification systems in publicly accessible

"As of yet, there is no AI-specific legislation to be enforced and monitored in Ireland. However, to the extent existing laws apply to AI, existing government agencies have been exercising their powers."

spaces for the purpose of law enforcement is also prohibited as it is considered an unacceptable intrusion on a person's rights and freedoms.

High risk AI systems

Some AI systems are considered high-risk, and specific rules apply to AI systems that create a high risk to the health and safety of individuals. High riss AI systems are permitted on the European market subject to compliance with certain mandatory requirements. There are two main categories of high-risk AI systems, namely:

- AI systems that are intended to be used as safety components for certain regulated products (eg, motor vehicles); and
- AI systems used in certain specific contexts and for specific purposes (eg, remote biometric identification in education).

High risk AI systems include AI technology used in critical infrastructure that could put the life and health of citizens at risk and also in the administration of justice and the democratic processes. All remote biometric identification systems are considered high risk and are subject to strict requirements.

Limited or no risk systems

The majority of AI systems used in the EU will fall under this category. This includes AI systems such as the operating of a chatbot and powered inventory management.

The National AI Strategy recognises and supports the European Commission's 'Ethics Guidelines for Trustworthy AI', and 'Policy and Investment recommendations for trustworthy Artificial Intelligence' (2019). The Ethics Guidelines set out what a trustworthy AI should look like. According to the Ethics Guidelines, a trustworthy AI should be lawful, complying with all applicable laws and regulations; ethical; and robust, both from a technical and social perspective.

Ireland will actively continue to play an important role in discussions at an EU level in relation to managing ethical and fundamental human rights, while creating a safe space for the innovation of AI.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

The Irish government published its National Cyber Security Strategy (2019–2024), with a vision of allowing Ireland to continue to safely enjoy the benefits of the digital revolution and to play a full part in shaping the future of the internet. The Irish government, through its National Security Analysis Centre, is considering potential threats that AI technologies could pose to Ireland's security as part of its ongoing work on the development of a new National Security Strategy. At the time of writing, there is no confirmed date when this new strategy will be finalised and published.

As mentioned earlier, Ireland is awaiting the enactment of the AI Act, which will impose AI risk assessment categorisations that will have implications for export and import of AI-based products into Ireland and the EU.

Ireland applies the various United Nations and EU measures adopted concerning trade (including trade sanctions). Irish laws also cover the control of exports, transfer, brokering and transit of dual-use items, including a licensing requirement in respect of brokering activities involving persons and entities negotiating or arranging transactions that may involve the transfer of items or technology listed on the EU Common Military List.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

In Ireland, the GDPR applies to all processing of personal data. This covers companies using AI systems to process personal data; these companies must comply with the GDPR. The GDPR imposes an obligation on companies to be transparent in their processing, protect the personal data within their possession, and provide data subjects with certain legal rights in relation to their personal data. The GDPR imposes different rules depending on whether the individual or company is acting as a data controller or the data processor. A data controller must demonstrate fairness, lawfulness, transparency, integrity, storage and full confidentiality of personal data. The controller must oversee how the data is processed, controlled, and must supervise the data processor in how they handle the personal data.

According to article 22 of the GDPR, the data subject has the right not to be subject to a decision based solely on automated processing,

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including profiling, unless the processing is based on the individual's explicit consent.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

As of yet, there is no AI-specific legislation to be enforced and monitored in Ireland. However, to the extent existing laws apply to AI, existing government agencies have been exercising their powers. For example, the DPC issued guidance in December 2021 of the use of AI and children's data, 'Children Front and Centre: Fundamentals for Child-Orientated Approach to Data Processing'.

7 Has your jurisdiction participated in any international frameworks for AI?

Yes. Ireland, through the National Standards Authority of Ireland (NSAI), participates in the International Standards Organisation (ISO), which is undertaking standardisation work relating to AI. The NSAI hosted an International Plenary meeting to develop ISO standards for AI and understand the use, application and ethical concerns relating to AI. A key aim of the meeting related to formulating standard policies in the area of AI standards, AI trustworthiness and Big Data.

Ireland has signed, for example, a declaration of cooperation on AI with other European countries, with member states agreeing to work together on the most important issues raised by AI, from ensuring Europe's competitiveness in the research and deployment of AI, to dealing with social, economic, ethical and legal questions. Ireland's policy development is underpinned by engagement in relevant international AI policy and governance processes at the EU, the United Nations, the Organisation for Economic Co-operation and Development and the Global Partnership on Artificial Intelligence.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

In terms of regulation of AI over the past year, the most noteworthy AI-related developments are the proposed AI Liability Directive and guidance from the DPC regarding the use of AI and children's data.

Generally, it is evident that cybercrime now equally poses as a significant a threat to our society as the typical criminal activity that occurs in our physical lives. Over the recent past, the dependency on technology has increased exponentially. More people in Ireland have adapted to a hybrid-working model and as a result of this there is a greater risk of cyberattacks. Through AI algorithms and data analysis, it is now possible to prevent cyberattacks more readily and successfully than ever before. More businesses are believed to be depending on AI to strengthen their cybersecurity defences.

> "The National AI Strategy quotes that the use of AI for AI-based products and services will boost Ireland's GDP by 11.6 per cent or €48 billion in 2030."

As part of those defences, the need for operational resilience has been raised by many experts, especially in light of new risk management and incident reporting obligations falling out of the European AI Strategy (2018), including the proposed EU Network and Information Security Directive (NIS-2 Directive), the EU Digital Operational Resilience Act (DORA) and the EU Cyber Resilience Act. Each of these developments would need to be read with the AI Act and the conformity assessment requirements set out there.

In May 2022, Ireland appointed its first AI Ambassador to lead the national conversation on the role of AI in the lives of the Irish population, with an emphasis on an ethical approach.

QUESTIONS

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

AI is an area that is rapidly growing in Ireland. The National AI Strategy quotes that the use of AI for AI-based products and services will boost Ireland's GDP by 11.6 per cent or €48 billion in 2030. We have seen major developments in how AI has redefined many industries in the Irish jurisdiction. With the recent technological advancements, the manufacturing industry is said to be the fastest growing in the context of AI in Ireland.

Ireland is recognised has having world-class centres of excellence in manufacturing sectors, including biopharma, medtech, technology, engineering and food, and in financial services. Balanced with the ability to deploy AI at scale within these sectors, it is expected that these sectors will continue to see the most development in AI-based products and services.

By way of examples, Irish AI-healthcare solutions have seen the creation of tools to tackle health issues such as chronic diseases and the creation of virtual reality tools that assist in the administration of healthcare in general.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

Yes. As mentioned in question 1, pending legislation is the AI Act and AI Liability Directive. At the time of writing, there is no exact date when these will be enacted.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

Given the various proposed EU laws and new risk management requirements, companies should begin now to familiarise themselves with those laws that will impact their business. Adherence to the privacy-by-design, privacy-by-default principles enshrined in the GDPR, 'Responsible AI' guidance, security-by-design and industry best practices will each assist with assessing and managing risks arising in the deployment of AI.

These regulatory developments are expected to require enterprises to embed operational and digital resilience into their systems, products and practices; to educate and train their employees effectively on the procurement, use and ongoing monitoring of AI systems (eg, identifying bias in datasets); and ensure adequate planning, testing and retesting of AI systems throughout their life cycle.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

Matheson has been very fortunate in being a first-adopter of AI technology in the operation of itself and in delivery of services to its clients. As tech lawyers, it is important to have a growth mindset (like our clients do) and learn everything you can from our clients. AI or data laws, AI products and services are ever evolving. The legal queries continue to be challenging in the best way possible. We have learned to look around those digital corners for clients. As in the tech world, AI lawyers need the skill to understand and accept that change is a constant. After all, it was only last year that the hype around the metaverse really took shape, and the rush to set up the first outposts there is very real.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

Emerging technology and services drive more exciting, complex questions. The greatest opportunities will exist within the digital economy, including the active, fast-paced innovation across all industries.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

The greatest challenge is predicting how legislators and regulators will react to new AI products and markets. Connected to that is the pressure for clients to keep up with all the changes. Clients may take some comfort from existing laws and regulatory guidance to help bolster their predictions. For society, the challenges are around awareness of how the AI product works, and the legal and ethical issues

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Japan

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Haruno Fukatsu is an associate at Iwata Godo. She is an attorney-at-law (admitted in Japan). Her practice focuses on general corporate matters and a wide variety of domestic dispute resolution. Her practice also includes corporate governance, shareholders' meetings and M&A. Additionally, Ms Fukatsu has advised many clients on data protection and data security issues in terms of Japanese laws and GDPR. She graduated from the University of Osaka (LLB) and the University of Kyoto (JD).

Kazuto Anzai is an associate at Iwata Godo. He is an attorney-at-law (admitted in Japan). His practice focuses on intellectual property and technology and communications and general corporate. His practice also includes dispute resolution, finance and M&A. He graduated from the University of Keio (LLB).

QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

The main principles and guidelines relating to AI published so far by public authorities in Japan are as follows:

- Draft AI R&D Guidelines for International Discussions published by the Conference toward AI Network Society (a conference held by the Institute for Information and Communications Policy, the Ministry of Internal Affairs and Communications (MIC) with advisers and experts to study social, economic, ethical and legal issues towards promoting AI networking in society) in July 2017;
- Social Principles of Human-centric AI, published in March 2019;
- AI Utilization Guidelines: Practical Reference for AI Utilization, published by the Conference toward AI Network Society in August 2019; and
- Governance Guidelines for the Implementation of AI Principles version 1.0, published by the Study Group on the Implementation of AI Principles in July 2021.

These principles and guidelines were formulated as non-binding soft law, and the government strongly encourages users of AI to take certain voluntary measures when using AI. The Social Principles of Human-centric AI states:

> *Since the development and utilisation principles of AI are currently being discussed in many countries, organisations, and companies, we emphasise it is important to build an international consensus through open discussions as soon as possible and to share it internationally as a non-regulatory and non-binding framework.*


Akira Matsuda


Haruno Fukatsu


Kazuto Anzai

"The Japanese government published its AI Strategy white paper in July 2019."

"The data section divides data contracts into three types: data provision, data generation and data sharing (platform type). The data section explains the structure and main legal issues for each contract type."

In addition, the AI Utilization Guidelines: Practical Reference for AI Utilization recommend sharing the guidelines as non-binding soft law and as best practice on how to use AI and as basic philosophy.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

In January 2016, the government issued its 5th Science and Technology Basic Plan (2016–2021) setting out goals for Japan to lead the transition from 'Industry 4.0' to 'Society 5.0'. The Japanese government established an Artificial Intelligence Technology Strategy Council in 2016, which published an Artificial Intelligence Technology Strategy in March 2017.

In May 2018, the Cabinet Office adopted the 'Declaration to be the World's Most Advanced IT Nation' and the 'Basic Plan for the Advancement of Public and Private Sector Data Utilization'.

It sets out a number of measures to be implemented without delay through governmental initiatives for the use of AI and 'Internet of Things' to solve social problems.

In addition, the Japanese government is preparing to establish 6th Science and Technology Basic Plan (2022–2026), This plan will cover the following matters: (1) concretisation of 'society 5.0', (2) speedy implementation of 'society 5.0' to society with a sense of crisis, (3) communication and cooperation between policies of science technology/innovation and society with human wellbeing, infections, disasters, and security environment in mind, (4) enhancement of ability to research and improvement of investments in research and development and (5) cultivation of human resources and globalisation for supporting the new society.

Regarding AI and data sharing, the Ministry of Economy, Trade and Industry (METI) published Contract Guidelines on the Utilization of AI and Data in June 2018.

The guidelines are divided into a data section and an AI section.

The data section divides data contracts into three types: data provision, data generation and data sharing (platform type). The data section explains the structure and main legal issues for each contract type.

The AI section explains the basic concepts of AI technology and the legal issues in the field of software development using AI technology.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

The Conference toward AI Network Society published Draft AI R&D Guidelines for International Discussions in July 2017. The guidelines elaborate on key ethical principles. Developers should strive to:

- pay particular attention to the need to respect human dignity and personal autonomy;
- take necessary measures to prevent unfair societal discrimination resulting from prejudice in the data learning processes of AI systems (eg, the big data used for algorithmic judgements about financial risk, housing, insurance or employment fitness can invisibly incorporate the effects of human prejudices); and
- take precautions to ensure that AI systems have a negligible impact on human rights.

According to the Social Principles of Human-centric AI of March 2019: 'Policymakers and managers of enterprises involved in AI must have an accurate understanding of AI, understand the proper use of AI in society and be knowledgeable about AI ethics.'

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The Conference toward AI Network Society published 'AI Utilization Practical Reference Guidelines for AI Utilization' in August 2019. These guidelines explain the 'principles of human dignity and personal autonomy' as 'AI service providers and business users are expected to respect human dignity and individual autonomy based on the social context in AI utilisation.'

In July 2020, the said conference published the report that introduces cases of the enterprises and individuals such as AI service providers and business users of AI.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

The Foreign Exchange and Foreign Trade Act regulates, among other things, export control from a national security and international trade administration perspective. Export control mainly focuses on classes

"In UNESCO and the G7, issues on ethics relating to AI are an important topic being debated and the ICDPPC has begun discussions to develop the AI guidelines from an ethical and data protection perspective."

of products, including dual technologies that can be used to develop nuclear weapons and missiles and biochemical weapons among others, with control extending to certain types of high-tech materials and machines. While such restrictions may be applicable to certain AI-based products, it is a general restriction unlike the US export control, which specifically focuses on AI-based products.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

The main piece of data protection legislation in Japan is the Act on the Protection of Personal Information (APPI). The APPI was significantly overhauled in May 2017 to strengthen data protection. When sharing personal data with a third party located in Japan (unless the data is anonymised), consent of the data subject is required unless certain exemption requirements are met. The use of a 'joint-use' arrangement is frequent for data sharing as it allows group companies or entities involved in the same project to share personal data without the need to secure data subject consent if certain disclosure requirements are met. Furthermore, the transfer of personal data to persons located outside Japan is subject to data subject consent unless:

- one can ensure that the receiving party has a structured data protection compliance system meeting Japanese law standards, through binding corporate rules or data transfer agreements (cross-border data transfer restriction); or
- the receiving party satisfies Asia-Pacific Economic Cooperation Cross-Border Privacy Rules requirements.

Reciprocal adequacy decisions on cross-border data transfers between the EU and Japan came into effect on 23 January 2019 and the above-mentioned cross-border data transfer restrictions do not apply to data transfers to the European Economic Area countries.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

The Japanese government ensures due compliance with the safety management regulations, among others, for AI-based products.

The Road Transport Vehicle Act provides that an automobile may not be driven unless it satisfies technical standards for safety and environment protection prescribed by ministerial ordinances (articles 40 and 41). This means that, even if an AI-based automatic control system is developed, an automobile fitted with this type of new automatic driving system will not be allowed to be driven on public roads if it fails to satisfy the technical standards. A ministerial

ordinance is yet to be issued to lay down technical standards applicable to such a system.

With respect to increasingly popular AI-based electronic appliances, the Electrical Appliance and Material Safety Act regulates electronic products for general use. The statute gives rise to such obligations as regulator notification at the manufacturing and importation stages, compliance with technical standards, periodical checks and labelling. A supplier of electronic appliances must make sure it complies with the technical standards prescribed by ministerial ordinances (article 8(1)).

See questions 1 to 3 on organisations formulating rules and strategies in relation to AI technology.

7 Has your jurisdiction participated in any international frameworks for AI?

Japan has participated in international discussions on AI under the aegis of various international organisations or treaty frameworks, such as the Organisation for Economic Co-operation and Development (OECD), G20, G7, UNESCO and the International Conference of Data Protection and Privacy Commissioners (ICDPPC), Global Partnership on AI (GPAI).

In May 2019, the OECD adopted its Recommendation of the Council on Artificial Intelligence, which is the first international standard agreed by governments for the responsible stewardship of trustworthy AI. This recommendation consists of measures and policies that governments should implement, including complying with the principles of 'responsible stewardship of trustworthy AI', and seeks to enlist major AI players.

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In June 2019, ministers of trade and digital economy of participant countries discussed research, development and utilisation of AI based on a human-centred AI approach. At this meeting, the G20 Ministerial Statement on the Trade and Digital Economy, which includes 'G20 AI Principles', was adopted. This statement is the first consensus in the G20 regarding AI. The G20 Summit held in Osaka also discussed G20 AI Principles, which were adopted as an annex to the official G20 Summit declaration.

In UNESCO and the G7, issues on ethics relating to AI are an important topic being debated and the ICDPPC has begun discussions to develop the AI guidelines from an ethical and data protection perspective.

GPAI is established in June 2020, which supports most-advanced research and implementation of AI in order to realise the development and utilisation of 'Responsible AI.'

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

In Japan, there is no area that could be singled out as drawing the most attention regarding AI over the past year, although discussions continue on a wide array of AI-related topics.

As in the answer to question 10, in the privacy area, a bill amending APPI, including the introduction of a rules on the handling of pseudonymised personal data was promulgated in 2020 and will come into force on 1 April 2022 (see question 10). Moreover, in the field of competition law, a bill of the Digital Platform Transparency Act (DPTA) was promulgated in 2020 and came into force on 1 February 2021.

The background of the DPTA is the increasing role of digital platforms such as large-scale e-commerce websites and app stores, and growing concerns about the transparency and fairness of terms and conditions. The DPTA is intended to regulate the activities of operators of certain digital platforms, by requiring them to appropriately disclose their terms and conditions of contracts with users and take measures to ensure fairness of operations in Japan. Operators subject to the DPTA are required to report the status and results of their self-assessment regarding the above to the METI, and the METI will assess the status of operations based on such reports and publish the results.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

According to a survey issued by MIC, the sectors with the highest proportion of 'AI active players' are technology, media and telecoms, and the sector with the second highest proportion is financial services. An AI active player is a company that has introduced AI (including on a trial basis) for part of its business and that considers the introduction of AI to be a success.

> "In the structuring of a governance system, it is essential to consider frequently discussed risks and issues viewed as specifically inherent in the deployment of AI, such as fairness, ethics accountability and transparency."

A number of companies have introduced AI to increase productivity, efficiency and reduce costs.

Although a number of major companies are considering the introduction of AI, they can be reluctant. Further, a large number of those companies that have introduced AI so far are small and medium-sized companies.

As a whole, the percentage of companies using AI in one way or another remains low, at 14.1 per cent (March 2019 data).

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

The amended the APPI came force into on 1 April 2022.

The APPI is being revised in pursuance of article 12 of the Supplemental Act amending the APPI, which requires a triennial review of the rules governing data protection to reflect global trends and developments. Key measures in this amendment include:

- a new obligation to report to the Personal Information Protection Commission and notify data subjects when personal information is leaked;
- expansion of the extraterritorial application of the APPI; and
- new rules on pseudonymised personal data closely following the General Data Protection Regulation concept and defined as personal data processed to prevent the identification of the data subject unless it is combined with other information.

These amendments can help mitigate the risks arising from the size of the digital universe, the growth of human- and machine-generated data and machine data, and the increasing diversification of the use of personal information and its wider circulation.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

To assess and manage risks arising as a result of the deployment of AI, it is important to establish appropriate governance systems, such as internal policies, organisational structures, standard operating processes, rules for the oversight of management, standards and reporting and management of AI-related risks against such governance framework. However, there are no prevailing binding standards dealing with AI governance and one of the topics still under discussion globally is how to build up hard rules. Therefore, it would still make sense to refer to soft laws, such as the Japanese Guidelines already mentioned. In the structuring of a governance system, it is essential to consider frequently discussed risks and issues viewed as specifically inherent in the deployment of AI, such as fairness, ethics accountability and transparency.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

A flexible way of thinking about the existing legal system and theories and a broad knowledge and expertise in the legal field, especially in data-related areas and obviously data, is the fuel of the future likened to oil and that AI is hungry for data. For example, a data set may involve legal issues from various perspectives: personal data protection, telecommunications, copyright and unfair competition prevention acts and anti-monopoly acts. Understanding the basic concepts under these law areas is essential to advise on the legal issues surrounding AI, especially at the development level and for service structuring.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

Automated driving and the wider use of robotics in society. Once automated driving reaches a certain technical level, and robots become more widely used, legal issues will keep cropping up from such use. If an algorithm used by AI is not clear, it is sometimes difficult to comply with the transparency principle to explain how personal data is processed and for what purpose they are processed. Data regulation experts should be involved in the structuring process from the outset for the whole system to be compliant with the regulations. Furthermore, more complex issues would arise in a global context when, for example, the service offering is cross-border, as it requires the developer to take a multi-jurisdictional approach, which can be very challenging.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

Allocation of risks and liability. In the case of automated driving, the Japanese legal theory and system are based on the assumption that the person in the driver's seat has a duty of care and if an accident occurs due to a malfunction of the automated driving system (based on AI), such an accident is attributed to the lack of due care of the person (monitoring duty). As such, the Japanese tort theory currently requires human involvement. However, once an automated system based on AI is deployed, the key for developers and society is to 'assess' the trustworthiness of the system based on AI. Users could be exempted from liability if AI deemed safe and reliable is deployed.

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Middle East

Tarek Khanachet advises clients across a broad range of complex international regulatory, government affairs and corporate matters focused on Turkey, the Middle East and the Gulf States. From 2011 to 2013, he was resident in Saudi Arabia, advising the Economic Cities Authority on regulatory developments, as well as outsourcing and licensing transactions. Mr Khanachet has extensive experience with government affairs and regulatory matters in the region, including advising government entities as well as private companies on matters as diverse as treaty interpretation, trade policy and market access issues and blocks. His corporate practice includes public–private partnerships, infrastructure projects, cross-border mergers and acquisitions, finance and commercial transactions. In addition to corporate and government affairs, Mr Khanachet has assisted clients with complex regulatory and white-collar enforcement and investigations.

Julie Teperow's practice includes counselling clients on local, regional and global compliance matters, across a wide range of industries on issues including data protection, cybersecurity, e-commerce and consumer protection. She also advises multinational companies on integrating issues on both local law and US law compliance, and counsels clients with complex cross-border compliance and regulatory issues by meaningfully engaging with clients and local counsel on legal and practical issues. Her practice also includes both employees and employers concerning local labour laws and procedures. Ms Teperow also has experience advising on various aspects of sport and sporting events, including risk management, venue and facilities leasing, and sponsorship and marketing.

QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

The Middle East does not have a regional overarching AI legal framework, and, with the recent exception of Egypt's new law regulating financial technology in the non-banking financial sector (discussed in further detail below), individual countries in the region do not have any laws or regulations that specifically address AI. Of course, many countries have laws and regulations that would apply to AI technologies. These include data protection laws, intellectual property laws, product safety and consumer protection regulations, medical devices regulations, financial services regulations and cybersecurity laws.

Countries in the Middle East have varied levels of applicable legislation. The countries that do have applicable laws have a level of regulation similar to that in other countries that rely on the application of laws that are not targeted at AI. Some countries in the region also have developed policy initiatives from which we expect AI-specific laws to result.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

There is no Middle East or unified Gulf strategy on AI or related data sharing. However, many countries in the region have released national strategies and initiatives.

Qatar has developed and published the National Artificial Intelligence Strategy. Qatar's vision is to have AI so pervasive in all aspects of life, business and governance that Qatar is a role model for 'AI-'-X nation'. The 'AI-'-'X nation' is built on the pillars of talent, AI-augmented

jobs and a knowledge economy. The underlying goals are to develop world-class data and computing infrastructure, to establish a strong AI ethics and governance framework aligned to international norms, and to produce guidelines for the level of explainability required for different types of decisions made by AI algorithms.

In 2020, Jordan published its Artificial Intelligence Policy, which has five pillars: (1) governance; (2) legislative and regulatory environment; (3) digital infrastructure; (4) business and investment environment; and (5) capacity building. The Artificial Intelligence Policy aims to promote the use of AI in all vital economic sectors; build an enabling legislative, regulatory and technological environment for AI; develop a digital infrastructure that reflects AI needs and developments; build AI-specialised Jordanian capacities, expertise and skills; strengthen the role of the public sector in the use of AI (including an increase in public–private partnerships); strengthen the AI business environment

> "Although many countries understand the importance of ethics in AI and have included an ethics component in their strategic AI visions, the UAE appears to be at the forefront with regard to implementation."

and increase investment in and support for AI-related initiatives and Jordanian IT start-ups; develop a system for research, development, application and experimentation related to AI; and raise public awareness and increase confidence in AI in the public sector and all facets of Jordanian society.

Saudi Arabia's 'Vision 2030' has a focus on AI, and this is augmented by a dedicated National Strategy for Data and AI. The Saudi Data and Artificial Intelligence Authority (SDAIA) is a government agency that is directly linked to the Prime Minister. SDAIA has three sub-entities: the National Information Center, National Data Management Office and National Center for AI. Saudi's plan specifically contemplates that AI-specific legislation will be enacted, under which these entities will operate.

The UAE has released its National Strategy for Artificial Intelligence 2031 (UAE Strategy). The UAE Strategy's emphasis is on the UAE's strategic objective of becoming a global leader in the responsible use of AI by 2031. The UAE aims to achieve this goal by adopting emerging AI technologies across government and attracting top AI talent to the country to advance AI research and development. The UAE Strategy pledges to provide AI-related start-ups and developers with access to local data infrastructure and funding for projects. It categorises 'data sharing and governance' and the 'new generation of regional talent' as opportunities for the UAE to lead in the development and deployment of AI technologies.

The UAE has a dedicated Minister of State for Artificial Intelligence, Digital Economy and Remote Work Applications who has a mandate of transforming the UAE into a world leader in AI. The Office of the Minister of State for Artificial Intelligence aims to broker new partnerships (particularly in education and governance) and support other government ministries with incorporating AI technologies into their policies and projects. The UAE has also formed the Council for Artificial Intelligence and Blockchain (the Council), a specialised council comprising 17 members from various government ministries and authorities. The Council's mandate is to promote the success of the UAE Strategy by proposing policies to create an AI-friendly ecosystem, conducting advanced research in the AI sector, promoting collaboration between the public and private sectors to accelerate the adoption of AI, and engaging with international institutions on AI issues. The Council has not yet introduced AI laws or regulations.

Egypt's AI Strategy has the mission to create an AI industry in Egypt that has the relevant skills, technology, systems, infrastructure and governance mechanisms necessary to ensure its sustainability and competitiveness. The AI Strategy aims to: integrate AI technologies into government processes; encourage the use of AI to address Egypt's development needs; prepare Egyptian citizens for the use of AI at all levels of society through education, training and raising public awareness; and position Egypt as an AI leader at the regional and international levels.

Bahrain has implemented a regulatory sandbox as a framework and process to facilitate and encourage the development of digital technology. As part of these efforts, the Artificial Intelligence Society of Bahrain (the Society), an independent and voluntary technological society to promote and disseminate AI technology across Bahrain, has been set up. Members of the Society include private and public sector chief information officers, AI experts and entrepreneurs, and over 12 university scholars and professors. The main objectives of the Society are to support Bahrain's Economic Vision 2030 through the implementation of specific AI applications and technologies, make Bahrain a regional centre for AI research and development, and build a pool of AI expertise from executives and technical resources within the Society to promote AI in Bahrain and the region.

In Oman, the Ministry of Transport, Communications and Information Technology is currently working on introducing a national AI strategy in the near-future. This will consist of a plan with four main pillars, namely to: (1) use AI to boost productivity in diverse economic sectors; (2) develop human capabilities in AI; (3) accelerate AI adoption in service sectors; and (4) govern fair and ethical use of AI.

Some countries, such as Lebanon, continue to work on a draft strategy.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

Although many countries understand the importance of ethics in AI and have included an ethics component in their strategic AI visions, the UAE appears to be at the forefront with regard to implementation. For example, to address concerns about trust, privacy, transparency and associated issues, the UAE government has created a regional ethics council, designed to assess ethical principles, define ethical rules of engagement and set ethical policies required in an evolving

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AI world. In January 2019, Dubai launched official principles and guidelines for the ethical implementation of AI and an 'AI Ethics Self-Assessment Toolkit', which allows anyone implementing AI to self-assess their performance against a set of criteria to try to ensure an ethical approach. This is a voluntary process using the data from the toolkit to provide feedback to those using and developing AI to attempt to create fair and trusted AI systems that manage the potential tensions between innovation and values.

In August 2022, Jordan's Ministry of Digital Economy and Entrepreneurship announced that the Cabinet approved the National Charter of Ethics for Artificial Intelligence (the Charter) with which all government ministries, institutions and departments must comply. The Charter aims to create a common ethical base for AI, regulate the development of AI technologies and raise awareness of the risks that can result from AI practices that occur outside of a responsible and ethical framework. The Charter includes a set of guiding ethical principles including accountability, transparency, impartiality, respect

> "There is currently no AI-specific legislation in the various Middle Eastern countries. However, existing laws and regulations that apply to AI are applied and enforced by the relevant government authorities."

for privacy, promotion of human values and principles that promote the rule of law, human rights, democratic values and diversity.

Egypt is currently in the process of developing a comprehensive Egyptian Charter for Responsible AI (the Egyptian Charter). The Egyptian Charter will include guiding principles on the responsible and ethical development of AI as well as technical guidelines, and will be used by AI practitioners and companies in Egypt.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

There are no published policies or strategies specific to implications of AI for national security or trade. However, countries in the region have existing export control regulations that apply to certain AI-based products specifically designed for a military end use and have national security implications. At this stage, AI-specific trade controls is not a focus. Instead, countries with AI initiatives are working to implement the AI vision set out in policy or national strategy.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

Bahrain, Egypt, Kuwait, Lebanon, Qatar, Saudi Arabia and the UAE have all recently implemented data protection and privacy laws inspired by the EU General Data Protection Regulation (GDPR). These laws are both more and less restrictive than the GDPR in certain areas, depending on the jurisdiction. Some laws do not yet have implementing regulations or have only recently issued implementing regulations. The interpretation of these data protection laws is a development to watch closely in the region as it impacts AI and other privacy issues. Financial free zones in the UAE and Qatar also have similar laws in place. Oman's Personal Data Protection Law, also inspired by the GDPR, was issued in February 2022 and will come into force on 13 February 2023. Because the GDPR applies to all processing of personal data, countries with GDPR-like laws can look to the EU for guidance in the context of AI applications that are trained on personal data or involve the processing of personal data.

The Saudi Personal Data Protection Law (PDPL) was issued in September 2021, and developed by SDAIA. The PDPL, which came into effect on 23 March 2022, addresses the processing of personal data and the rights of personal data owners, and marks a new development in the Kingdom's approach to the protection of personal data. The notion of protecting personal data has existed for many years under existing Saudi law, but this is the first standalone and comprehensive legal framework protecting personal data. The PDPL remains subject to forthcoming implementing regulations.

The recent nature or absence of these types of laws in the region will present a significant challenge in the context of AI. A lack of developed guidelines for data protection and sharing could have a chilling effect on both local and cross-border AI deployment and development, even if other AI laws are implemented.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

As already mentioned, there is currently no AI-specific legislation in the various Middle Eastern countries. However, existing laws and regulations that apply to AI are applied and enforced by the relevant government authorities. Countries that have developed data protection laws have data protection authorities that will likely become active in monitoring the collection and processing of data required for AI. However, as discussed above, various countries in the Middle East have set up committees and authorities to develop an AI vision and strategy, including applicable regulations. However, the focus of those committees and strategies to date has been primarily to encourage research and development.

7 Has your jurisdiction participated in any international frameworks for AI?

Because the strategies for most countries in the region are in the early stages of development, most countries have not yet participated in international frameworks for AI.

The UAE Minister for Artificial Intelligence and Invest India signed a memorandum of understanding in July 2018 to establish an AI

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partnership between the two nations. Three areas of focus for the partnership include open engagement, fostering innovative ecosystems and looking to the future. The collaboration has established an UAE–India AI Working Committee between the UAE Ministry for Artificial Intelligence, Invest India and Startup India, which will meet annually and focus on increasing investment for AI start-ups and research activities together with industry partners, in order to support the development of new AI technologies and services. The committee will also monitor technological and policy developments to help both nations maintain relevant regulatory frameworks and policies. Finally, the committee will share regulatory expertise to help AI start-ups integrate into each other's jurisdictions and develop the digital infrastructure to share data sets across borders.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

Many countries in the region have only recently announced their AI initiatives and strategies. In terms of legal developments, the implementation of data protection laws in multiple jurisdictions is significant. We expect that other countries in the region will follow suit. Having a framework to protect privacy and confidentiality, while allowing for the data analytics necessary to drive AI, is important for AI to flourish in the region.

On 8 February 2022, Law No. 5 of 2022 Regulating the Development and Use of Financial Technology in the Non-Banking Financial Activities (the FinTech Law) was issued in Egypt (and came into effect on 9 February 2022). The FinTech Law defines financial technology as 'any mechanism that utilizes modern and innovative technology in the non-banking financial sector to support and facilitate financial services, financing and insurance activities using applications, software, digital platforms, *artificial intelligence*, or electronic records' (emphasis added). The FinTech Law prohibits entities from engaging in non-banking financial activities utilising financial technology without obtaining a license from the Financial Regulatory Authority and also regulates the use of financial technology in respect of data privacy considerations.

In other interesting developments, at the end of 2019, Abu Dhabi announced the launch of its own AI lab. Now both Dubai and Abu Dhabi have dedicated AI labs to accelerate the adoption of AI. Several first-of-a-kind projects have been initiated, which are expected to be transformative in various sectors. The UAE announced in 2021 the establishment of the first AI university, the Mohamed bin Zayed University of Artificial Intelligence, a graduate-level AI research institution providing both master's and doctoral degrees in order to

"Most countries in the region have initiated plans to develop smart cities that use AI, data analysis and innovation to improve the quality of life and efficiency of urban operations and services while ensuring that cities meet the needs of residents."

increase scientific research and innovation, and develop an AI-savvy workforce.

Abu Dhabi National Oil Company's (ADNOC) Panorama Digital Command Center (Panorama) is using AI, data and advanced technologies to optimise performance. The Panorama facility uses smart analytical models, AI and data to generate operational insights and recommendations, which, according to ADNOC, has generated over US$1 billion (3.67 billion dirhams) in business value for ADNOC to date.

Working with industry, Saudi's SDAIA entered into partnership with Huawei to launch the National AI Capability Development Program. Huawei will bring an abundance of local and international experience from over 500 AI projects. This programme aims to cement Saudi Arabia as a global frontrunner in the adoption of AI.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

The use of AI-based products in the region has grown considerably in the government and healthcare sectors.

Smart government projects to improve services have been at the forefront of regional activity. Governments in the region are focused on using AI to increase government speed, efficiency and effectiveness. These initiatives leverage AI technology to personalise and improve experiences. The UAE, Saudi Arabia, Qatar and Kuwait all have smart government initiatives.

On 28 September 2022, SDAIA and Saudi's Ministry of Economy and Planning entered into a memorandum of understanding to harness the use of data and AI in the development of plans and economic policies. The memorandum of understanding will allow for strategic

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cooperation on developing indicators to monitor the impact and effectiveness of social and economic policies in Saudi Arabia, particularly using data modelling and simulation techniques. Both parties will also integrate the latest economic and scientific reports, as well as intelligence, into new social and economic policies to strengthen policymaking and economic growth.

Most countries in the region also have initiated plans to develop smart cities that use AI, data analysis and innovation to improve the quality of life and efficiency of urban operations and services while ensuring that cities meet the needs of residents.

The digital health sector has also seen an increase in AI-powered solutions through emerging technologies, including:

- apps that diagnose certain diseases;
- software tools that assist with the treatment of chronic diseases;
- platforms that facilitate communication between patients and healthcare providers;

- virtual reality or augmented reality tools that help administer healthcare; and
- research projects involving big data.

An online article in Omnia Health last year identifies Saudi Arabia and the UAE as leaders in this space. For example, Saudi Arabia will experience exponential AI benefits as the Spanish-based MedLab Media Group is working with both the private and public sectors to develop various customised AI solutions. *Wired* magazine reported that, for covid-19 vaccine distribution, Saudi Arabia developed an AI-powered solution to prioritise vaccine distribution based on data collected on age, profession, infection history, pregnancy status, weight and chronic disease.

The UAE has introduced projects to diagnose and monitor patients using AI technology, including a Dubai smart home care project that ensures homebound patients can be monitored effectively and efficiently, and an AI lab app, designed to sync to the fitness trackers of the user's choice and provide personalised coaching based on data collected from users. In the UAE, medical professionals have developed an AI algorithm for detecting tuberculosis that reduces screening time as part of the resident visa process.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

Most countries in the region are in the nascent stages of setting out strategies to develop AI technology and the legislation required to regulate those technologies. At this stage, the focus is on research, development, education and infrastructure. We are not aware of pending or proposed legislative or regulatory initiatives.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

While countries in the region do not have specific AI legislation yet, various laws and regulations may nevertheless apply. Therefore, companies should be aware of these laws. In addition to compliance with those laws, companies should engage with government authorities in relevant sectors to obtain guidance on the application of the law to AI issues and technologies due to the undeveloped nature of law in this area and look to best practices in other, more developed jurisdictions to assess and manage risks. Separately, companies should stay on top of developments in AI law and regulation and seek to engage and inform government authorities to help shape AI policy.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

At Covington, we take a holistic approach to AI that integrates our deep understanding of technology and our global multi-disciplinary expertise. We have been working with clients on emerging technologies for decades and we have helped clients navigate evolving legal landscapes, including at the dawn of cellular technology and the internet. We draw on this experience and our deep understanding of technology, and leverage our international and multi-disciplinary approach. We also translate this expertise into practical guidance that clients can apply in their transactions, public policy matters and business operations.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

The development of AI technology is affecting virtually every industry and has tremendous potential to promote the public good, including to help achieve the UN Sustainable Development Goals by 2030. For example, in the healthcare sector, AI may play an important role in mitigating the effects of covid-19, and it has the potential to improve outcomes while reducing costs, including by aiding in diagnosis and policing drug theft and abuse. AI also has the potential to enable more efficient use of energy and other resources, and to improve education, transportation, and health and safety. We are excited about the opportunities presented by AI.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

AI has tremendous promise to advance economic and public good in many ways and it will be important to have policy frameworks that enable society to capitalise on these benefits while safeguarding against potential harm. Also, as this publication explains, several jurisdictions are advancing different approaches to AI. One of the great challenges is to develop harmonised policy approaches that achieve desired objectives. We have worked with stakeholders in the past to address these challenges with other technologies, such as the internet, and are optimistic that workable approaches can be crafted for AI.

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Sweden

David Frydlinger is Cirio's managing partner. Among other things, he has extensive experience of drafting and negotiating IT agreements, including outsourcing, cloud computing, software development and similar contracts. He is also an expert in data privacy, information security and relational contracting. David works with large global organisations as well as start-ups, often with a strong technology focus.

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

The current state of the law and level of regulation governing AI in Sweden is comparable to most other countries in the European Union. As yet, no legislation targeted specifically at AI has been adopted. Instead, a combination of generic and industry-specific rules apply, for example, rules on data privacy, civil and criminal liability and so on.

As is quite well known, the European Commission has recently put forward a proposal for a Regulation laying down harmonised rules on AI within the European Union. The proposal aims to implement a legislation for coordinated European approach by setting harmonised rules for the development, placement on the market and use of AI systems in the Union following a proportionate risk-based approach. The proposal would require providers and users of high-risk AI systems to comply with rules on data and data governance, documentation and record-keeping, transparency and provision of information to users, human oversight and robustness, accuracy and security. The Swedish government has not yet taken any concrete measures with regard to the proposal, but it has received consultation responses from different authorities and organisations such as the Swedish Authority for Privacy Protection.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

Yes, the Swedish government released a national strategy on AI in May 2018. Its ambitions are high, which is not surprising for a country with a strong culture for the early adoption of new technologies. The government wants Sweden to be a world leader in using the


David Frydlinger

opportunities that AI can provide, with the purpose of strengthening both Swedish welfare and Swedish competitiveness. The strategy states that Sweden must develop rules, standards, norms and ethical principles aimed at driving ethical and sustainable use of AI. The government also calls for a strong collaboration between industry, the public sector and research in AI, and endorses pilot projects in both private and public sectors, for safe and responsible development of AI.

As yet, there are no national efforts to create data sharing agreements, specifically. However, there are national efforts to improve the infrastructure necessary for the use and advancement of AI. This includes, inter alia, increased access and availability of open data and enhanced computational capacity for complex calculations. The Swedish supercomputer resources in the Swedish National Infrastructure for Computing network are an important resource in this context. Public stakeholders are encouraged to actively support

> "There is no specific entity enforcing or monitoring the use of AI, not least since there is no coherent legal or regulatory framework for AI."

the use of AI applications by making relevant data available, while taking into account security and integrity aspects.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

Yes, the Swedish government released a national strategy on AI in May 2018. Its ambitions are high, which is not surprising for a country with a strong culture for the early adoption of new technologies. The government wants Sweden to be a world leader in using the opportunities that AI can provide, with the purpose of strengthening both Swedish welfare and Swedish competitiveness. The strategy states that Sweden must develop rules, standards, norms and ethical principles aimed at driving ethical and sustainable use of AI. The government also calls for a strong collaboration between industry, the public sector and research in AI, and endorses pilot projects in both private and public sectors, for safe and responsible development of AI.

As yet, there are no national efforts to create data sharing agreements, specifically. However, there are national efforts to improve the infrastructure necessary for the use and advancement of AI. This includes, inter alia, increased access and availability of open data and enhanced computational capacity for complex calculations. The Swedish supercomputer resources in the Swedish National Infrastructure for Computing network are an important resource in this context. Public stakeholders are encouraged to actively support the use of AI applications by making relevant data available, while taking into account security and integrity aspects.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

As yet, there are no trade restrictions specifically (and sufficiently) relevant for the development of AI. Sweden is a small country with a small domestic market and most of the world's leading AI research takes place outside Sweden's borders. Therefore, as recommended in the national strategy, Sweden should take advantage of synergies between civil research and defence research conducted in the country (eg, research relating to cybersecurity and autonomous systems). The recommendations also include developing collaborations with prominent players in other countries, especially within the EU. Nevertheless, the government highlights in its national strategy that international collaborations must show proper regard to Swedish national security interests. As a result, not all AI research collaborations can be conducted in an international environment.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

In Sweden, the General Data Protection Regulation (GDPR) applies and, hence, all organisations using AI to process personal data must comply with the regulation. This poses slightly different challenges depending on you are a data controller or data processor. Data controllers must, for example, consider the rules regarding automated decision-making and transparency requirements. Data processors, such as software-as-a-service providers wanting to use AI to process customer data, may face restrictions since data processors must not process personal data for their own purposes (eg, business development).

In addition to the GDPR, there are also sector-specific privacy regulations (eg, in healthcare, finance and others), none of which has been specifically adapted to the use of AI. However, it is not unlikely that such sector-specific privacy regulations will be amended in connection with the anticipated legal framework on ethical and sustainable AI.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

There is no specific entity enforcing or monitoring the use of AI, not least since there is no coherent legal or regulatory framework for AI.

Enforcement of data protection and privacy issues is primarily conducted by the supervisory authority, the Swedish Authority

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for Privacy Protection, which is an independent public authority established by a member state pursuant to article 51 of the GDPR.

As regards Swedish healthcare – an important area for AI in the future, we believe – monitoring and enforcement are shared between a few government agencies. The legislative framework for Swedish healthcare requires that all healthcare meets the high standard of medical care. This means, for example, that medical care should meet the patient's need for safety, continuity and security. The caregiver, conducting the medical care, is responsible for ensuring that the medical care meets the requirements, resulting in a need for suitable equipment. We believe AI will become increasingly relevant in regard to the requirement for a high standard of medical care. Note that the caregiver has an obligation to perform its medical care in accordance with science and proven experience. Responsibility in regard to medical devices is currently distributed between the Swedish Medical Products Agency, the National Board of Health and Welfare and the Health and Social Care Inspectorate.

"A recent Swedish report on AI in Swedish business and society concluded that the highest impact of AI application on economic growth is in the information and communication industry, with manufacturing and financial services coming second and third. However, the highest impact of AI application on profitability was believed to be in the education industry."

Current proposals for AI-specific legislation, such as the legislation of autonomous vehicles, indicate that compliance may continue to be monitored and enforced by numerous government authorities. It all depends on the relevant industry and the intended use of the AI solution.

7 Has your jurisdiction participated in any international frameworks for AI?

Within AI research, in a global sense, Sweden is relatively weak. However, there are a few prominent Swedish individuals in the field of AI. One example is Dr Fredrik Heintz, an associate professor in computer science at Linköping University, who is partaking in the EU High-Level Expert Group on Artificial Intelligence, comprising 52 representatives from academia, civil society and industry. In addition, Sweden is leading a digitalisation and AI collaboration with the other Nordic and Baltic countries with a focus on improving the access to data, enabling the sharing of competences and agreeing on standards for infrastructure, hardware, software and data to ensure interoperability, integrity, security, trust, usability and mobility.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

The GDPR has been the most noteworthy AI-related recent event impacting the development of AI.

In addition, the national legislation implementing the NIS Directive (the first EU directive on cybersecurity, with the purpose to enhance cybersecurity across the union) is a noteworthy AI-related development in Sweden. The national legislation, the act on information security for socially important and digital services,

imposes several obligations for providers of socially important services, including requirements on technical and organisational security measures and risk assessments. The requirements are reminiscent of the requirements of the GDPR, but apply regardless of whether an AI solution processes personal data or other data.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

A recent Swedish report on AI in Swedish business and society concluded that the highest impact of AI application on economic growth is in the information and communication industry, with manufacturing and financial services coming second and third. However, the highest impact of AI application on profitability was believed to be in the education industry, followed by accommodation and construction. With that said, we believe the potential for AI in healthcare, education and transportation to be exceptional, even ground-breaking. AI may greatly help to achieve many of the UN's Global Goals for Sustainable Development. AI is a key driver of the Fourth Industrial Revolution, which is fundamentally transforming the way we live, work and relate to one another. In short, the potential impact of AI on humanity is unprecedented.

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

No, we have not seen any national proposed legislation specifically for the use or development of AI. There is proposed legislation regulating autonomous vehicles that relates to the use of AI; however, the proposed legislation does not regulate the use of AI specifically, only providing for a requirement to store specific data processed by the

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vehicle for a few months, as well as the current settings and actions of the driver. Nonetheless, we consider it likely that in the next few years we will have proposed legislation of a regulatory framework for the ethical use of AI in the same way that we have ethical rules for research, medicine and marketing.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

Our recommendations begin with adhering to the key requirements identified in the Guidelines of the EU High-Level Expert Group. We believe this is a decent start in assessing and managing risks associated with AI. These key requirements are human agency and oversight, technical robustness and safety, privacy and data governance, transparency, diversity, non-discrimination and fairness, societal and environmental well-being and accountability.

Taking into account these requirements and documenting the considerations made by the company is essential to the safe and responsible development of ethical and sustainable AI.

Should the aim be to invest in businesses developing AI in Sweden, there are several aspects to consider. An indication on whether the AI solution is developed in a sustainable and ethical manner is the level of transparency in regard to its development process, use and results. Transparency is essential in the development of trustworthy and sustainable AI and can be assessed by reviewing documentation on the considerations made in regard to the AI model. As discussed above, ethical considerations and concerns should be integrated in the early stages in the process of designing an AI solution, including the process of making data useful, and documented for future reference.

Ideally, the above-mentioned documentation would show that concern was given and appropriate technical and organisational measures were taken to avoid the most common risks and difficulties in the design of an AI solution. Such considerations include an assessment of the quality of data (ie, whether the data is sufficient in amount and in variation (and non-biased)) to avoid any unforeseen results or consequences. Moreover, one should review the composition of the team of developers and engineers, in order to avoid undesired bias unintentionally created by an overly homogeneous team (eg, white men of the same age and background). Finally, you would want to see that the AI is or was created for a specified purpose and goal. The relevant documentation would then explain why the underlying code has been created in the specific way and through what forms of logic the AI solution reaches its results – resulting in an explainable AI. It is much preferred to have a slightly inferior AI, giving results that you understand and can explain, than going live with what you hope to be a magnificent AI solution, of which you have no understanding of how it was developed and, most importantly, why it reaches the provided results – as you may soon be in for a surprise, eventually forcing you to shut down the AI.

To sum up, we recommend the above practices are in place at early stages of AI development and that verification be made through structured documentation. In a not too distant future, an ethical legislative framework will be in place and it may be very costly to retrace and reverse engineer the AI solution. Consider this your impact or risk assessment when investigating the growing Swedish artificial intelligence business.

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QUESTIONS

QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

First, general knowledge and experience, as we have worked within the area of law and technology for 20 years. Much of what is called AI today was called 'big data' yesterday and many of the legal questions are the same. But AI brings in other perspectives also, not least societal, ethical, psychological. Here, it has helped me a lot to have a master's degree in sociology, a lifelong interest in ethical philosophy as well as a deep understanding into behavioural economics and many of the cognitive biases humans have. When you work in AI-related issues, it is important to have a sense for the details while never losing sight of the big picture.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

I like to think about AI in terms of what the World Economic Forum calls the Fourth Industrial Revolution – where we see a merge of physical, biological and digital systems generating unprecedented opportunities for efficiency gains but also for solutions to serious human and societal problems (think of covid-19). Commercially, AI offers opportunities for a much deeper understanding of everything from customer preferences to efficiency improvement potentials in production, affecting both the revenue and cost side of businesses.

I think it is also a quite safe bet to say that AI-based solutions assisting organisations to achieve ambitious sustainability goals will offer great business opportunities.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

I think that one of the greatest challenges is organisational, both at corporate and societal level. I know that one of the greatest challenges to become compliant with the GDPR is that you have to regard functions of the organisation. With these functions often separated in silos, to bring about organisational change is a major challenge. If you now think of AI – where you would have to bring understanding of ethics and human bias to the coders, understanding of deep learning to boards of directors and so on – it is easy to see that AI may very well call for totally new ways of organising business. And if you scale up, new ways of organising society, which in turn raises the question of how to legislate for such technology.

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Taiwan

Abe Sung is a partner in the banking and capital department of Lee and Li, Attorneys- at-Law. His main practice areas are capital market, banking and structured finance. He advised several foreign companies and underwriters in their initial public offerings (IPOs) and offerings of Taiwan Depositary Receipt in Taiwan, including the IPO of Integrated Memory Logic and AirTAC and TDR offerings of Wang Wang Holding, Super Coffee, Digital China and SIMTech. Mr Sung has also been actively involved in many securitisation deals in Taiwan and led his colleagues in several pioneering cases, including a number of real estate investment trusts issuings, securitisation on cards receivable and auto loans, and the first cross-border securitisation deal ever done by a Taiwanese issuer. According to *Chambers Asia*'s survey, clients commend him for combining 'commercial sense with an open mind' and consider him as 'the first choice' for structured finance.

Eddie Hsiung is licensed to practise law in Taiwan and New York, and is also a certified public accountant in Washington state. He is familiar with legal issues regarding the application of new technologies such as fintech, blockchain AI and data protection and is often invited to participate in public hearings, seminars and panel discussions in these areas. His practice focuses on M&A, securities and financial services, cross-border investments, general corporate and commercial, start-ups, among other things. He has participated in many corporate transactions spanning a broad range of industries. He regularly advises leading banks, securities firms, payment service companies, among others, on transactional, licensing and regulatory or compliance matters as well as internal investigation.

QUESTIONS

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?


Abe Sung


Eddie Hsiung

According to our observations, Taiwan's government sector is aware of the AI trends and has proceeded to explore whether any adjustment to the current regulatory regimes in multiple aspects would be needed. In early 2018, to promote fintech services and companies, the legislators in Taiwan passed the Financial Technology Development and Innovative Experimentation Act (the Fintech Sandbox Act), which was enacted to allow fintech businesses to test their financial technologies in a controlled regulatory environment. Although the Fintech Sandbox Act is not specifically designed for AI, the creators of new financial-related business models with AI technology may test their new ideas and applications under such a mechanism while enjoying exemptions from certain laws and regulations.

Adopting a similar spirit to the Fintech Sandbox Act, the legislators in Taiwan passed another sandbox law for autonomous and self-driving vehicles, the Unmanned Vehicle Technology Innovation and Experiment Act (the Unmanned Vehicle Sandbox Act), in late 2018, which took effect from June 2019. The Act is to provide a friendlier environment to test the applications of AI and the internet of things in transportation. 'Vehicle', as defined in this act, covers cars, aircraft, ships or boats, and any combination thereof.

In addition to the above-mentioned legislation, the impacts on the current regulatory regimes as a result of the application of AI technologies have also been widely discussed, such as whether AI technology can be protected by intellectual property rights, what would be the consequences of and how to mitigate algorithmic bias in AI systems, whether data protection issues will be triggered when personal data are shared for the purpose of AI-related developments, among other things. However, as at the time of writing, no explicit court precedents or rulings have been issued on such topics.

It is also worth noting that, according to the Taiwan AI Action Plan, announced by the Executive Yuan in 2018, the Taiwan government has been evaluating relevant issues so as to further determine whether any laws need to be enacted or amended to address AI development. Such issues include, among others, the rights and obligations derived from the application of AI technology (eg, whether AI should be considered a 'person' from the perspective of certain legal fields, whether there will be intellectual property rights in an AI-created work, among other things), open data, restrictions on AI applications, government procurement (eg, the outsourcing concerning AI issues), industry regulatory challenges and approaches to AI, among other things. Given this, we think that Taiwan has been actively examining

> "Although the Fintech Sandbox Act is not specifically designed for AI, the creators of new financial-related business models with AI technology may test their new ideas and applications under such a mechanism."

the current regulatory regime in relation to AI in order to establish a good foundation for developments of AI technology.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

The Executive Yuan announced the Digital Nation and Innovative Economic Development Plan and the Taiwan AI Action Plan in 2016 and 2018 to declare Taiwan's goal to become an important partner in the value chain of global AI technology and intelligence systems and to leverage the advantages in software and hardware techniques to promote AI technology across industries with, among others, test fields, regulations and a data-sharing environment. According to the Taiwan AI Action Plan, the government's view is that Taiwan is well positioned to take advantage of the opportunities in developing AI-related industries.

Furthermore, according to relevant news report in 2022, the next phase of the Taiwan AI Action Plan would focus on explainable and trustworthy AI, as well as the development of advanced technologies for small or medium size enterprises such as joint learning, automated machine learning (AutoML) tools, self-supervised learning, and migration learning, and low-code platforms to accelerate AI development. What is more, the Industrial Technology Research Institute (ITRI) is dedicated to establish the infrastructure of AI governance, such as an AI testing and evaluation centre to measure AI risk, model performance and robustness. ITRI will also set up an AI product validation mechanism which aims to promote the development of industry.

In addition, the Taiwan government views AI as having an indispensable role in the 5+2 Industrial Innovation Plan (the 5+2 Plan), as declared by the Taiwan government in 2018. The 5+2 Plan is considered the core generator for Taiwan's next generation of industrial development, which mainly focuses on seven industries: intelligent machinery, Asia Silicon Valley, green energy, biomedicine, national defence and aerospace, new agriculture and the circular economy. To facilitate the 5+2 Plan, the government has launched the AI Talent Programme, which aims to:

- cultivate 1,000 high-calibre talented persons in intelligent technologies;
- train 5,000 talented persons in practical intelligent technologies; and
- attract foreign professionals by the year 2021.

With respect to data sharing, the National Development Council prescribed the Guidelines for Trial Operation of Data Interface on MyData Platform to promote personalised digital services called MyData in February 2020. The main purpose of this service, in a similar to 'open data' and 'open banking', is to create a platform for individuals to authorise the government or the participating

companies to collect their personal data in order for the government and such companies to develop and render more personalised services to the individuals with such data.

3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

The Ministry of Science and Technology under the Executive Yuan announced the AI Technology R&D Guidelines in September 2019 to demonstrate the Taiwan government's commitment to improve Taiwan's AI R&D environment. Pursuant to the AI Technology R&D Guidelines, considering that AI developments may bring changes to various aspects of human existence, the Taiwan government expects the participants to always pay attention to when conducting relevant activities and endeavouring to build an AI-embedded society with three core values: human-centred values, sustainable developments and diversity and inclusion.

Deriving from the three core values, eight guidelines were given under the AI Technology R&D Guidelines for all AI participants to follow so that a solid AI R&D environment and society that connects to the global AI trends may be established.

The eight guidelines are:

- common good and well-being;
- fairness and non-discrimination;
- autonomy and control;
- safety;
- privacy and data governance;
- transparency and traceability;
- explainability; and
- accountability and communication.

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4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

To date, no laws or regulations have been specifically promulgated or amended to deal with the national security and trade implications of AI. These matters are still handled in accordance with the existing regulatory regime (eg, the National Security Act, Cyber Security Management Act, trade regulations, among others).

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

In Taiwan, personal data is protected by Taiwan's Personal Data Protection Act (PDPA). The collection, processing and use of

> "To date, no laws or regulations have been specifically promulgated or amended to deal with the national security and trade implications of AI."

any personal data are generally subject to notice and consent requirements under the PDPA. Pursuant to the PDPA, 'personal data' is defined broadly as the name, date of birth, ID card number, passport number, characteristics, fingerprints, marital status, family information, education, occupation, medical record, medical treatment and health examination information, genetic information, information about sex life, criminal record, contact information, financial conditions, social activities and other information that may directly or indirectly identify an individual.

Under the PDPA, unless otherwise specified under law, a company is generally required to give notice to (notice requirement) and obtain consent from (consent requirement) an individual before collecting, processing or using any of said individual's personal data, subject to certain exemptions. To satisfy the notice requirement, certain matters must be communicated to the individual, such as the purposes for which his or her data is collected, the type of the personal data and the term, area and persons authorised to use the data, among other things.

AI technology has not changed the said requirements. If a company wishes to collect, process and use any individual's personal data using AI technology or exploring the data with AI technology, it will be subject to the obligations under the PDPA as advised above. Note that the MyData platform described in question 2 should also be subject to the PDPA regime.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

In the past few years, the Executive Yuan has published several guidelines and plans for AI developments, such as the Digital Nation and Innovative Economic Development Plan, the Taiwan AI Action Plan, the AI Technology R&D Guidelines and the 5+2 Plan, as stated in the answers to previous questions.

However, considering AI is more of a 'technology', which could be applied in various industries, there is no single central competent authority for the actual enforcement and monitoring of AI technology and such enforcement and supervisory tasks fall under the jurisdictions of relevant competent authorities. For example, the Ministry of Economic Affairs is assigned as the competent authority for the Unmanned Vehicle Sandbox Act, while the Financial Supervisory Commission is the authority for the FinTech Sandbox Act

7 Has your jurisdiction participated in any international frameworks for AI?

To our knowledge, the Taiwan government has not participated in any international frameworks for AI. However, according to the relevant

public announcement by the Ministry of Science and Technology, the AI Technology R&D Guidelines, as outlined in question 3, were set out to, among other things, follow the international trends with respect to AI developments and were prescribed by referencing the relevant principles and guidelines of the European Union, Japan and the Organisation for Economic Co-operation and Development, among others.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

Taiwan is well known for its information and communications technology and semiconductor industry, and it is reported that there have been AI-related developments in these areas, such as AI-related chips, integrated circuit design, systems, software and relevant peripheral products. In recent years, there have been also certain AI and data analysis-focused start-ups reportedly having the potential to become the next 'unicorns', with main products used in the areas of digital marketing, advertising and video analytics, among others. It is also noteworthy that there are more and more associations and non-profit organisations offering educational and training programmes and courses to various industry players that are interested in exploring the possibility of exerting AI as a tool for improving their existing products or operations or to create new applications or business models with AI as underlying technology.

In August 2022, the Ministry of Digital Affairs (MDA) (which is under the Executive Yuan) was formally established for matters in relation to facilitating Taiwan's digital development of its telecommunications, information, cybersecurity, internet and communications industries, coordinating national digital policies, supervising national cybersecurity policies, managing communications and digital resources and assisting digital transformation. There are

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two subordinate agencies under the MDA — the Administration of Digital Industries and the Administration of Cyber Security — which were established to plan and implement policies to facilitating the development of digital economy related industries as well as reviewing and supervising national cybersecurity programmes. According to the Organization Act of the Administration for Digital Industries, Ministry of Digital Affairs, the Administration of Digital Industries is in charge of providing guidance and incentives for interdisciplinary digital innovation of AI, big data, platform economy, or other digital economy related industries.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

In addition to those stated in question 8, see below the recent trends relating to developments of AI-based products and services in Taiwan.

Transportation

As mentioned above, the aim of the Unmanned Vehicle Sandbox Act is to provide a friendlier environment for testing the application of AI in transportation. Pursuant to the news releases in November 2019, the Ministry of Economic Affairs plans to invest around US$8 million in four years to expedite the industrialisation of unmanned vehicle technology. As at 29 July 2022, 13 innovative experimentations have been approved to enter the sandbox.

Healthcare

The Ministry of Science and Technology has driven the 'AI for Health' plan, which assisted major medical research institutions in Taiwan in developing AI algorithms to be used for cardiovascular risk assessment, diagnosing cancer lesions at an early stage, accelerating the image recognition, among other things. Furthermore, as the Medical Device Act took effect in 2021, the Taiwan Food and Drug Administration set up a project office aiming to assist with matters regarding medical devices using AI technology and reviewing the laws and regulations to explore the possibility of amending existing rules in order to establish a more friendly regulatory environment for 'AI for Health'.

Financial services

The main application of AI in financial business in Taiwan involves correspondence with clients, such as ChatBot and Robo-Adviser Services. In June 2017, the Securities Investment Trust and Consulting Association of Taiwan, the self-disciplinary organisation of the asset management industry, issued Operating Rules for Securities Investment Consulting Enterprises Using Automated Tools to Provide Consulting Service (the Robo-Adviser Rules). Pursuant to the Robo-Adviser Rules, securities investment consulting enterprises may provide online securities investment consulting services by using automated tools through algorithms (Robo-Adviser Services). Furthermore, it was reported that the Financial Supervisory Commission, the financial regulator in Taiwan, is considering relaxing the current regulations regarding robo-advisers, and once the regulations are amended, securities investment consulting enterprises would be permitted to provide portfolio management services.

> "We would recommend that relevant risks, especially legal risks, be analysed as early as possible, and certainly well before the time any product is officially launched."

10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

As indicated in question 1, according to the Taiwan AI Action Plan, the Taiwan government is still evaluating the following issues so as to further determine whether any laws need to be enacted or amended to address AI development:

- the impact on employment and the labour market;
- the rights and obligations derived from the application of AI technology (eg, whether AI should be considered a 'person' from

the perspective of certain legal fields, whether there will be intellectual property rights in an AI-created work);
- applying AI in the government;
- open data;
- consumer protection for AI applications;
- restrictions on AI applications;
- the legal system of the regulatory sandbox;
- spectrum resource allocations;
- government procurement (eg, the outsourcing concerning AI issues); and
- industry regulatory challenges and approaches to AI.

In addition to the above, some legislators proposed the draft Basic Act for Developments of Artificial Intelligence in 2019 and 2020, which is intended to set out fundamental principles for AI developments, to drive the government to promote the development of AI technologies. The draft is still under review by the Legislative Yuan and it is uncertain whether this draft will be passed.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

As stated in question 1, Taiwan promulgated two regulatory sandbox laws, the FinTech Sandbox Act and the Unmanned Vehicle Sandbox Act. These regulatory sandbox laws were enacted to allow the relevant businesses to test their new ideas and technologies within a safe harbour. After completion of the approved experiments, the relevant competent authority will analyse the result of the experiment. If the result is positive, the relevant competent authority will actively examine the existing laws and regulations to explore the possibility of amending them with a view to making feasible the business models or activities previously tested in the sandbox. Therefore, for any business models that will involve the application of AI, relevant risks, especially legal risks, may be mitigated in case they are tested under either of the two sandbox laws.

As to any proposed business models or activities not falling within the sandbox scope permitted by the above sandbox laws, we would recommend that relevant risks, especially legal risks, be analysed as early as possible, and certainly well before the time any product is officially launched. The application of AI technology or AI-related products may involve various issues under traditional as well as emerging legal areas such as potential liabilities under civil and criminal laws, the ownership of AI products-related IP rights, privacy, among others. With respect to any products to be sold to end customers, more detailed analysis on issues such as consumer protection and product liabilities, product inspection and testing, and liability insurance are also advised.

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QUESTIONS

The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

We were engaged by the National Development Council to conduct a research project, focusing on exploring the necessary adjustments to the existing legal regime to create a more friendly environment for AI developments. As to AI technology and its applications and its various areas of legal practice, Lee and Li, known for expertise in all legal fields and offering a full range of services, has the competitive advantage in offering valuable insight and best solutions from a Taiwan law perspective in every legal practice area.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

AI applications may be used across many industries. As lawyers, what we are most excited about is that we may see industry experts come up with creative ideas associated with the technology and assist clients in exploring how to put technology innovations and actual AI applications into practical use in the real world. With respect to Taiwan, Taiwan's well-known information and communications technology has established a good foundation for AI development. Taiwan has also been one of the major players in the semiconductor manufacturing industry. Given this, we think Taiwan has great opportunities to play an important role in AI trends.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

We think an important challenge facing the developers would be how to commercialise AI technology and make AI applications address the needs of industry players and the general public. From the perspective of wider society, the greatest challenge might be the replacement of human resources. Take the legal profession as an example, where topics widely discussed include how AI may impact the legal profession (eg, whether AI will replace some of the jobs that lawyers do). One can imagine AI applications to replace some jobs in multiple professional settings in many industries. Where AI applications can replace most of the jobs currently done by humans, it would be inevitable that the whole of society would have to face issues arising from human resource surplus.

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United States

Lindsey Tonsager is co-chair of Covington's global data privacy and cybersecurity practice. She advises clients in their strategic and proactive engagement with the Federal Trade Commission, the US Congress, the California Privacy Protection Agency and state attorneys general on proposed changes to data protection laws, and regularly represents clients in responding to investigations and enforcement actions involving their privacy and information security practices. Lindsey's practice focuses on helping clients launch new products and services that implicate the laws governing the use of artificial intelligence, data processing for connected devices, biometrics and new technologies, among many others.

Jayne Ponder is an associate in Covington's Washington office. She counsels national and multinational companies across industries on data privacy, cybersecurity and emerging technologies. In particular, Jayne advises clients on compliance with federal, state and global privacy frameworks, and counsels clients on navigating the rapidly evolving legal landscape. Her practice includes partnering with clients on the design of new products and services, and helping clients design governance programmes for the development and deployment of artificial intelligence and internet of things technologies.

Olivia Vega is an associate in Covington's Washington office. She is a member of the data privacy and cybersecurity and healthcare practice groups. Olivia Vega provides strategic advice to global companies on a broad range of privacy, healthcare and technology issues, including in technology transactions, mergers and acquisitions, and regulatory compliance. Olivia counsels clients on navigating federal and state privacy and data security laws and regulations, including on topics such as HIPAA and the California Consumer Privacy Act.

1 What is the current state of the law and regulation governing AI in your jurisdiction? How would you compare the level of regulation with that in other jurisdictions?

Currently, the United States does not have any comprehensive federal laws or regulations that specifically regulate AI. However, as in other jurisdictions, a range of existing US laws, regulations and agency guidance may apply (or may come into effect to apply) to AI, including the following:

- the United States Federal Trade Commission (FTC) has issued guidance with respect to AI and algorithms, and this guidance highlights existing US laws, regulations and guidance that apply to these technologies;
- the Department of Defense (DOD) has reaffirmed its Ethical Principles for Artificial Intelligence;
- the Food and Drug Administration (FDA) has initiatives aimed at addressing specific AI applications;
- the Department of Energy (DOE) established an AI Advancement Council to lead AI innovation and ethics at the department;
- the Department of Commerce and the Committee on Foreign Investment in the United States (CFIUS) have various requirements applicable to AI; and
- various states and local governments have begun turning their attention to AI regulation.

At the state level, a few states have enacted legislation that will govern automated decision-making, as described further in response to question 5.

While there have been various AI legislative proposals introduced in Congress, the United States has not embraced a horizontal broad-based approach to AI regulation as proposed by the European Commission. Rather, the United States has focused on legislation


Lindsey Tonsager


Jayne Ponder


Olivia Vega

"The United States has continued to focus on funding and developing dedicated projects for AI research."

> "The NDAA for Fiscal Year 2021 includes a number of other provisions expanding research, development and deployment of AI such as authorising $1.2 billion through FY 2025 for a DOE artificial intelligence research programme."

investing in infrastructure to promote the growth of AI. In particular, the National Defense Authorization Act (NDAA) for fiscal year 2021 established the National AI Initiative to coordinate the ongoing AI research, development, and demonstration activities among stakeholders. To implement the AI Initiative, the NDAA mandates the creation of a National Artificial Intelligence Initiative Office under the White House Office of Science and Technology Policy (OSTP) to undertake the AI Initiative activities, as well as an interagency National Artificial Intelligence Advisory Committee (NAIAC) to coordinate federal activities pertaining to the AI Initiative.

Since the passage of the AI Initiative, the United States has continued to focus on funding and developing dedicated projects for AI research. For example, the Consolidated Appropriations Act of 2022 requires the Director of National Intelligence to develop a plan, within one year, for an 'artificial intelligence digital ecosystem' that improves the intelligence community's use of 'artificial intelligence-powered applications' and includes appropriations for the armed forces to recruit and train an 'artificial intelligence-literate acquisition workforce'. Additionally, the DOE recently announced the establishment of the Artificial Intelligence Advancement Council, which will lead artificial intelligence governance, innovation and AI ethics at the department, and the DOE pledged to issue US$10 million to support certain research making use of AI techniques. Furthermore, the NDAA for Fiscal Year 2022 authorises the Secretary of Defense to carry out a pilot programem to establish data repositories for DOD data sets relevant to the development of AI technology, and allows certain private and public sector organisations to access those data sets for the purpose of developing AI technology for DOD.

2 Has the government released a national strategy on AI? Are there any national efforts to create data sharing arrangements?

On 11 February 2019, President Trump signed an executive order (EO) 'Maintaining American Leadership in Artificial Intelligence', which launched a coordinated federal government strategy for AI. The EO sets forth the following five pillars for AI:

- empowering federal agencies to drive breakthroughs in AI research and development;
- establishing technological standards to support reliable AI systems;
- establishing governance frameworks to foster public confidence in AI;
- training an AI-ready workforce; and
- engaging with international partners.

Pursuant to the EO, the Trump administration released the Draft AI Regulatory Guidance, and the National Institute for Standards and Technology (NIST) released a plan for developing AI standards.

In addition to this EO, Congress has passed legislation that will have significant implications on AI. Specifically, in addition to the establishing the National AI Initiative, discussed above, the NDAA for Fiscal Year 2021 directs NIST to support the development of relevant standards and best practices pertaining to both AI and data sharing. To support these efforts, Congress has appropriated US$400 million to NIST through FY 2025. The NDAA for Fiscal Year 2021 also has several AI-related provisions pertaining to the DOD. For example, in relation to the Joint Artificial Intelligence Center, the new law requires an assessment and report on whether AI technology acquired by the DOD is developed in an ethically and responsibly sourced manner, including steps taken or resources required to mitigate any deficiencies. Finally, the NDAA for Fiscal Year 2021 includes a number of other provisions expanding research, development and deployment of AI such as authorising $1.2 billion through FY 2025 for a DOE artificial intelligence research programme.

The NDAA for Fiscal Year 2022 further authorises the Secretary of Defense to 'take such actions as may be necessary to increase the number of commercial artificial intelligence companies eligible to provide support to DOD components, including with respect to requirements for cybersecurity protections and processes'. It also requires the Secretary of Defense to review potential AI applications to DOD platforms, processes and operations, and to establish performance objectives and metrics for incorporating AI into such platforms, processes and operations.

The White House has also expressed a commitment to AI development and launched AI.gov and the National AI Research Resource Task Force to coordinate and accelerate AI research across all scientific disciplines. The Task Force released its interim report on 25 May 2022, which lays out its vision — a shared research infrastructure that would provide experts with tools and resources to foster AI research and development. The Department of Commerce also formally launched NAIAC, discussed above, which is tasked with advising the President on a range of issues related to AI, including United States AI competitiveness, issues related to the AI workforce, and AI research and development. The Department of Commerce announced the 27 members of the NAIAC, which include representatives from civil society, academia and industry.

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3 What is the government policy and strategy for managing the ethical and human rights issues raised by the deployment of AI?

The United States adopted the Organisation for Economic Co-operation and Development (OECD) AI Principles in May 2019, which also were embraced by the G20, focusing on:

- using AI to stimulate inclusive growth, sustainable development and well-being;
- human-centred values and fairness;
- AI transparency and explainability;
- making AI secure, robust and safe throughout its life cycle; and

"Foreign investors must carefully evaluate any investments involving US businesses to determine whether a CFIUS filing may be mandatory or, if not mandatory, warranted on the basis of potential national security risk."

- accountability.

In October 2022, the OSTP published a new blueprint for an 'AI Bill of Rights'. The blueprint is 'intended to support the development of policies and practices that protect civil rights and promote democratic values in the building, deployment, and governance of automated systems'.

The blueprint outlines a set of five principles: (1) safe and effective systems; (2) algorithmic discrimination protections; (3) data privacy; (4) notice and explanation; and (5) alternative options. The blueprint is non-binding and does not constitute US government policy. Nevertheless, the blueprint outlines the White House's vision for the deployment of automated systems.

The Department of Justice (DOJ) and Equal Employment Opportunity Commission (EEOC) each released guidance documents explaining how algorithms and AI can lead to disability discrimination in hiring that violates the Americans with Disabilities Act on 12 May 2022. The guidance documents also provide information to help organisations avoid such discrimination.

The DOD has formally adopted and reaffirmed its own ethical AI principles leveraging the Defense Innovation Board's 2019 report proposing high-level recommendations for ethical use of AI by the DOD. Additionally, the National Security Commission on AI released its own highly anticipated final report in 2019 that, consistent with the DOD's principles, centred on the importance of reliability, auditability, and fairness of AI systems used in the defence context.

4 What is the government policy and strategy for managing the national security and trade implications of AI? Are there any trade restrictions that may apply to AI-based products?

Trade controls are an important and evolving component of AI regulation in the United States and increasingly are being used to manage the cross-border flow of AI technologies. To pursue national security and foreign policy objectives, the United States employs a number of regulatory systems to govern international trade in hardware, software and technology. These regulations are becoming increasingly complex and difficult to navigate, as the United States and China heighten their competition in the technology sector.

The Department of Commerce's Bureau of Industry and Security (BIS) regulates the export, re-export and transfer (in-country) of certain commercial, dual-use and less sensitive military items. In late 2018, BIS published a representative list of 14 categories of 'emerging technologies,' including AI and machine learning, over which it may, in the future, seek to exercise export controls. The very first such 'emerging technology' control was promulgated in January 2020, imposing export restrictions on certain software specially designed for training 'deep convolutional neural networks' to automate the analysis of geospatial imagery. More 'emerging technology' controls

are expected on a rolling basis, and may include additional AI-related export controls.

The Department of Commerce also is authorised to prohibit the export of items subject to the Export Administration Regulations (EAR) to designated foreign parties that pose risks to US interests. Among the parties added to the 'Entity List' pursuant to this authority are several of China's leading AI companies, including Hikvision, iFLYTEK, Megvii Technology, SenseTime and Yitu Technologies, which were designated in 2019 in connection with alleged ties to human rights abuses. A licence issued by BIS is required to export even non-sensitive hardware, software or technology subject to the EAR to these companies.

Separately, inbound investment into AI technologies is under increased scrutiny from national security-focused regulators. CFIUS, an interagency committee composed of nine federal agencies and offices with US national security responsibilities, and chaired by the Department of the Treasury, reviews foreign investments in US businesses that could implicate US national security. Recent legislation and regulations expanding the scope of CFIUS's authorities to address new and evolving threats to US national security, including perceived threats from China, among other things, have focused on US technology development and competition. The changes to the CFIUS regime also included the introduction of a mandatory filing process for certain investments and control transactions involving 'TID US Businesses'.

A company may be a TID US Business if it produces, designs, tests, manufactures, fabricates or develops one or more 'critical technologies,' or maintains or collects 'sensitive personal data'. Businesses involved in AI could fall into one or both of these categories. 'Critical technologies' are defined by reference to certain US export control regulations, including the EAR and there are potential components or applications of AI that could trigger this

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definition. Moreover, AI development relies on significant amounts of data, including data that may be considered 'sensitive personal data.' Foreign investors must carefully evaluate any investments involving US businesses to determine whether a CFIUS filing may be mandatory or, if not mandatory, warranted on the basis of potential national security risk.

5 How are AI-related data protection and privacy issues being addressed? Have these issues affected data sharing arrangements in any way?

There is no comprehensive federal privacy legislation in the United States, and US federal policy has not focused specifically on the data protection and privacy impacts of AI technologies to date. However, there is federal sector-specific privacy legislation regulating, for instance, health data and financial data. Additionally, the FTC has broad jurisdiction to enforce deceptive and unfair business practices,

including privacy and data security practices. In connection with its enforcement efforts, the FTC has recently expressed an interest in requiring companies to delete algorithms and derived learnings when they were created using personal information that was unlawfully collected or used.

In the absence of comprehensive federal privacy legislation, various states have enacted privacy legislation, most notably the California Privacy Rights Act (CPRA), which amends the California Consumer Privacy Act and which broadly regulates privacy and data security practices for companies processing California residents' information. Virginia, Colorado, Utah, and Connecticut have enacted similar privacy legislation. There likely will continue to be more state privacy laws so long as there is no federal privacy legislation pre-empting such state laws. The lack of federal legislation and the need to comply with a patchwork of state and local rules can make compliance more challenging.

The Virginia, Colorado, and Connecticut privacy laws allow consumers to opt out of the processing of personal data for the purposes of 'profiling' in furtherance of decisions that produce legal or similarly significant effects concerning the consumers, and the laws further define profiling as any form of automated processing of personal information. Notably, the Connecticut law limits the opt-out to profiling 'in furtherance of solely automated decisions'. In California, the CPRA authorises the California Privacy Protection Agency to enact regulations governing 'opt-out rights with respect to businesses' use of automated decision making technology, including profiling and requiring businesses' response to access requests to include meaningful information about the logic involved in those decision making processes, as well as a description of the likely outcome of the process with respect to the consumer'. Regulations related to these issues are expected to be finalised by the end of the year.

"The FTC AI Guidance cautions that the manner in which data is collected for AI use could potentially give rise to liability. For example, the FTC investigated and settled with Everalbum, Inc in January 2021 in relation to its 'Ever App', a photo and video storage app that used facial recognition technology to automatically sort and 'tag' users' photographs."

In addition to broad privacy legislation, states also are considering technology- or sector-specific regulations. Colorado enacted a law that prohibits an insurer from directly or indirectly using an algorithm or predictive model that unfairly discriminates against an individual based on membership in a protected class. Illinois amended its Artificial Intelligence Video Interview Act to provide that employers relying solely upon AI to determine whether an applicant will qualify for an in-person interview must gather and report certain demographic information to the state authorities. The state authorities must then analyse the data and report on whether the data discloses a racial bias in the use of AI. In addition to these examples of enacted legislation, several states have proposed legislation detailed in response to question 10.

6 How are government authorities enforcing and monitoring compliance with AI legislation, regulations and practice guidance? Which entities are issuing and enforcing regulations, strategies and frameworks with respect to AI?

While there has not been comprehensive US AI legislation, agencies are focusing on how existing laws, regulations and guidance might apply to AI, including in the enforcement context. For example, at the federal level, the FTC released a guidance document on 19 April 2021 (the FTC AI Guidance) that discusses existing FTC guidance that already applies to AI and algorithms and outlines five principles for AI and algorithm use. The FTC AI Guidance mentions that certain AI applications must comply with the Fair Credit Reporting Act, the Equal Credit Reporting Act and Title VII of the Civil Rights Act of 1964. More recently, the FTC issued an Advanced Notice of Proposed Rulemaking (ANPRM) on 11 August 2022, the first step in creating trade regulation rules under its section 18 authority, that solicits input on several questions related to automated decision-making technologies. A violation of a trade rule results in civil penalties, so if the FTC were to create new rules for automated decision-making technologies, this could provide a significant source of new requirements.

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The FTC AI Guidance cautions that the manner in which data is collected for AI use could potentially give rise to liability. For example, the FTC investigated and settled with Everalbum, Inc in January 2021 in relation to its 'Ever App', a photo and video storage app that used facial recognition technology to automatically sort and tag users' photographs. Pursuant to the settlement agreement, Everalbum was required to delete models and algorithms that it developed using users' uploaded photos and videos and obtain express consent from its users prior to applying facial recognition technology. Enforcement activity by the FTC may become even more common, as legislative efforts seek to create a new privacy-focused bureau within the FTC and expand the agency's civil penalty authority. The FTC also has demonstrated its role in this area by hosting hearings and workshops, such as its workshop in April 2021 on how AI may be used to personalise and serve 'dark patterns' to individuals consumers.

> "In the financial sector, large banks report success in implementing AI to improve processes for anti-money laundering and know-your-customer regulatory checks."

Other agencies are considering sector-specific regulation. For example, various federal financial agencies solicited a request for information on financial institutions' use of AI, including machine learning, with the expectation of future regulations. The FDA released its 'Artificial Intelligence/Machine Learning (AI/ML)-Based Software as a Medical Device (SaMD) Action Plan', which includes developing a tailored regulatory framework for AI- and machine learning-based SaMD, advising on best practice for the development of machine learning algorithms, and supporting patient transparency.

7 Has your jurisdiction participated in any international frameworks for AI?

As noted above, the United States joined the 'Principles of Artificial Intelligence' adopted by the OECD and the G20. On 15 June 2020, the United States announced its participation in the Global Partnership on AI (GPAI), an effort launched during 2020's G7 ministerial meeting on science and technology, which aims to enhance multi-stakeholder cooperation in the advancement of AI reflecting shared democratic values, with an initial focus on responding to covid-19. The GPAI will initially be comprised of four working groups focused on responsible AI, data governance, the future of work, innovation and commercialisation.

8 What have been the most noteworthy AI-related developments over the past year in your jurisdiction?

The most noteworthy AI developments at the federal level include the FTC's ANPRM on commercial surveillance and the proposed federal privacy legislation. As discussed above in response to question 6, the FTC's ANPRM seeks comment on algorithmic decision-making systems, including on issues such as algorithmic errors, consumer benefits and potential harms. The ANPRM follows on the heels of the FTC's 16 June 2022 report, where the FTC advised that although AI can serve as a helpful tool, there are significant risks associated with its use, particularly as applied to historically disadvantaged communities.

The American Data Privacy and Protection Act (ADPPA), introduced on 21 June 2022, would require 'large data holders' that use algorithms to conduct 'algorithm impact assessments' on certain algorithms that could negatively impact individuals. These assessments must provide details about the design of the algorithm and the data used by the algorithm, as well as a description of steps the large data holder is taking to mitigate harms to individuals. Separately, developers of algorithms are required to conduct 'algorithm design evaluations' that evaluate the design, structure, and inputs of the algorithm.

In addition to these federal developments, a number of state laws will regulate automated decision-making in certain applications. As described in response to question 5, a number of state laws will

afford consumers the ability to opt out of certain automated decision-making starting in 2023. In addition to these more general consumer privacy laws, some states have passed sector-specific laws. For example, Colorado law prohibits an insurer from directly or indirectly using any external consumer data and information source, algorithm, or predictive model that unfairly discriminates against an individual based on membership in a protected class. In addition to these targeted laws, some states, including Alabama, Colorado, Illinois and Vermont have passed bills creating a commission, task force or oversight position to evaluate the use of AI in their states and make recommendations regarding its use.

9 Which industry sectors have seen the most development in AI-based products and services in your jurisdiction?

As a result of the covid-19 pandemic, efforts within the healthcare industry to develop AI-based products and services have accelerated. In addition to the covid-19 response, many other US industries are actively engaging in AI development, including for healthcare financial services, logistics and transportation. In healthcare, for example, digital therapeutics, such as clinical-grade sensors paired with AI-driven predictive analytics are a major area of growth. In the financial sector, large banks report success in implementing AI to improve processes for anti-money laundering and know-your-customer regulatory checks. Additionally, paired with developments in mobile devices and biometrics, financial institutions reportedly are investing in more robust multifactor authentication measures using technologies such as facial recognition. AI also has tremendous potential to assist with supply chain and inventory management and other logistics.

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10 Are there any pending or proposed legislative or regulatory initiatives in relation to AI?

While various federal legislative proposals have been introduced, such as the ADPPA discussed above, it is unlikely that any will pass in the near term given other priorities of the administration. In addition to the ADPPA, Congress is also considering the United States Innovation and Competition Act of 2021, which would incorporate AI-related provisions of several other bills introduced over the past year, including the AI Jobs Act of 2022, AI in Counterterrorism Oversight Enhancement Act and Fellowships and Traineeships for Early-Career AI Researchers Act.

Notably, there has been increased interest in ensuring the safe use of algorithms with children, as evidenced by recent legislative efforts. For example, at the federal level, the Kids Online Safety Act would impose new safeguards, tools and transparency requirements for minors online, and would create a duty for covered entities to

> "Companies should closely monitor state and federal legal developments and consider engaging with policymakers on AI legislation and regulatory developments to inform legal efforts in this area."

act in the best interests of minors using their products, and would apply to commercial software that connects to the internet and is likely to be used by a minor. Affected companies, to the extent they operate 'algorithmic recommendation systems' that use minors' personal data, would be required to make disclosures in its terms and conditions that disclose how those algorithmic recommendation systems are used by the covered platform to provide information to minors and information about options for minors and their parents to control algorithmic recommendation systems that use minor's data. Similarly, the recently enacted California Age-Appropriate Design Code will prohibit affected businesses from using personal information to 'profile a child' by default unless the business can demonstrate appropriate safeguards to protect children, and either (1) the profiling is necessary to provide the product of feature with which the child is actively and knowingly engaged, and (2) the business can demonstrate a compelling reason that profiling is in the best interest of children. 'Profiling' is defined as 'any form of automated processing' of personal information, including analysing or predicting aspects of a person.

In addition, a continuing area of emerging consensus is support of AI-related research and training. The AI Training Act would the Director of the Office of Management and Budget to develop an AI training programme for certain federal workers, including those involved in procurement, logistics, programem management, research and development, and cost estimating. The training should include information related to the science underlying AI, as well as the risks posed by AI, 'including discrimination and risks to privacy'.

There continues to be a growing body of state and federal proposals that address algorithmic accountability and mitigation of unwanted bias and discrimination. Federal proposals include the Health Equity and Accountability Act of 2022, which aims to address algorithmic bias in the context of healthcare and would require the Secretary of the Department of Health and Human Services to establish a Task Force on Preventing AI and Algorithmic Bias in Healthcare to develop guidance on how to ensure that the development and use of AI and algorithmic technologies in delivering care 'does not exacerbate health disparities' and help ensure broader access to care. Other federal bills, such as the Digital Platform Commission Act of 2022, would establish the Federal Digital Platform Commission, which is empowered to develop regulations for online services that facilitate interactions between consumers, and between consumers and entities offering goods and services. Such regulations could include, for example, requirements that algorithms used by the platforms 'are fair, transparent, and without harmful, abusive, anticompetitive, or deceptive bias'.

Relatedly, NIST released for public comment a draft of its AI Risk Management Framework, which provides guidance for managing risks in the design, development, use and evaluation of AI systems. In particular, the Framework addresses 'characteristics of

trustworthiness' such as accuracy, explainability, reliability, security and privacy. NIST separately released a document titled 'Towards a Standard for Identifying and Managing Bias within Artificial Intelligence', which aims to provide guidance for mitigating harmful bias within AI systems.

States are considering their own slate of related proposals. For example, states continue to propose bills to create oversight bodies that would review and report on states' use of AI and other automated decision-making systems and develop recommendations for the use of these systems. Additionally, facial recognition technology continues to attract attention from state lawmakers, with wholesale bans on state and local government agencies' use of facial recognition gaining steam.

11 What best practices would you recommend to assess and manage risks arising in the deployment of AI?

Companies developing or deploying AI applications in the United States should be mindful that a number of existing laws, regulations and regulatory guidance may apply to their AI application – including, but not limited to, those discussed above. Companies should seek to ensure compliance with these existing requirements and guidance, and review decisions of any governmental authorities that may be relevant to their offering. Companies should also closely monitor state and federal legal developments and consider engaging with policymakers on AI legislation and regulatory developments to inform legal efforts in this area. To the extent that companies are offering services outside the United States, they should expand these practices to other jurisdictions.

Although the legal landscape with respect to AI is still evolving, companies can take steps now to help manage potential risks that may arise when developing or deploying AI, as we discuss our article '10 Steps To Creating Trustworthy AI Applications' (www.covingtondigitalhealth.com/2020/05/7415/). These steps involve, among other things, adopting a governance framework to help build on and operationalise the applicable AI principles and help ensure compliance with laws and applicable practices.

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The Inside Track

What skills and experiences have helped you to navigate AI issues as a lawyer?

At Covington, we take a holistic approach to AI that integrates our deep understanding of technology matters and our global and multi-disciplinary expertise. We have been working with clients on emerging technology matters for decades, and we have helped clients navigate evolving legal landscapes, including at the dawn of cellular technology and the internet. We draw upon these past experiences as well as our deep understanding of technology and leverage our international and multi-disciplinary approach. We also translate this expertise into practical guidance that clients can apply in their transactions, public policy matters and business operations.

Which areas of AI development are you most excited about and which do you think will offer the greatest opportunities?

The development of AI technology is affecting virtually every industry and has tremendous potential to promote the public good, including to help achieve the UN Sustainable Development Goals by 2030. For example, in the healthcare sector, AI may continue to have an important role in helping to mitigate the effects of covid-19, and it has the potential to improve outcomes while reducing costs, including by aiding in diagnosis and policing drug theft and abuse. AI also has the potential to enable more efficient use of energy and other resources and to improve education, transportation, and the health and safety of workers. We are excited about the many great opportunities presented by AI.

What do you see as the greatest challenges facing both developers and society as a whole in relation to the deployment of AI?

AI has tremendous promise to advance economic and public good in many ways and it will be important to have policy frameworks that allow society to capitalise on these benefits and safeguard against potential harm. Also, as this publication explains, several jurisdictions are advancing different legal approaches with respect to AI. One of the great challenges is to develop harmonised policy approaches that achieve desired objectives. We have worked with stakeholders in the past to address these challenges with other technologies, such as the internet, and we are optimistic that workable approaches can be crafted for AI.

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