GLI GLOBAL LEGAL INSIGHTS

AI, Machine Learning & Big Data

2023

Fifth Edition

Contributing Editor: **Charles Kerrigan**

glg global legal group

CONTENTS

Portugal

Sofia Barata, Nuno Carrolo dos Santos & Iakovina Kindylidi
Vieira de Almeida

Trends

Introduction

For the purposes of clarity, it should be noted that there is not a uniform definition of Artificial Intelligence ("**AI**") in Portugal or in the EU (with the exception of the definition of AI set forth in the Proposal for a Regulation laying down harmonised rules on AI – the Artificial Intelligence Act ("**AIA**") – and its pertinent criticism). As such, any reference to AI should be understood as referring only to machine learning, including deep-learning AI, while the terms 'AI' or 'algorithm' or 'AI system' are used interchangeably.

When identifying the main AI trends in Portugal, it is useful to distinguish between AI providers – entities that design, develop and provide AI solutions – and AI users – entities using AI solutions either internally in their organisations or to provide products and services to their end users.

AI providers market

The AI providers market is soaring in Portugal, with startups and SMEs offering a wide variety of AI-based solutions ranging from virtual assistants and translation tools to biometrics and anti-fraud solutions.

The year 2022 saw the conclusion of negotiations for the funding of various consortiums in the context of the national Recovery and Resilience Mechanism, created by the Portuguese Government as part of the Next Generation EU package of the European Council. The Recovery and Resilience Mechanism is organised on three structural dimensions: (i) Resilience; (ii) Climate Transition; and (iii) Digital Transition.

Among the consortiums selected is the Responsible AI Consortium, with the participation of 25 Portuguese entities, including two unicorns and 10 startups specialising in AI (Unbabel, Feedzai, Sword Health, Automaise, Emotai, NeuralShift, Priberam, Visor.ai, YData and YooniK), eight research centres from Lisbon, Porto and Coimbra (Champalimaud Foundation, Centre for Informatics and Systems of the University of Coimbra, Faculty of Engineering – University of Porto, Fraunhofer Portugal AICOS, The *Instituto de Engenharia de Sistemas e Computadores - Investigação e Desenvolvimento*, *Instituto Superior Técnico* ("**IST**"), IST-ID/ Institute for Systems and Robotics and IT), one law firm (Vieira de Almeida – VdA), and five industry leaders from the life sciences, tourism and retail sectors (BIAL, *Centro Hospitalar de São João*, Luz Saúde, Grupo Pestana and SONAE). The Consortium's goal is to position Portugal as a global leader in Responsible AI technologies, principles and regulation by creating 21 new AI products, standards and recommendations for regulation and best practices in Responsible AI and 132 postgraduate academic degrees, among other initiatives.

AI users market

Over the past two years, an increasing number of entities from different sectors are acquiring either off-the-shelf or tailor-made AI solutions. The following sectors have been the most active in adopting AI systems: (i) life sciences; (ii) banking and finance; (iii) insurance; (iv) public sector; (v) retail; and (vi) telecommunications. Regardless of the sector and the varying levels of complexity of the AI systems acquired, there has been a marked increase in the use of the following solutions: (i) recruitment and HR management; (ii) digital marketing; (iii) biometric data; (iv) virtual assistants; and (v) natural language models and machine translation.

Main legal challenges

The main legal challenges for AI providers or AI users can be grouped in the following categories:

- **Data:** Definition of a robust data strategy by clearly identifying the personal and non-personal data used in the various stages of the AI lifecycle, ensuring its quality for data-mining purposes, its sources and processing purposes, as well as the data protection relationships with different stakeholders.
- **Fundamental rights:** Identification and mitigation of the risks related to fundamental rights of individuals, as well as any risks related to bias and errors in datasets, and concomitantly to discriminatory outputs of AI systems.
- **Safety and (cyber)security:** Identification, implementation, monitoring and updating of organisational and technical security measures to ensure the robustness, safety and security of the AI system throughout its lifecycle, while ensuring compliance with any sector-specific cybersecurity and safety rules or international standards.
- **Intellectual property:** Clear management of the intellectual property rights relating to the results generated by AI, as well as matters related to trade secrets and other proprietary information used to train the system, while ensuring compliance with transparency obligations.
- **Transparency:** Provision of clear information to stakeholders in conformity with the consumer protection and data protection frameworks and with best business practices, including based on the reporting obligations of the AIA Proposal, to ensure future-proof governance. It should be noted in this regard that compliance with the transparency obligation does not require disclosure of the AI algorithm or of any proprietary information of the AI provider or user.
- **Accountability:** Ensuring there are technical, organisational and contractual mechanisms in place to promote the auditability of AI outputs and that the responsibility of the various stakeholders for any damages caused due to errors and biases of the AI system is clearly identified contractually, including the obligation to provide evidence and relevant information to support or refute claims.
- **Compliance:** Ensuring future-proof compliance by proactively fulfilling the AIA obligations, depending on the role of the entity, as well as specific obligations related to the intended application of AI or the sector in which the AI provider or user operates.

Government initiatives

In 2019, the Portuguese Government published its AI Portugal 2030 Strategy (available in English at: https://www.portugal.gov.pt/download-ficheiros/ficheiro.aspx?v=%3D%3D BAAAAB%2BLCAAAAAAABACzMDQxAQC3h%2ByrBAAAAA%3D%3D) with the

aims of boosting innovation and investment in the AI ecosystem, attracting and retaining talent and promoting the adoption of AI across the country's various industries. These objectives translate into an Action Plan consisting of seven lines of action: (i) inclusion and education: disseminating generalist knowledge on AI; (ii) qualification and specialisation; (iii) thematic areas for research and innovation in European and international networks; (iv) public administration and its modernisation; (v) specific areas of specialisation in Portugal with international impact; (vi) new developments and supporting areas in European and international networks; and (vii) facing societal challenges brought by AI: ethics and safety. These objectives reflect to a large extent the EU Declaration of Cooperation on Artificial Intelligence of 2018, which Portugal has signed, as well as the OECD AI principles.

Furthermore, with a view to boosting innovation in emerging technologies, and as part of the Portuguese Government's Action Plan for Digital Transition (available in English at: https://portugaldigital.gov.pt/wp-content/uploads/2022/01/Portugal_Action_Plan_for_Digital_Transition.pdf), the Portuguese Government published Resolution 29/2020 of the Council of Ministers, establishing the general principles for the preparation of the legislative framework for Technological Free Zones (*Zonas Livres Tecnológicas* – ZLTs), and Decree-Law 67/2021, setting forth the legal framework for establishing ZLTs. ZLTs are real-life geographical areas set up as regulatory sandboxes aimed at promoting and facilitating research, development and testing activities related to innovative technologies, products and services, including AI, across all industries.

More recently, in 2022, the Agency for Administrative Modernisation (AMA – *Agência para a Modernização Administrativa*) published its Guide to ethical, transparent and responsible Artificial Intelligence in the Public Administration (available only in Portuguese at: https://bussola.gov.pt/Guias Prticos/Guia para a Intelig%C3%AAncia Artificial na Administra%C3%A7%C3%A3o P%C3%BAblica.pdf). This Guide provides an overview of the main characteristics of AI, the AI market and the Portuguese ecosystem, presenting a series of principles that must be followed in the use of AI systems by Public Administration.

Notwithstanding the above, since the AIA is still under negotiation, there have been no developments regarding its implementation in Portugal, particularly as to which national authority will be tasked with monitoring compliance with the AIA obligations or whether possible regulatory sandboxes, identified in the AIA Proposal as a means to promote innovation, will operate as part of the ZLT initiatives. Nonetheless, developments are expected during 2023 (please refer to the Regulations/government intervention section below).

Ownership/protection

In Portugal, there are no intellectual property provisions specifically referring to AI.

As such, the Portuguese Code of Copyright and Related Rights ("**CDADC**") and the Industrial Property Code ("**IPC**"), transposing the EU intellectual property framework into national law, are applicable.

More specifically, the AI algorithm can be protected by copyright. The rightsholder is usually the AI provider and registration is not necessary. The copyright protection of AI code expires 70 years after the AI provider's death and, since in most cases the AI provider is an entity, the copyright protection also expires 70 years after the first time the code was lawfully made available to the public.

When it comes to patents, in line with the EU Patent Law, it is difficult to patent AI systems that are not embedded in a physical device, since the patent claim usually fails to meet the

applicable inventiveness or novelty requirements. This may be because the AI system has been *trained* based on existing data, simply combining already established ideas in a new way. Demonstration of a technical implementation or application, besides from purely abstract AI methods, may be required for the acknowledgment of a technical effect and, therefore, inventive step.

In addition, depending on the specific application of the AI system, there is discussion regarding the ownership of its outputs, especially when data, trade secrets or other proprietary information of the AI user is used to train the AI system. Considering the lack of clarity in this regard, these aspects are usually resolved contractually by assigning or irrevocably licensing the modifications or improvements made to the algorithm to the AI provider.

In relation to the ownership of the data used to train and deploy the AI system, although the prevailing opinion is that there is no property right to data, in Portugal databases may be protected, as a whole or substantially as a whole, under Decree-Law 122/2000, which transposed the EU Database Directive into national law. Provided that the qualitative and quantitative requirements of the law are met, in line with the case law of the Court of Justice of the European Union ("**CJEU**"), the entity that created the database may be protected for 15 years, from the first of January of the year following the date of the creation or of the date on which it was made available to the public. In addition, the data providers enter into data sharing or database licensing agreements with AI providers and AI users.

In Portugal, there is also some theoretical discussion around the possibility of recognising some sort of intellectual property right to AI outputs. However, under the current wording of the national and EU intellectual property framework, it is not possible for an AI output to be protected by copyright or patent since human authorship/inventorship is necessary for this protection.

Antitrust/competition laws

Competition in Portugal is mainly regulated by the Portuguese Competition Act (Law No. 19/2012). However, as an EU Member State, the EU competition law framework and CJEU case law are also directly applicable in Portugal.

As in almost every field of law, competition law is not immune to the challenges posed by the digital economy. Aware of these challenges, the Portuguese Competition Authority ("**PCA**") has been strengthening its investigative toolbox to better detect indicators of potential breaches of competition rules by or with recourse to AI-driven tools or similar technologies (as per the PCA's Competition Policy Priorities for 2023).

Following the adoption, in 2019, of the *Digital Ecosystems, Big Data and Algorithms Issues Paper* (addressing the challenges that the digital transition entails for competition policy) ("**2019 Issues Paper**"), in 2020 the PCA set up a task force for the digital sector which has been investigating complaints and actively engaged in proactive investigation. In 2019, the PCA had also conducted a survey on the use of monitoring and pricing algorithms.

In December 2022, the PCA published its *Defence of Competition in the Digital Sector in Portugal* policy brief ("**2022 Policy Brief**"). This document provides an update of the PCA's policy for digital markets and a summary of its investigative and enforcement initiatives (which range from surveys sent to online retailers, open calls for information and sector-specific analysis to automated web scraping-based investigations to substantiate ongoing cases and dawn raid warrants).

What happens when machines collude?

The ever-increasing number of commercial (namely pricing) decisions that are delegated to algorithms raises serious concerns from a competition law perspective. As a result from the 2022 Policy Brief, the PCA is well aware that "*algorithms may be used to implement price fixing and alignment strategies between competitors, thus harming consumers. Monitoring algorithms may be instrumental in price collusion agreements by making it easier to detect price deviations. More sophisticated algorithms may be able to reach collusive equilibria without direct human intervention*".

Automated price surveillance and definition is particularly worrisome if pricing algorithms are coupled with the capabilities of reinforcement learning algorithms, as this creates a high likelihood of algorithmic collusion. Indeed, as EU Commissioner Margrethe Vestager stressed, "*it is a hypothesis that not all algorithms will have been to law school. So maybe there is a few out there who may get the idea that they should collude with another algorithm who haven't been to law school either*". Ranking, search, recommendation and nudging algorithms also seem to be on the PCA's radar.

In the 2019 Issues Paper, the PCA warned that companies are responsible for the algorithms they use, and that the use of these tools to coordinate market strategies is not compatible with competition law. Additionally, in the 2022 Policy Brief, the PCA hinted that it will be paying attention to situations where competitors use common algorithms to coordinate prices or where there is some conscious and deliberate consensus between competitors on price strategies. It is worth highlighting that, according to a survey carried out by the PCA on the online retail of electronic products and household appliances sector, in 2019 21% of market operators acknowledged using price monitoring algorithms and 12% confirmed using price definition algorithms for some of their products. These percentages are likely to have increased in recent years.

However, there is an ongoing debate on whether Articles 101(1) TFEU and 9(1) of the Portuguese Competition Act, as currently interpreted by the CJEU and the Portuguese Courts, are suited to tackle algorithm activity without revamping, *inter alia*, the notion of contact/communication between competitors.

What antitrust concerns arise from big data?

Similar questions may arise with the increasingly widespread use of Big Data. In its *Competition Policy Priorities for 2023*, the PCA highlighted the creation of its digital team, who will continue to investigate evidence of abuse and collusion in digital markets in close cooperation with other European authorities (in particular to ensure the interplay between competition enforcement and the Digital Markets Act).

Indeed, in May 2022, the PCA opened proceedings against Google for possible abuse of dominance in online advertising, in the form of an alleged self-preferencing practice. Following this investigation, the European Commission relieved the PCA of its competence in July 2022 and decided to investigate Google's conduct on its own initiative.

All in all, certain aspects of the current antitrust framework may need to be modernised to better address the challenges posed by the digital economy. Significant efforts have already been developed at the EU-level with the adoption of the Digital Markets Act, which aims at establishing an *ex ante* regulatory system ensuring contestability and fairness in the digital economy; yet further guidance is needed on how competition law should be applied in these scenarios.

Board of directors/governance

Directors are required to comply with any laws applicable to their company and its articles of association, but Article 64 of the Portuguese Companies Code further tasks them with the duty to act diligently and always in accordance with the company and shareholders' best interests, as well as those of relevant stakeholders (e.g. employees, clients and creditors).

Directors must be available, technically qualified and knowledgeable of the company's business if they are to perform their duties properly. In addition, they are bound by a duty of care and a duty of loyalty.

Consequently, if AI can be used as a tool to help directors make complex decisions, the intuitive reasoning would be: if you have technology that can assist you, you should use it. However, to do so legally may prove more complicated. If directors are to act diligently and make well-informed decisions, they should be able to avail themselves of any information and tools, including any AI algorithm, at their disposal. As such, it is only logical that the duty of care will sooner or later have directors relying on AI as part of their decision-making process.

We already saw that directors have fundamental duties, such as the duties of care and of loyalty. According to the "business judgment rule", directors' liability is excluded if they can prove that they were duly informed, had no personal interest in the matter and that the decisions taken were based on a solid business rationale.

This begs two questions: if there were an AI algorithm or a robot that could assist directors in their decision-making, would they be required to use it or not? And could directors be held liable for a decision made by an AI algorithm or robot?

The outright answer to the first question is no, directors are not required to use AI in their decision-making. They are completely free to use such tools, as they can help them immensely in their tasks, but it would be farfetched to say that if directors choose not to use them, they are not reasonably informed and have failed to comply with any procedural rule.

Other than in exceptional situations related to certain types of activity and obligations undertaken by corporate bodies, it would go against the business judgment rule if courts could discretionarily determine what it means to be reasonably informed in every specific case. Until AI programs are consolidated and become common tools in making a good decision, directors will not be required to use them in their decision-making process.

When answering the second question, we need to bear in mind that directors are bound by duties of care and are expected to act diligently and in accordance with the corporate interest, which means they must select, feed instructions to and monitor any AI systems used. Directors will therefore answer for system decisions as if they were their own. In other words, directors' liability is not excluded but rather increased: they will answer for both their own decisions and conduct *vis-à-vis* the company, as well as any decisions made by the autonomous governance system. Moreover, if directors were to allow the algorithms to decide alone, they would be further accountable for not having taken the necessary precautions, even if they only ratified an algorithmic decision. Nonetheless, it is important to keep in mind that AI is going to become increasingly autonomous and is already starting to be considered indispensable for good governance, which means that companies will slowly have to evolve from *ex-post* to *ex-ante* control.

These are still complex issues, but it is likely that the duties of care and diligence will require directors to rely on AI in their decision-making in the near future.

This means that, when making decisions, it is crucially important to obtain quality information at the appropriate time. Not all information is equal, since directors only need whatever

information is relevant for their decision-making. Quality of information has been at the top of the agenda during the last decade, as shown by EU Commission Recommendation 2014/208/EC on the quality of corporate governance information ("comply or explain"). This framework brought to reality some of the questions that lawyers have asked about AI and its implications for corporate law and governance.

For instance, is corporate law ready to deal with the implications that AI may have on a company's decision-making process? Can AI replace a director? The answer to that question is clearly no.

Portuguese law does not allow AI, algorithms or robots to be appointed as directors, since they lack the legal personality or capacity required by law.

We are aware that the possibility of granting legal personality to certain categories of robots and programs is being widely discussed, including in EU institutions, but right now that is not the case.

As such, because AI still lacks the legal personality and capacity which only natural or legal persons (represented by natural persons, in the case of corporate acts) have, it cannot have any right or obligation within companies. In terms of decision-making, AI can only support the directors, not perform their duties for them, which means that delegation to AI and robots is also out of the question.

Although many AI technologies can reach a decision based on their interpretation of data, keeping a record of how they reached that decision can be more problematic.

Mere administrative tasks, such as assessing a call for a general meeting or analysing reports and annual accounts, are undoubtedly faster and more efficiently performed by robots than human beings. In fact, robots will be able to manage more information and produce more reliable results in far less time, freeing directors to focus on other activities. AI systems can also arguably assist with a large part of directors' resolutions, namely where prognosis and judgment are needed.

Relying on AI to enhance the board's decision-making and data analysis capabilities may thus soon be more commonplace. And who knows, we may yet see the appointment of AI as directors in our lifetime; but right now, we should look to AI as a tool to make better decisions, while keeping an eye towards a future where we can start to think about AI in the role of autonomous director, because sooner or later we will have to address this issue and consider how it is going to affect corporate law as we know it.

To tackle the legal challenges identified (please refer to the Trends section above), both AI providers and AI users are gradually starting to develop their AI Governance as an incremental piece of their AI Strategy. Companies are starting by carrying out AI Legal Impact Assessments ("**AILIAs**"). Although the criteria assessed should be adapted to the specific AI application and the user's sector, most AILIAs assess compliance and possible risks of the AI system in relation to the following aspects:

- AI system classification and application/sector.
- Technical robustness, safety and security of the system.
- Data governance, including personal and non-personal data.
- Transparency.
- Fundamental rights, including due to biases and non-discrimination.
- Accountability.
- System sustainability.

This legal assessment helps companies identify the possible risks related to a specific AI system and application, as well as potential technical, organisational and contractual ways of

mitigating these risks. It is important to note that this is not a one-off exercise. Considering the upcoming regulatory initiatives that will have a direct impact on AI (please refer to the Regulations/government intervention section below), companies should periodically monitor and update their data governance and AI governance to ensure that their AI systems remain future-proof.

Regulations/government intervention

Without prejudice to the various initiatives mentioned herein, there are currently no AI-specific laws in Portugal.

However, any EU-wide regulatory or policy initiative would have an impact on the national AI market, starting with the AIA which, once finalised, will be directly applicable in Portugal, although its current wording provides for possible carve-outs in its implementation in Member States (e.g. regulatory sandboxes, designated national authorities for notification and supervision, authorisation for certain uses of high-risk AI systems, etc.). Therefore, following the entry into force of the AIA, it is expected that an implementing act will be adopted in Portugal.

Moreover, once the Directive on Liability for Defective Products and the AI Liability Directive are finalised, the Portuguese legislator will have a maximum of two years after their entry into force to transpose them into national law.

In addition, the following EU regulatory initiatives are expected to have a direct impact on the Portuguese AI market:

- Data Governance Act, which will be applicable in September 2023;
- Proposal for a Data Act;
- Common European Data Spaces initiative, with the proposal for a European Health Data Space already having been published and the proposal for European Financial Data Spaces expected during 2023.

These initiatives, which make up the three pillars of the EU Data Strategy, aim, amongst others, to ensure that there is high-quality data available to foster innovation and training, and the validation and verification of AI systems in the EU.

Moreover, in relation to cybersecurity, and more specifically the use of AI in essential sectors, we highlight the importance of the NIS 2 Directive, which should be transposed into national law by 17 October 2024.

Notwithstanding the above, the current panoply of European and national consumer protection legislation, the privacy and data protection framework, particularly the GDPR provisions pertaining to automated-decision-making, the intellectual property (please refer to the Ownership/protection section above) and cybersecurity laws, as well as sector-specific laws depending on the AI application and the sector of the AI user, will all apply to AI systems operating in Portugal.

* * *

Acknowledgment

The authors would like to thank João Carlos Assunção for his valuable contribution to the preparation of this chapter.

Sofia Barata
Tel: +351 213 113 534 / Email: sb@vda.pt

Sofia Barata joined VdA in 2005 and is Of Counsel in the Corporate Services Area. With a vast track record in M&A, she has worked in numerous domestic and international transactions over the years, notably M&A, joint ventures, acquisition and corporate finance deals.

Her combination of years of experience in the day-to-day support of clients across industries and a perfect command of the new technological tools of AI and process-automation procedures give Sofia the skill sets required to develop and optimise new cross-practice products and services within VdA, resorting to the consistent adoption of technological procedures.

Nuno Carrolo dos Santos
Tel: +351 213 113 347 / Email: ncs@vda.pt

Nuno Carrolo dos Santos joined VdA in 2015. He is a Managing Associate of the Competition & EU practice area where he has worked in several cases and transactions, particularly in the pharmaceutical and media sectors, with a focus on restrictive practices and merger control.

Iakovina Kindylidi
Tel: + 351 213 113 560 / Email: imk@vda.pt

Iakovina Kindylidi joined VdA in 2019 and provides advice, in Portugal and abroad, on matters relating to privacy, data protection and cybersecurity as well as on technologies, intellectual property, trade secrets and consumer protection. She has assisted in various national and international projects, including projects funded by H2020, and has participated in the preparation of reports for international institutions. Iakovina has expertise on matters related to emerging technologies, namely AI, robotics, Distributed Ledger Technology/Blockchain, smart contracts, NFTs, Metaverse and IoT, and has been involved in various operations involving the design and development of ICT products and services and offering advice on matters of privacy and security as well as on licensing and outsourcing. Iakovina has a background in banking and business law, allowing her to provide strategic advice to entities coming from the financial services sector, including FinTech and InsurTech, while she regularly advises clients coming from various sectors, especially IT, healthcare, media and entertainment, and energy.

Vieira de Almeida

Rua Dom Luís I, 28, 1200-151, Portugal
Tel: +351 213 113 400 / URL: www.vda.pt

www.globallegalinsights.com

Other titles in the **Global Legal Insights** series include:

Banking Regulation
Blockchain & Cryptocurrency
Bribery & Corruption
Cartels
Corporate Tax
Employment & Labour Law
Energy
Fintech
Fund Finance
Initial Public Offerings
International Arbitration
Litigation & Dispute Resolution
Merger Control
Mergers & Acquisitions
Pricing & Reimbursement

GLI GLOBAL LEGAL INSIGHTS