Artificial Intelligence 2024

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North Macedonia: Trends and Developments
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NORTH MACEDONIA


Trends and Developments

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Schoenherr

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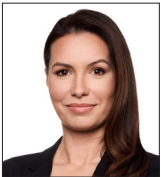
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The Absence of AI Regulation in North Macedonia

Unlike neighbouring countries, North Macedonia currently has no AI regulation and legislation, falling behind countries that have implemented either non-binding guidelines or laws. In 2021, the Macedonian Fund for Innovation and Technology Development (FITD), in co-operation with the government of North Macedonia, initiated the formation of a working group ("Working Group") with the objective of creating a Macedonian National Strategy for AI (the "Strategy"). However, to date, there are no presentable documents that would advance Macedonia's AI regulation efforts.

Members of the Working Group emphasise that developing a comprehensive AI strategy requires significant data, human resources, and technical capabilities. These factors are key reasons why Macedonia has yet to make progress in developing the legal AI framework. However, the FITD asserts that, with support from organisations like the World Bank and the United Nations Development Programme (UNDP), there remains a strong commitment to developing a successful national AI strategy that will benefit the entire ecosystem.

Importantly, many countries, including countries from the Western Balkans, have begun creating national strategies for AI development and regulation. An integral component of such strategies is the implementation of ethical guidelines for the development, implementation and responsible use of AI, as ethical considerations are closely intertwined with AI performance.

Indeed, these non-mandatory guidelines and related soft law legal acts contain terminology specifically crafted to address and regulate AI. While they may lack legal enforceability, they serve to familiarise both the general public and experts in the field with the concepts and terminology necessary to comprehend and regulate AI and its practical applications.

One can reasonably assume that North Macedonia will need to accelerate its efforts to catch up in AI legal development, both regionally and within the EU, to which North Macedonia has been an official candidate for accession since 2005. The complete absence of a legal framework, including secondary, non-binding legal documents and ethical guidelines, is expected to delay compliance and harmonisation with international AI regulations.

AI Development and Subsidies for AI Start-Ups in North Macedonia

While the Working Group under the FITD has not yet yielded tangible results in terms of developing a strategy to address and regulate AI, it is worth noting the FITD's involvement in initiatives aimed at technical development of AI for the benefit of Macedonian consumers and improving public services.

As part of one of its programmes, the FITD aids start-ups with innovative AI solutions and has already provided subsidies to a dozen successful companies. As a most notable example, the FITD supported a private IT company, which subsequently developed the first Macedonian AI-based digital public administration assistant called ADA.

National AI Strategy Adoption

At the outset, the relevant stakeholders (including the governmental sector, the FITD, experts, IT and start-up associations, and various individuals) recognised the importance of prompt completion and implementation of a comprehensive National Strategy, which should outline

the country's approach to AI development, regulation, and ethical considerations. The expectations are that such approach shall facilitate easier enactment of a legislative framework and alignment with international standards, to cover all aspects of AI, such as data protection, privacy, accountability, transparency, ethical guidelines and intellectual property.

This Strategy should be based on the European initiative on artificial intelligence prepared based on the policy of the European Commission in the field of artificial intelligence. In this context, North Macedonia, as a candidate for membership in the European Union, should strive to ensure the necessary measure of compliance with the European Union, which will enable full integration into the European research area and even closer co-operation.

Adoption of this Strategy will represent a direction for AI development within a single public policy document, in order to achieve improvement in this area, as well as establish clear, measurable and concrete measures for the development of artificial intelligence for all sectors in North Macedonia.

Expectations for Ethical Guidelines for AI

Aside from the comprehensive Strategy and recognising that it might require significant time and effort, there is a growing demand to at least establish ethical guidelines for the development, deployment and use of AI technologies (as has, for example, already been done in neighbouring Serbia), in order to ensure that AI systems operate in a manner that is transparent, fair and subject to accountability.

Ultimately, the effective implementation of ethical guidelines should contribute to building trust, promoting accountability, and fostering responsible AI innovation. The ethical guidelines, despite their lack of legal enforceability, could be expected to persist and function as supplementary measures for legal systems, not just in North Macedonia, but worldwide. This raises the question of ethics versus legality, where interestingly, the interpretation of such balance – will require legal insight.

Given that AI applications and use transcend national borders, issues such as privacy (and even IP to an extent) have become increasingly complex and may not be adequately addressed by existing laws. As such, ethical considerations regarding AI often extend beyond legal requirements, focusing on what should be done rather than solely on what is legally mandated. This becomes particularly relevant in areas where laws struggle to keep pace with technological advancements.

Ethical AI aims to strike a balance between technological progress and upholding fundamental human rights, including privacy, autonomy, and fairness. However, resolving issues related to AI will require careful consideration by the relevant authorities and, potentially, the courts. It is expected that Macedonian courts will draw upon established principles from legal systems within the EU and adapt these to address domestic issues effectively.

Education and Science

One of the most significant challenges to the development of AI in North Macedonia is the scarcity of skilled professionals, which is exacerbated by the trend for educated young individuals to seek opportunities abroad.

In addition to potential amendments to the Higher Education Act (Закон за високото образование), the Macedonian government

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should explore strategies aimed at retaining talented youth trained in IT disciplines, crucial for the country's development. These strategies should address the retention of skilled individuals in high-demand IT professions, ensuring a sustainable talent pool within the country.

On this issue, it is worth recognising the efforts made by the FITD, which has launched an educational programme aimed at fostering AI development and comprehension, offering free education to over 1,000 high school students. It is foreseeable that such initiatives will expand as AI becomes more prevalent. These programmes are likely to incorporate lectures on fundamental compliance issues and challenges associated with AI. It must be stated that it is crucial for not only legal practitioners, but also developers and maintainers, to grasp, at least at a basic level, the legal conundrums posed by AI.

IT Sector
The IT sector in North Macedonia demonstrates a keen interest in the development and application of AI technologies. North Macedonia is increasingly recognised as an attractive destination for IT businesses due to favourable conditions, including competitive labour costs and high-quality work output.

The FITD has been actively supporting the growth of the IT sector by providing financial and material assistance to start-ups and promoting innovative solutions. These initiatives predominantly focus on AI-driven technologies, highlighting the sector's commitment to advancing AI development in the country. The FITD has mainly secured two ongoing programmes for this approach:

• a support programme through the "Project for the development of skills and support of

innovations" financed through a loan from the World Bank; and
• a domestic support programme through one of the pillars (the third pillar) of the plan for economic growth of the government of North Macedonia.

Both programmes aim to provide grants to start-ups, support the commercialisation of innovative solutions, and facilitate technological expansion in North Macedonia.

The IT sector plays a significant role in the country's economy, with many IT companies serving as key exporters. These companies typically secure contracts with global IT firms to provide services and products. It is reasonable to expect that this trend will extend to AI development, with Macedonian IT companies or branches established in Macedonia, making strides in the field of AI.

Moreover, the Macedonian ICT Chamber of Commerce (MASIT) plays an active role in promoting and fostering AI solutions among all its members. Through its initiatives, MASIT effectively communicates the legislative requirements to the government and provides insights to the private sector and emerging IT professionals regarding the practical and theoretical needs of AI operators for achieving success in business and career opportunities.

AI development could be classified as an activity within the IT sector, potentially falling under the purview of the technological-industrial development zones established in North Macedonia. These zones are created with the primary objective of attracting domestic and foreign investment to foster the development of new technologies, offering incentives to investors. Presently, certain IT activities are encompassed within the

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activities covered by these zones. However, due to the outdated version of the law currently in force, the existing legislation does not explicitly refer to AI development but rather broadly mentions IT programming. Specific requirements and regulations governing AI-based activities within these zones remain to be determined. It will be necessary to assess whether and to what extent the relevant laws governing these zones should be amended to accommodate the latest advancements in technology.

Notwithstanding the above, despite the favourable investment conditions in North Macedonia, the absence of both a suitable AI framework and a clear strategy could be perceived as a signal to both foreign and domestic investors that the country lacks the vision to seize these opportunities, potentially impeding its growth.

Administration and Public Services
As mentioned above, the FITD under one of its programmes incentivised the creation of the first digital administrative assistant powered by AI called ADA, to facilitate in certain public services for the citizens (investors) in North Macedonia.

High-ranking officials and government members in North Macedonia have expressed the necessity of advancing the modernisation and digitalisation of public service delivery methods. It is evident that such an approach would rely heavily on the utilisation and development of AI.

Given this direction, assuming that such a system would be developed and implemented by the Macedonian government, to allow its full functionality it is imperative to update and amend specific laws, most notably the General Administrative Procedure Act (Закон за општата управна постапка), but other related legal provisions as well, to effectively regulate the scope and manner in which public services could be provided by AI.

One of the primary concerns in this regard is the validity and accuracy of public documents and information issued by official public authorities, as well as the deadlines for exercising citizens' rights in administrative procedures. These fundamental issues could be distorted if a government AI system was to offer such public services to citizens. Therefore, laws governing the public sector must be revised and enhanced to align with the government's objectives of modernising and digitalising public services, similar to the legal frameworks governing the private sector.

Data Privacy
Undoubtedly, one of the most prominent concerns regarding AI is the significant potential for mishandling private data and the ensuing privacy challenges. This is primarily due to AI's core function as a machine learning technology, which involves the capacity to gather, process, and make decisions based on vast amounts of input data. Consequently, privacy issues are thrust to the forefront of AI discussions.

The Macedonian Data Protection Agency has echoed these concerns, particularly in light of the absence of a comprehensive AI framework in North Macedonia. A spokesperson for the data protection agency has clarified that:

" *[t]he data protection agency, following EU guidelines, monitors the development and use of artificial intelligence technologies in our country and strives for a balanced approach between the speed of technological changes and possible challenges to the rights to personal data protection, as one from basic human rights* ".

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While the Macedonian Data Protection Act (Закон за заштита на личните податоци) aligns with the EU GDPR, its scope alone seems insufficient to safeguard privacy in the context of AI development and usage. Consequently, North Macedonia will likely mirror the approach taken by the EU AI Act.

The EU AI Act, designed to regulate AI products, includes measures aimed at addressing privacy concerns inherent in AI activities. By ensuring compliance with data privacy guidelines, the AI framework indirectly safeguards consumers' privacy rights. This supplements the protection provided by the GDPR, which is rooted in the fundamental right to privacy and applies whenever personal data is processed.

A similar approach, involving the interplay between specific AI-mandated privacy protection and existing data protection laws, is anticipated in North Macedonia. Amendments to the Macedonian Data Protection Act and related legislation are expected to align with future AI legal provisions, ensuring clear synchronisation and minimising potential discrepancies regarding privacy protection.

Likewise, the Macedonian data protection agency is expected to play a pivotal role in the coming years regarding privacy concerns arising from AI. The agency's practical approach and policies must be aligned with those of European data regulators to ensure legal certainty for citizens facing issues that transcend domestic law and extend globally. By synchronising their mechanisms with European standards, the agency can provide a uniform framework to address such challenges. This harmonisation would offer citizens consistent protection and regulatory oversight in the face of evolving AI technologies.

Intellectual Property and AI

The intellectual property (IP) considerations arising from the development and use of AI are globally recognised as complex issues, and North Macedonia is no exception. The current legal definition of copyrighted work in North Macedonia does not allow copyright protection to inventions or assets created solely by AI, as spiritual human input is deemed necessary for a work to be copyrightable. The challenge lies in delineating the extent of human versus AI involvement in the creative process, which will serve as a guiding principle for courts and practitioners in addressing these issues.

On the other side of the process, the datasets – ie, the inputs used to train the AI – generally contain copyrighted (or otherwise IP-protected) works, which raises concerns regarding potential IP infringement. The existing IP legislation in North Macedonia suggests that generative AI's learning mechanisms may infringe on IP rights, unless proper licensing agreements are in place for the input data. Currently, there are no fair use exceptions in Macedonian IP laws that would permit such data mining activities by AI operators, especially in commercial contexts such as those typically seen in contemporary AI systems.

As the AI industry continues to expand, it is anticipated that both the judiciary and the legislature in North Macedonia will work to establish rules and principles governing the treatment of AI-generated works under IP law. These efforts are likely to – and should – draw on international and comparative legal frameworks, given the cross-border nature of these issues.

What Happens Next?

Based on the current circumstances, it seems that in the coming months we will see North Macedonia focus on two crucial aspects:

- the development of the infrastructure required to support the education, stimulation, and incentivisation of AI; and
- the development and adoption of the much-needed Strategy, along with ethical guidelines.

Without the fundamentals that should provide the basis for responsible AI innovation, North Macedonia might end up marginalised in the era of AI advancement and could end up falling behind its neighbours, despite being a generally attractive destination for investment, with highly educated experts and strong IT sector.

It is imperative for North Macedonia to exercise caution during the drafting of its local legal framework, ensuring it reflects the country's specific needs while remaining aligned with global trends and advancements. Rather than straightforwardly replicating the EU AI Act, the drafting process should prioritise customisation to foster effective regulation tailored to North Macedonia's specific circumstances.