Sweden

Johan Hübner, Delphi, Stockholm

Linus Larsén, Delphi, Stockholm

Felix Makarowski, Delphi, Stockholm

1. What is the understanding or definition of AI in your jurisdiction?

There is currently no statutory definition of the term 'artificial intelligence' (AI) in Sweden. Neither is there a clear-cut or generally agreed definition of the term.[453] However, some guidance on the understanding of AI in Sweden can be found in government documents and voluntary industry codes.

In a 2018 report on AI in Swedish business and society, Vinnova – the Swedish Government agency for innovation – described AI as follows: 'In this analysis, artificial intelligence is defined as the ability of a machine to imitate intelligent human behaviour. Artificial intelligence also denotes the area of science and technology that aims to study, understand and develop computers and software with intelligent behaviour.'[454]

The Vinnova report's definition of AI provides two important insights into what AI is and into how it is often understood in Sweden. The first insight is that, at its core, AI is computer software. The second is that AI refers to the area of science and technology related to machines imitating intelligent behaviour, often with human intelligence as a reference point.

In its national approach to AI, the Swedish Government refers to the definition of AI in the Vinnova report.[455] The government further adds that: 'AI is a broad field that encompasses many technologies, not least machine learning and deep learning. What distinguishes AI from other automation methods is the ability of AI technology to learn and become smarter over time.'[456]

The Swedish Government's national approach to AI provides two further insights into how AI is often understood in Sweden. The first is that, in most cases, when referring to AI, most people mention machine learning and deep learning technology. Machine learning and deep learning are subsets of AI research and technology. However, these technologies currently hold the most potential for

453 Vinnova, *Artificial Intelligence in Swedish Business and Society*, dnr 2017-05616 (2018), see https://www.vinnova.se/en/publikationer/artificial-intelligence-in-swedish-business-and-society accessed 6 July 2020.

454 *Ibid*.

455 Government of Sweden, *National approach to artificial intelligence* (2018), see https://www.government.se/491fa7/contentassets/fe2ba005fb49433587574c513a837fac/national-approach-to-artificial-intelligence.pdf accessed 6 July 2020.

456 *Ibid.*

developing complex AI systems and solutions. The second insight is that AI is usually understood to be technology that, on its own, learns and becomes more intelligent over time. This is achieved through exposing the AI to more data and by letting it attempt to solve problems it was programmed to complete.

Many discussions about AI in Sweden focus on ethics and trust. The discussions essentially come down to one question: how can we create AI that does the right thing but does not cause harm? This indicates that AI is viewed as a powerful, and potentially game-changing, technology, but it may be dangerous if it ends up in the wrong hands or is left to its own devices.

Since 2018, no legislative proposals or additional government reports have been published in which there has been an attempt to define AI. Instead, Sweden may be forced to follow the European Union's lead regarding the definition. In its proposal on an AI regulation (the AI Act), the European Commission defined AI systems as: 'Software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with.'[457]

The techniques and approaches listed in Annex I of the proposed AI regulation include machine learning approaches, logic- and knowledge-based approaches, and statistical approaches.[458] It is worth noting that the Commission has included several different subsets of AI research and technology in its definition, choosing not to focus too narrowly in its definition of AI. We note, however, that as the Commission's AI Act proposal will be subject to negotiations with the European Parliament and the Council of the European Union, the definition of the term AI may be subject to change.

2. In your jurisdiction, besides legal tech tools (i.e. law firm or claim management, data platforms etc), are there already actual AI tools or use cases in practice for legal services?

Actual AI tools are used in Sweden in a manner similar to other jurisdictions. Legal AI tools are used by a number of organisations in practice. We can identify two main categories of tools currently in use: tools used for document review/due diligence; and tools for proof-reading documents and other similar technologies.

The first category consists of a number of internationally marketed legal services, such as Luminance, Kira and RAVN, which identify trends and concepts in large sets of documents. These services can be used for due diligence processes and other cases in which the review of documents is required.

457 See https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-9585-01aa75ed71a1.0001.02/DOC_1&format=PDF accessed 25 April 2022.

458 See https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-9585-01aa75ed71a1.0001.02/DOC_2&format=PDF accessed 25 April 2022.

The second category, which contains services such as Contract Companion and the Swedish service Donna, includes functions to proof-read the style and format of contract documents, often as plugins to programs such as Microsoft Word.

Even though it is common that actors in Sweden use some legal AI technology, litigation software based on AI has a much more limited use than in it does, for instance, in the United States. One plausible explanation for this could the common law system used in the US and the differences in the nature of litigation processes.

An emerging additional category of AI technology which is expected to gain increased importance over the next few years, is data retrieval with the help of AI to handle organisations' legal knowledge management. There has recently been an increased interest in this type of solution where relevant legal documentation can be retrieved within an organisation's IT infrastructure using AI software specialised in natural language processing.

Besides Donna, there are additional examples of AI tools developed in Sweden, both by law firms and independent legal tech providers, sometimes in cooperation. In a few cases there have also been examples of in-house legal development of legal tech, one example being a tool for reviewing data processing agreements under the General Data Protection Regulation (GDPR).

3. If yes, are these AI tools different regarding: (1) independent law firms (2) international law firms (3) in-house counsel, and what are these differences?

The main variation between how AI tools are used in Sweden is based on their respective capacity in acquiring legal AI services. Large international law firms are, in general, the only actors that are able to develop their own legal AI services, and have done so internationally, implementing such services in Sweden.

Several 'off-the-shelf' products are more widely available, see for instance, the examples provided to question 2 (above). Such AI products are widely in use by large and medium size Swedish law firms (all large and medium-sized law firms asked had invested in AI according to a 2019 survey conducted by the Swedish Bar Association's magazine).

The adoption of AI technology is more unusual in smaller law firms, although there are exceptions and niche use cases where even smaller law firms have developed their own AI technology.

For in-house legal counsels there are a few off-the-shelf products available as well as a few examples of in-house developments such as the example provided under question 2 above. However, the general AI maturity of in-house legal departments still seems to be somewhat lower than at the large Swedish law firms.

The authors' understanding is that AI technology is limited to certain specific use cases in general among all law firms in Sweden, and not widely used within the scope of any organisation's core business.

4. What is the current or planned regulatory approach on AI in general?

The regulatory approach related to AI has historically not been very clearly defined in Sweden, although the work carried out in the area is increasing gradually. The Swedish Government has set out several general goals in its national approach to AI. The general ambition is for Sweden to be a leading country in exploiting AI's benefits, both through strengthened welfare and increased competitiveness.[459] Sweden has the ambition to become world leading in AI technology, and one ambition is for the legislative tempo to be increased and unnecessary regulatory obstacles preventing digitalisation to be removed.[460]

One area of importance, as indicated by the Swedish Government and other actors, is the creation of and adherence to ethical principles for developing and using AI technology, for instance, the guidelines issued by the EU High Level Expert Group on Artificial Intelligence (AI HLEG). Furthermore, specific Swedish guidelines have been issued by some stakeholders, including the Swedish IT and telecoms interest organisation (*IT & Telekomföretagen*).

Another area of importance that has been identified is the question regarding access and ownership of data, as will be outlined further below. It should also be added that much of Sweden's planned AI regulatory approach is coordinated within the EU framework, led by the European Commission, to increase both harmonisation and competitiveness with regard to the rest of the world.[461] The Swedish Government has expressed its ambition that Sweden should have a high level of competence and actively participate in the regulatory discussion regarding AI at an EU level. The government responded positively to the proposed AI Act presented by the European Commission in April 2021. It supported the approach, arguing that the proposal is based on human rights, including the right to privacy, freedom of expression, non-discrimination and gender equality, as well as human integrity, the protection of natural persons with regard to the processing of personal data and information and cybersecurity.[462]

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459 Government of Sweden, *National approach to artificial intelligence*, (2018) see https://www.government.se/491fa7/contentassets/fe2ba005fb49433587574c513a837fac/national-approach-to-artificial-intelligence.pdf accessed 6 July 2020.

460 Government of Sweden, *Hur Sverige blir bäst i världen på att använda digitaliseringens möjligheter - en skrivelse om politikens inriktning*, Skr. 2017/18:47, (2017), pp 19-20, see https://www.regeringen.se/rattsliga-dokument/skrivelse/2017/11/skr.-20171847 accessed 6 July 2020.

461 European Commission, *White Paper on Artificial Intelligence: a European approach to excellence and trust*, (2020) see https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf accessed 25 April 2022.

462 Government of Sweden, *Förordning om artificiell* intelligens, FPM 2020/21:FPM109 https://www.regeringen.se/faktapromemoria/2021/05/202021fpm-109 accessed 22 March 2022.

In mapping the view on the regulation of stakeholders, a concern raised is that is unclear how the current rules apply to the use of AI technology, particularly sector-specific legislation.[463] That could be for instance with regards to data protection and the specific rules for healthcare, where there are limitations on the purposes for which personal data can be processed.

In the beginning of 2021, the Swedish state research institute RISE issued 25 recommendations for the increased adoption of AI in Sweden as part of its 'AI Agenda for Sweden' (the 'AI Agenda').[464] The many legal challenges of AI technology are also discussed in the AI Agenda, with the proposal stating that laws need to be modernised and adapted to the new reality where AI is a normal part of society. Laws should, according to the proposal, be drafted from a human-centred ethical perspective and it is essential that they are drafted in a technology-neutral way. Emphasising that the EU is a key player, the proposal stresses the need to adapt EU-level regulation while maintaining data protection. Furthermore, the EU needs to ensure that the legal conditions for experimentation in AI are in place for AI to be effectively introduced into society.

The Agenda identifies certain legal issues as particularly important for enabling the use of AI. These involve data protection, patents, liability issues and product safety. It proposes, among other things, that the Swedish supervisory authority for data protection (*Integritetsskyddsmyndigheten*) should be tasked with developing simple and clear examples of how personal data can be handled in a legally secure way when using AI and that responsibility for automated decision-making should be clarified. It is also proposed that legislative changes are made to enable the further sharing of data and information.

In June 2021, the government gave four Swedish authorities the task of investigating how the public sector can improve its use of AI to strengthen the country's welfare system and the global competitiveness of Swedish society. The work includes dealing with the availability and access of data, information security, a trust model for automated decisions and an overview of digital infrastructure in the public sector from an AI perspective.[465]

To summarise, it is of central priority for the Swedish legislator to assess current legislation from an AI perspective and implement necessary changes. Moreover, support in the interpretation of new legislation is required from courts and public authorities. Access to data, information security and robustness, together with the ethical use of AI, are principles of central importance in the future regulatory approach.

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463 Agency for Digital Government (*Myndigheten för digital förvaltning (DIGG))*, *Främja den offentliga förvaltningens förmåga att använda AI*, I2019/01416/DF, pp 29-30, see https://www.digg.se/globalassets/dokument/publicerat/publikationer/framja-den-offentliga-forvaltningens-formaga-att-anvanda-ai.pdf accessed 6 July 2020.

464 RISE, *25 förslag* för *accelererad AI-användning i Sverige* (2021), see https://www.ri.se/sv/ai-agendan/forslag-for-accelererad-ai-anvandning-i-sverige accessed 25 April 2022.

465 Government of Sweden, *Uppdrag att främja offentlig förvaltnings förmåga att använda artificiell intelligens*, (2021) see https://www.regeringen.se/regeringsuppdrag/2021/06/uppdrag-att-framja-offentlig-forvaltnings-formaga-att-anvanda-artificiell-intelligens accessed 25 April 2022.

5. Which are the current or planned regulations on the general use of AI or machine learning systems?

Introduction

There are currently no AI laws in Sweden. Historically, the legislative approach in Sweden has been to pass technology-agnostic legislation which does not need to be changed with every advance in technology. As a result, existing legislation can, in many cases, be applied to AI or machine learning systems. However, existing legislation is, in some cases, ill-suited for dealing with the unique challenges brought about by AI. In some cases existing legislation has been updated to improve how challenges relating to AI are dealt with.

There are four areas of legislation that are of primary relevance to AI: torts and liability, intellectual property rights, data protection and privacy, and automated decision making. It is important to note that AI does not have legal capacity in Sweden (ie, electronic personhood), meaning that the natural and legal persons behind the AI carry all relevant rights and responsibilities relating to it.

Torts and liability

The primary Swedish legislation governing liability in tort (non-contractual liability) is the Tort Liability Act (*Skadeståndslagen*). The Tort Liability Act is applicable when a party has suffered injury or damage attributed to AI caused by another party's negligent or intentional acts. Furthermore, there must be a causal link between the negligent act and the injury or damage.[466] However, because AI cannot be held liable under Swedish law, claims for damages must be directed toward the persons behind the AI (eg, the programmer, the user or the person responsible for training the AI). Due to the autonomous nature of AI as well as to the black box problem, it may be difficult to establish negligence and a causal link between the actions of those behind the AI and the injury or damage.

A tortfeasor may also be held liable on other grounds, primarily strict liability, if there is support for such liability in other legislation. This is the case, for instance, for damages caused by defective products under the Product Liability Act (*Produktansvarslagen*). In most cases, AI technology falls outside the scope of the Product Liability Act because software is not a product under Swedish law. However, if the AI is embedded in a product, the Product Liability Act may be applicable to the product.

466 The legal assessment here may be complicated, but it is essentiality a requirement of foreseeability.

Intellectual Property Rights

Three main issues relating to AI are relevant to the protection of intellectual property rights (IPR): protection of data and input, protection of the AI itself, and protection of results and AI generated works. The primary relevant IPR legislation is the Copyright Act (*Upphovsrättslagen*). However, other legislation such as the Patent Act (*Patentlagen*) and the Trade Secrets Act (*Lag om företagshemligheter*) may, in some cases, also be relevant. Due to the difficulties in protecting IPR related to AI, companies and organisations may instead choose to protect them as confidential information and trade secrets.

The main rule in Sweden is that data, such as industrial or transaction data, is not eligible for copyright protection under law. However, if data is organised into a database, the database as a whole may be eligible for protection under the Copyright Act. Protecting AI technology under the current copyright framework also poses significant challenges. The Copyright Act protects the AI's code and algorithms but provides no protection for the idea or concept behind the AI – meaning that anyone can create similar AI using different code or algorithms. Finally, works autonomously created by AI are not eligible for copyright protection under Copyright Act. However, where humans and AI collaborate in the creative process, AI generated works may be eligible for copyright protection.

Data protection and privacy

The primary legislation governing data protection in Sweden is the GDPR.[467] This is complemented by the Swedish Data Protection Act (*Lag med kompletterande bestämmelser till EU:s dataskyddsförordning*), and sector-specific regulations such as the Patient Data Act (*Patientdatalagen*). Training and using AI requires large quantities of data. Where that data is personal data, the need to use large quantities of data comes into conflict with the GDPR and compliance with legislation must be observed.

The Swedish Data Protection Authority (*Integritetsskyddsmyndigheten*) (DPA) has issued a few decisions relating to the processing of personal data with the help of AI-systems. In 2019, the DPA issued an administrative fine to a municipality that used an AI system to register student attendance in classrooms. The DPA stated that the processing of personal data and sensitive personal data was not compliant with Articles 5 and 9 of the GDPR. In a more recent case from 2021, the DPA issued an administrative fine to the Swedish Police Authority for using a facial recognition application. The fine was issued on the grounds that the Swedish Police Authority: (1) had processed biometric data in breach of the Swedish Criminal Data Act (*Brottsdatalagen*); (2) had not

467 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

implemented appropriate technical and organisational measures; and (3) had not carried out a data protection impact assessment relating to the use of the facial recognition application.

Automated decision-making

The main legislation that governs automated decision making under Swedish law is the GDPR. Under GDPR, Article 22, data subjects have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects. GDPR Article 22 paragraph 2 contains some exceptions to the main rule, including, for instance, that automated decision-making is permitted when it is authorised by EU or Member State law, which also lays down suitable measures to safeguard the rights of data subjects.

Following the reform of the Administrative Procedures Act (*Förvaltningslagen*), Swedish public authorities are permitted to use automated decision-making when making decisions. This change was made to permit automated decisions with the aim of making public authorities compliant with GDPR, Article 22.

Planned legislation and legislative initiatives

The majority of legislative initiatives and planned regulations concerning the use of AI and machine learning in Sweden come from the EU. The Swedish Government is currently working on implementing the Digital Single Market (DSM) Directive[468] and the Open Data Directive[469] into Swedish law, which will potentially improve free data access in Sweden (see further question 6 below).

In 2017, the Swedish Government adopted an ordinance permitting the trial of autonomous vehicles on public roads. The following year, the government released its official government report on autonomous vehicles.[470] The report contains, inter alia, discussions on introducing a new definition for the term 'driver', regulating the obligations and responsibilities of drivers and owners of autonomous vehicles, as well as on introducing new crimes such as 'gross negligence during automated driving on roads'. To date, the report has not resulted in any new legislation.

468 Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC.

469 Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information.

470 Swedish Government Official Reports (SOU) 2018:16, *Vägen till självkörande fordon – introduktion,* see https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2018/03/vagen-till-sjalvkorande-fordon---introduktion accessed 6 July 2020.

6. Is free data access an issue in relation with AI?

Yes, free data access is an issue that relates to AI. Training and using AI requires large quantities of data. One of the main issues preventing free access to data is that there is, as a general rule, little to no IPR protection for data, meaning that data is free to use for anybody with access to it (see question 5). Many companies therefore try to protect data as confidential information and as a trade secret in order to maintain competitive advantage.

Most legislative initiatives to improve free data access have come from the EU. These include the Regulation on a framework for the free flow of non-personal data in the EU,[471] the Open Data Directive, the DSM Directive and Payments Services Directive (PSD2), and the proposed Data Act.[472] The European Commission's data strategy may provide further insights into planned EU legislative initiatives.[473]

Improving access to data relating to AI is important to the Swedish Government. In its national approach to AI, the government states that:

> 'Access to data is the lifeblood of AI and a crucial part of the infrastructure. […] Appropriate frameworks of principles, norms, standards and rules are therefore important prerequisites if Sweden is to realise the benefits of AI in society. Such frameworks must balance fundamental needs for privacy, ethics, trust and social protection with access to the data needed to realise the potential of AI.'[474]

As mentioned above, the Swedish Government is planning to implement the Open Data Directive, which will hopefully improve free access to public sector data related to AI. In March 2022, the proposed act implementing the Open Data Directive was referred to the Swedish Council on Legislation (*lagrådet*). The Swedish Government intends to bring the proposed act into force on 1 August 2022.

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471 Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the EU.

472 Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC.

473 European Commission, *A European strategy for data, 2020*, see https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020_en.pdf accessed 6 July 2020.

474 Government of Sweden, *National approach to artificial intelligence*, (2018), see https://www.government.se/491fa7/contentassets/fe2ba005fb49433587574c513a837fac/national-approach-to-artificial-intelligence.pdf accessed 6 July 2020.

7. Are there already actual court decisions on the provision of legal services using AI or decisions concerning other sectors that might be applicable to the use of AI in the provision of legal services?

To the authors' knowledge, there are not yet any legal cases in Sweden regarding the provision of legal services or other sectors of relevance related to the use of AI.

It should be added that there are few limitations on how legal services can be provided in Sweden, with no restrictions on practitioners not admitted to, or acting under the supervision, of the Swedish Bar Association. Practitioners are generally free to provide legal advice and services, including those given with the help of technology, with potential legal disputes expected to be ruled by the usual civil law legislation relating to contracts and torts.

8. What is the current status – planned, discussed or implemented - of the sectorial legislation in your jurisdiction on the use of AI in the legal profession or services that are traditionally being rendered by lawyers?

As mentioned above, there are generally few regulatory limitations in Sweden regarding the provision of legal services. What is regulated is, generally, the procedures of court and the lawyers practising under the supervision of the Swedish Bar Association (membership of which in general, with a few exceptions, is not compulsory for the provision of legal services in Sweden). What could be expected is an oversight of the Swedish procedural legislation for courts in conjunction with possibility to use AI technology in Swedish courts. A government inquiry has already been made into public authorities' use of AI for making legally binding decisions and how legislation should be adapted.[475]

9. What is the role of the national bar organisations or other official professional institutions?

The Swedish Bar Association has yet to give recommendations specifically on the use of AI technology. The bar association has, however, discussed questions regarding AI in an article its monthly magazine *Advokaten* in issue 4 from 2019.[476] In the article, the bar association made no recommendations for lawyers acting under the bar.

475 Swedish Government Official Reports (SOU) 2018:25 – *Juridik som stöd för förvaltningens digitalisering*, see https://www.regeringen.se/rattsliga-dokument/statens-offentliga-utredningar/2018/03/sou-201825 accessed 6 July 2020.

476 See https://www.advokaten.se/Tidningsnummer/2019/nr-4-2019-argang-85 accessed 6 July 2020.

Of related significance are the guidelines on how lawyers under the bar can use external IT services.[477] This may have an impact on the use of AI as many Swedish law firms use 'off-the-shelf' products which are often provided as cloud services. A significant question is, for instance, the storage of confidential information related to clients, where adequate protection must be ensured both from a regulatory and technical perspective. This is especially the case where information is stored in countries other than Sweden, as could be the case when Legal Tech service providers are being used by a lawyer or law firm.

In 2021 the Swedish Bar Association provided feedback on the AI Act proposed by the European Commission.[478] The feedback was critical, citing for instance that the regulation has been given too broad a scope. The Swedish Bar Association also identified risks which might lead to discrepancies in application in different EU Member States that could create legal uncertainty, an inappropriate outcome, particularly in light of the severe penalties that can be imposed under the proposed regulation.

477 Swedish Bar Association (*Advokatsamfundet*), *Uppdaterad vögledning om användningen av externa IT-tjänster i advokatverksamhet,* (2019), see https://www.advokatsamfundet.se/Nyhetsarkiv/2019/april/uppdaterad-vagledning-om-externa-it-tjanster-vid-advokatverksamhet accessed 6 July 2020.

478 See https://www.regeringen.se/49eb04/contentassets/59dff9749d5e4cfa8d51146dd026ff62/sveriges-advokatsamfund.pdf accessed 22 March 2022.