



# AI GOVERNANCE IN AUSTRIA AND AUSTRALIA: LEARNING FROM THE ANTIPODEANS

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## ABSTRACT

In all OECD countries, discussions abate around the question of how to best regulate artificial intelligence (AI) to exploit the economic and social potential of this technology, while minimising risks. The article asks the question of how to govern AI and what role the state might take, with respect to questions of regulation and utilization of AI in its own ranks. Case studies for comparison are Austria and Australia, two democratic high-income countries with differences in geographic location, political system, and economic structure. While both countries aim for a balance of innovation, ethics, and regulation in their AI strategy, the chosen elements for obtaining this balance vary remarkably regarding structures, processes, and tools.

**Keywords:** AI, AI governance, Austria, Australia, policy learning

The economic prospects of artificial intelligence (AI) are substantial, with projections indicating its impact on productivity, GDP growth, and employment patterns worldwide. By 2030, the AI market is expected to drive a significant portion of the global economy, potentially contributing \$19.9 trillion in economic value, and steering around 3.5% of global GDP (IDC, 2024). In the U.S., generative AI alone could contribute between \$2.6 and \$4.4 trillion annually to GDP, driven by productivity gains and labour automation (McKinsey, 2023). Even when the figures may be debatable (Acemoglu, 2024), one thing is quite clear: the economic impact of AI is sizable. However, the economic impact of AI adoption is not uniform globally. According to the International Monetary Fund (2024), economies with strong digital infrastructure and skilled labor,

such as those in advanced markets, are better positioned to capture AI's benefits.

Therefore, and despite frequent warnings that the "AI hype" is coming to an end anytime soon (e.g., by the inventor of the much-hyped tech hype-cycle: Gartner, 2017), the global race for AI experts, technologies, corporations, and infrastructure is in full effect. All OECD countries feature AI policies, governance structures, and increasingly, also regulations (Galindo et al, 2021; Huw et al, 2023; Walter, 2024). Moreover, policymakers all over the world are thinking about how to foster their own AI eco-systems, how to support these, how their efforts compare to others - and how they could evaluate their accomplishments in this matter (OECD, 2024a). Therefore, AI policy papers, structures, and measures will become subject to evaluations before long.

When thinking about this worldwide competition, it is also important to keep in mind that AI, similar to other technologies, comes with risks attached (Biegebauer et al, 2022; 2024). AI models learn from vast datasets that often inadvertently embed societal biases, leading to discriminatory outcomes in fields like hiring, lending, and law enforcement (Zou and Schiebinger, 2018). This risk is particularly concerning for algorithms used in decision-making for sensitive areas, such as criminal justice or healthcare - the prime reason for the EU to classify AI systems focusing on these societal areas as high-risk applications in its AI Act (EU, 2024).

From an innovation perspective, interesting questions to answer are: how can we govern artificial intelligence and exploit the economic and social potential of this technology while minimising its risks? What might be the role of the state, especially with respect to questions of regulation and utilization of AI in its own ranks?

In Europe, we are used to compare ourselves with each other, most often looking at the innovation leader countries in the North of the continent (EC, 2024). Yet, perhaps we could also learn from looking a bit farther, and once we have encouraged ourselves to do so, why not look as far as you can - to Australia.

I have a specific angle to this question, since I stayed in Australia from March to June 2024 as a distinguished visiting scientist with the national science agency Commonwealth Science and Industry Research Organization (CSIRO) upon invitation of Justine Lacey, the leader of CSIRO's Future Science Platform. This provided me with the opportunity to talk to AI and AI ethics experts in Brisbane, Sydney, and Canberra. My discussion partners came primarily from CSIRO, where I could work together with people from locations over all

of Australia, but also the University of Queensland, the Technical University of Queensland, as well as the Department of Industry, Science and Resources (DISR), the Digital Transformation Agency (DTA), and the Ministry for Agriculture, Fisheries and Forestry (MAFF), where I had a presentation on policy coordination - as it turns out, a topic quite relevant to AI governance.

Moreover, I am leading the AIT AI Ethics Lab of the AIT Austrian Institute of Technology, where a team of social and computer scientists develops trustworthy AI and works on ethical and legal questions pertaining to AI. Amongst other things, we have been tasked by the Federal Ministry for Arts, Culture, Civil Service and Sport to create practical guidelines for AI in the public administration. These should literally guide civil servants in their daily work and provide a framework for reflection of digitalization and AI, technology assessment, ethics, and training standards (BMKÖS, 2023, 11). The guidelines were co-developed with the BMKÖS Department for Strategic Performance Management and Public Service Innovation, with a second and enlarged version coming out a year after the first one (BMKÖS 2024b).

A comparison between Austria and Australia can provide some interesting results regarding AI policies, governance structures, and regulations. To obtain a better understanding of differences and similarities regarding these, a comparison should start with a short look at economic and political framework conditions influencing AI governance, before turning to the topic of AI governance itself.

## **AUSTRALIA AND AUSTRIA: ECONOMY AND POLITICS**

The two countries have a number of things in common, for example in terms of GDP per capita, but also their role in global digitalization with both countries arguably not being home to a leading AI eco-system. Yet, there are also some differences to be reckoned with. Here, size matters - in terms of population, country, economy (i.e., key factors of production), as do differences in the government structures.

Australia now has 26 million inhabitants, with a GDP of USD 71,930 per capita in 2022 (OECD, 2024b), living on 7.7 million km<sup>2</sup> and an economy highly dependent on mining - close to 10% of GDP - and agriculture. Exports of minerals, particularly coal, iron ore, and gold, are important. However, the Australian government is increasingly prioritizing diversification through services and

knowledge-based industries, including finance, education, and healthcare. The Australian economy's robust trade relationships with Asian markets, particularly China, have also influenced its economic landscape (Australian Bureau of Statistics, 2024).

Austria, on the other hand, has 9 million inhabitants, with a GDP of USD 71,014 per capita in 2022 (OECD, 2024b), living on close to 84,000 km<sup>2</sup> and a more industrialized and diversified economy, rooted in manufacturing, engineering, and financial services. Similar to Germany, industrial production in mid-tech sectors is important, specifically machinery, automotive parts, and chemical industries. Situated at the heart of Europe (to cite a slogan of the Austrian tourism industry, an important sector for both countries), Austria benefits from EU trade policies and a strong relationship with neighboring Germany (Statistics Austria, 2024).

The Australian political system is half-jokingly called "Wash-minster" system, pointing at similarities to both the US ("Washington") and the UK ("Westminster"), with a strong second chamber in parliament, an active state level (both similar to the US) and a prime minister heading government (similar to the UK). Its policies are shaped by a two-party system dominated by the Liberal-National Coalition and the Australian Labor Party, fostering stability. Australia's foreign policy has traditionally aligned with Western allies, although its proximity to Asia has led to greater engagement with the Asia-Pacific region.

Austria is a federal republic featuring an important state level and a two-chamber parliament, one of which (the Bundesrat supposed to represent regional interests) is weak, however. Austria's political landscape is multiparty, with a coalition government structure, fostering a collaborative but - with the two formerly largest parties, Social Democrats and Conservatives, shrinking - increasingly complex governance model. Austria's EU membership places it firmly within the framework of European policies, particularly in areas such as trade, innovation, and environment. Austria also maintains a longstanding policy of neutrality, which influences its foreign policy and contributes to a unique position within the EU.

Differences between the two countries also pertain to the Anglo-Saxon pragmatic way of approaching (case) law, business, and government in Australia ready to address problems by creating surprising combinations of factors - the "Wash-minster system" itself being an example, on the one hand. On the other hand, in Austria the Germanic principle-led approach is dominant, to (Roman) law, business, and government, ready to sometimes go for the abstract axiomatic argument.

A short side remark on AI ethics: epitomizing the differences between Germanic and Anglo-Saxon thinking is the difference between Immanuel Kant and Jeremy Bentham. Both are important 18<sup>th</sup> century European Enlightenment thinkers with a sizable impact on philosophy and specifically the applied philosophy subfield AI ethics, featuring different approaches to moral philosophy, but also politics and law. Kant's categorical imperative ("act only according to that maxim whereby you can at the same time will that it should become a universal law") and Bentham's fundamental axiom ("it is the greatest happiness of the greatest number that is the measure of right and wrong") leads to, amongst other things, also different angles on how to think about the ethical imperatives regarding AI (Stahl, 2021), with ramifications for, e.g, policy imperatives.

Regarding AI, both countries are trying to mitigate the impact of US and Chinese hyperscalers by working together to strengthen their AI ecosystems. The US corporations Alphabet, Amazon, Meta, Apple, and Microsoft mostly are seen as cooperation partners, e.g., in initiatives such as the Australian National AI Centre NAIC. At the same time the danger of being left out has driven both Australian and Austrian governments to engage in funding programmes such as AI Mission Austria (with the three largest national research funders joining forces), and the invitation of inbound investments, such as the Australian federal government, together with the Queensland government, investing AUD 1 bn into quantum computing firm PsiQuantum in 2024.

Table 1 offers an overview over some of the key characteristics of the economic and political framework conditions for AI governance Australia and Austria.

**Table 1. Economic and Political Framework Conditions Australia and Austria**

	Australia	Austria
<b>Country size</b>	7,700,000 km <sup>2</sup>	84,000 km <sup>2</sup>
<b>GDP per capita</b>	USD 71,930 (2022)	USD 71,014 (2022)
<b>Structure political system</b>	"Wash-minster" with medium strong executive and strong state-level representation	Continental European with strong executive and weak state-level representation
<b>Supranational context</b>	Anglo-Saxon states cooperation, Commonwealth of Nations	European Union
<b>Reaction to global AI competition</b>	Cooperate with US AI leaders	Cooperate within EU structures

<b>Approach to ethics</b>	Anglo-Saxon European Enlightenment based (pragmatist)	German European Enlightenment based (principle based)
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## AI GOVERNANCE: ACTORS AND POLICIES

After having described some of the key elements of the AI governance framework conditions, we will take a comparative look on actors and policies of AI governance, especially ministries, agencies, policy support, and coordination structures of the field.

### AUSTRALIA

Regarding AI governance the main government players in Australia are the Department of Industry, Science and Resources (DISR) and the Digital Transformation Agency (DTA). Other ministries have smaller portfolios, such as the Department of Infrastructure (catchy slogan: Connecting Australians!), which oversees the Australian Communications and Media Authority ACMA, dealing with disinformation, among other things.

DISR is therefore also responsible for the key documents of Australian AI governance, e.g., the national AI Ethics Framework (2019), 'Applying the AI Ethics Principles' (2024b), and 'Safe and responsible AI in Australia' (2023), as a result of which a series of participatory events took place (partly interministerial, trans-disciplinary, encompassing various economic sectors, online and offline), with the preliminary result of an 'Australian Government's interim response' (2024a) and the prospect of various further governance activities, including an AI Act.

Interestingly, the AI Ethics Framework rests on a set of principles mostly identical with their EU counterparts, specifically the European Commission's High-Level Experts Group Ethics Guidelines (2019). However, subsequent documents have a more industry-friendly approach, which in comparison to their European counterparts have less of an emphasis on human rights.

In Australia, agencies play a key role: in addition to DTA and ACMA, e.g., the Office of the Australian Information Commission (OAIC) on data protection and freedom of information, the eSafety Commissioner on online safety, and the Privacy Commissioner.

In fact, one of the key differences between Australian and Austrian (or most other European countries) policies regarding US Tech corporations is the

Australian position to stand their ground in cases of rights infringement. This seems to be supported by the independence of regulators to, amongst things, interpret basic rights such as privacy. Independent regulators interpret their role more political than their EU counterparts, which often act in a more technocratic fashion. An example is the conflict of the Australian eSafety Commissioner Julie Inman Grant with X-owner Elon Musk's understanding of freedom of speech, which frequently entails ignoring (or even actively engaging in) hate speech and disinformation (The Guardian, 2024).

When it comes to AI, DTA has the central operational role among the agencies and is responsible for working with AI within the administration, including a corresponding DTA/DISR task force. The DTA is responsible for the Australian Government Architecture AGA, a public database containing all government documents relevant to digitisation, as well as for the Digital Review of Digital Competency, which covers all government agencies (although this has only been carried out once so far and has led to considerable controversy) and the Investment Oversight Framework for all government ICT investments. Under the auspices of the DTA Australian Public Service (APS) Trials were held for the first time in 2024, with more than 50 agencies (including the national science agency, the Commonwealth Science and Industry Research Organization CSIRO) trialling the MS Copilot software, resulting in an impressive evaluation report from which there is a lot to learn (DTA, 2024).

At state level, Queensland and New South Wales are innovating and early on have developed frameworks, guidelines, and education programmes for AI, with other states following more reluctantly. Data and Digital Minister's Meetings between federal and state governments have been introduced more recently.

Science policy support is coordinated, with the science agency CSIRO as a hub. The current chair of the National Science and Technology Council formerly was CSIRO Chief Scientist. CSIRO organises also the National AI Center NAIC and the Responsible AI Network RAIN, both of which are funded by DISR, and was also commissioned to create the national AI Ethics Framework with its 8 principles (comparable to the EC HLEG principles, see EC, 2019). Side note: in summer 2024 NAIC has become integrated into DISR, with CSIRO organizational support ongoing.

In 2024, for several months, a temporary Artificial Intelligence (AI) Expert Group was established by DISR to advise government on technical, and regulatory expertise on AI.

The key traumatic incident for Australian AI governance is the Robodebt scandal involving a governmental automated debt recovery system targeting welfare recipients for alleged overpayments (cp. Royal Commission into the Robodebt Scheme 2023). The algorithmic decision-support system was initiated in 2015 by the Department of Human Services under the pretext of increasing efficiency in identifying and recovering debts from overpaid social welfare benefits.

The programme faced widespread criticism and legal challenges for placing the burden of proof on welfare recipients to disprove these automated debt claims—a reversal of the standard legal responsibility typically held by government. This practice was found to be legally unsound by the Federal Court of Australia in 2019, which led to a class-action settlement of AUD \$1.2 billion to affected individuals.

In 2022, a Royal Commission was established to investigate the origins and failures of the Robodebt scheme. It identified significant governance issues, lack of oversight, and ethical failings within the departments involved (cp. Royal Commission into the Robodebt Scheme 2023).

## **AUSTRIA**

Austrian AI governance represents a multi-layered and collaborative approach. Key actors in the federal government are the Federal Chancellery (BKA) and the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation, and Technology (BMK), central to shaping AI policy, and jointly coordinating the AI Policy Forum, which integrates the federal ministries in an effort to ensure the alignment of the Austrian AI governance. Mind you, government coordination is no easy task (Dinges et al 2018)!

The policy forum was established in 2021 and its trick is to be a thematic working group to support the federal ministries in applying the AI strategy AIM AT 2030 (BMK and BMDW, 2021) - and developing it further. It promotes the exchange of experiences and approaches to the use of AI in the federal ministries and their discussion of current issues relating to artificial intelligence. A key element of the AI Policy Forum is the establishment of ad hoc working groups on various AI-related topics. For example, a working group has been established on the implementation of the AI Act of the EU. The forum tries to stay connected to the Austrian AI eco system and, e.g., invites experts from research, business, social partners, and NGOs to showcase their perspectives.



In this way a number of governance elements have already been created, from an AI eco-system map to a list of AI projects within the federal government, and a webpage for the national AI strategy ([www.ki-strategie.at](http://www.ki-strategie.at)) hosting policy measures and good practice examples for AI governance from ministries, research institutions, and international organizations.

Austria's overarching framework for AI governance is laid out in the AIM 2030 strategy, which was launched in 2019 and updated in 2024. AIM AT 2030 emphasizes AI's role in achieving national goals in innovation, sustainability, and public welfare, aligning with the broader EU objectives.

Austria has established an institutional framework to support its AI agenda, with prominent roles for both National and European Digital Innovation Hubs. These hubs, supported by the Austrian Research Promotion Agency (FFG) and coordinated under programs such as Horizon Europe and Digital Europe, are to foster AI innovation and provide support for digital transformation across sectors.

At the policy advisory level, FORWIT (Austrian Council for Sciences, Technology, and Innovation) provides strategic advice to top-level policymakers. FORWIT brings together industry leaders, academic experts, and representatives from public institutions to address emerging issues also in AI and recommend policy adjustments.

The bulk of scientific policy support is organized through a community of policy advice organizations such as the AIT Austrian Institute of Technology, which is partially owned by the state, represented by BMK. In addition, AIT researchers not only develop AI, but also work in AI ethics and support the government, e.g., through partaking in debates on research programs and in co-developing policy documents such as the practical guidelines for AI in the public administration (BMKÖS, 2023; 2024b), and the AI Guidelines (BMKÖS, 2024a).

Austria's Service Desk for AI located at the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) is an effort to make AI accessible and beneficial for both companies and the public. The service desk is to support SMEs, guide the public on AI-related issues, and build trust by providing transparent and practical information.

Both AI Advisory Board and AI Stakeholder Forum were created in 2024. The Advisory Board is an additional body within RTR consisting of 11 members from ethics, research, economics, law, and technical sciences advising government on AI. The AI Stakeholder Forum is an initiative organised by BKA and BMK

bringing together actors from federal government and various stakeholders outside government who are involved in or affected by the topic of AI in different ways.

Regulatory discussions and documents on AI governance in Austria are deeply embedded in European regulatory processes. Being part of the EU, Austrian civil servants, and experts have been part of European regulatory activities early on, most importantly in the AI Act, the first comprehensive binding regulation on AI in the democratic world.

Accordingly, documents such as the Austrian AI Strategy AIM AT 2030 (BMK and BMDW, 2021), the AI Guidelines (BMKÖS, 2024a), the Strategy Digital Competencies Austria (BMF, BMKOES, BMAW, BMBWF, 2023) or the Practical Guidelines on AI in the Public Administration (BMKÖS, 2023; 2024b) are all heavily influenced by EU discussions.

Regional actors also play a role in Austrian AI governance, Vienna being the leading example, having established its own guidelines, training, and research initiatives already some time ago. Other states such as Styria, Carinthia, and Upper Austria more recently have started initiatives driven by state and industry players.

There is a place for niches in the global AI race, exemplified by an Austrian strength in quantum computing, with several strong research groups and the legacy of Anton Zeilinger, the 2022 physics Nobel Prize winner - the second Nobel Prize in quantum physics for an Austrian, after Erwin Schrödinger in 1933 (indeed, the guy with the, depending on your point of view, more or less dead cat). An AIT working group is successfully translating basic science results into quantum encryption products, several firms are working on encryption technologies.

With regards to AI in government there have been no major scandals in Austria. However, the topic became part of public discussions already several times, e.g., when there was a debate on a chat bot of the Public Employment Service AMS based on Open AI's ChatGPT, which was found to be biased against gender and ethnicity (Der Standard, 2024a).

**Table 2. Actors and Policies of AI Governance in Australia and Austria**

	Australia	Austria
<b>Main government actors: ministries and agencies</b>	DSIR (industry and broad public), DTA (public administration)	BKA (coordination), BMK (industry, applied research), BMKÖS (public administration)
<b>Main government actors: independent regulators</b>	ACMA, OAIC, eSafety Commissioner, Privacy Commissioner	RTR (incl. AI Service Desk), DSB Data Protection Authority
<b>Independent regulators' stance</b>	Political interpretation of legal framework	Technocratic interpretation of legal framework
<b>State-level activities</b>	Large states (NSW, QLD) almost faster than federal level	Large city-state Vienna on par with federal level
<b>Policy coordination</b>	DISR/DTA federal level, DDMM federal-state level	AI Policy Forum (12 federal ministries), more informal federal-state meeting formats
<b>Scientific policy support</b>	National science agency CSIRO as hub	FORWIT (policy related), e.g., AIT (science related), AI Advisory Board (transdisciplinary)
<b>Public debates on policies</b>	High key: Robodebt scandal politicized discussions	Low key: ChatGPT-based AMS Infomat output biased

## NOW THAT WE HAVE COME TO KNOW EACH OTHER...

By way of drawing conclusions, several observations can be made. First, the location determines the perspective. If you are located in the midst of an ocean, you will have to look farther abroad than when your location is in the midst of a continent consisting of dozens of small states. Whilst Australia is acutely aware of what Europe, the US, and China are doing, Austria is concentrated on the EU. More concretely, whilst Austria focuses very much on the EU, Australia has oriented itself towards the international British-led AI Safety process, which started with the Bletchley Park Declaration in November 2023 (PMO, FCDO and DSIT, 2023), however taking regularly notice in their policy documents and

reacting accordingly to developments in the EU and the US alike (e.g., DISR, 2023; 2024a). There are pros and cons to each, provided the limited policy intelligence resources of small countries. But certainly, Austria could learn something from looking a bit farther than just the EU.

Then again, the EU AI Act from 2024, with all its gaps and flaws, is promising in terms of trustworthy AI. It has been charged by NGOs for being overly permissive, and by industry for stifling innovation. Both actor groups have a point, but there comes the time, when - after years of negotiation - you have to draw a line and issue a regulation. The US have followed a different path and, for the time being, ended up with literally dozens of bills on federal and state levels, which never managed to be passed, because lawmakers feeling the pressure from big tech companies could not come to a decision. Similarly, until now the Australian debates whether there should be a national AI law or not, have not come to the point of actually working on a possible regulation. And although it is much more likely that Australia will pass such a law than the USA under President Trump (and the increasingly libertarian IT industry in Silicon Valley), valuable time will have passed before the governance of AI can become more tangible.

Indeed, Australia has chosen a particularly innovation- and business-oriented approach to AI regulation with a focus on international competitiveness. The regulatory approach chosen by the EU (with Austrian policy-makers partaking in the processes) stresses ethical thinking, data, and civil rights protection. The question remains if an emphasis on ethics and civil rights automatically translates into innovation hostility (as the argument sometimes goes) or if “AI made in Europe” in the future might stand for “trustworthy AI”, which might well make a difference for the consumers and thus become a strength instead of a weakness.

The Australian governance system has been proliferating agencies, regulators, and policy documents. Independent regulators have proven their strengths by taking on international actors such as US tech giants - with governments and NGOs all over the world closely watching (and sometimes acutely envying) Down Under. Austrian AI governance is more attuned to a coordination and/or centralization of actors. Moreover, there is little political will to confront US or Chinese hyperscalers. Yet, the coordination attempted by the AI Policy Forum on the ministerial shop floor level is remarkable and innovative, as it leads to actual interorganizational exchange and learning.

Regarding the nuts and bolts of the civil service, i.e., the utilization of AI applications for the daily business of government, the handouts of the DTA are outstanding in their good accessibility and practicality. Moreover, the AGA is

an excellent place to find AI related documentation. However, and I readily confess to be anything but impartial on this matter (being one of its authors), the guidelines on AI in the administration commissioned by the BMKÖS (2023, 2024b) may have no equivalent, combining technical, legal, ethical, and civil service perspectives on AI in a single document. The guidelines have been developed and tested with civil servants from several ministries to include their domain knowledge and viewpoints.

The civil service in both countries have engaged on working with AI solutions, certainly on an individual, but also increasingly on a collective organizational level. The Australian DTA has carried out its Australian Public Service (APS) Trials with more than 50 agencies, resulting in a very interesting process of learning. The ensuing evaluation report is something also actors abroad can draw from (DTA, 2024).

In spring 2024 the Austrian Ministry of Education, Science and Research (BMBWF) has started a test of AI applications such as OpenAI's ChatGPT via Microsoft's cloud computing platform Azure for 250 civil servants with positive results and plans open access to these AI applications for all 1.200 staff members (Der Standard, 2024b). According to the implementation plan of the Austrian AI strategy AIM AT 2030 from fall 2024 other federal ministries plan to follow swiftly (BKA and BMK, 2024). An evaluation of these activities similar to the Australian APS Trials would be helpful for learning from experience.

The Australian National AI Center NAIC has developed a multitude of engaging activities primarily for the good of society and SMEs, including conferences, workshops, training videos, as well as informational material of all sorts and for different target groups. It cleverly includes the Responsible AI Network RAIN, which like NAIC is a cooperation of business, research, and civil society organizations. The Austrian Service Desk for AI has focused on different set of activities, which are similarly important. However, a perspective such as offered by RAIN currently is missing in Austria.

What has been recognized in both countries is that a balanced combination of innovation, ethics, and regulation is crucial for a sustainable AI strategy. Yet chosen solutions display remarkable variety. To summarise: similar problems, different solutions - and clear potential for both sides to learn from each other at the level of structures, processes, and tools.

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