

AI World Society and AI-Government

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The AIWS 7-Layer Model

The Artificial Intelligence World Society (AIWS) is a set of values, ideas, concepts and protocols for standards and norms whose goal is to advance the peaceful development of AI to improve the quality of life for all humanity. It was conceived by the Michael Dukakis Institute for Leadership and Innovation (MDI) and established on November 22, 2017.

AIWS has developed the *AIWS 7-Layer Model*. This model establishes a set of norms and best practices for the development, management, and uses of AI so that this technology is safe, humane, and beneficial to society.

AIWS recognizes that we live in a chaotic world with differing, and sometimes conflicting, goals, values and norms. Hence, the *7-Layer Model* is aspirational and even idealistic. Nonetheless, it provides a baseline for guiding AI development to ensure positive outcomes and to reduce pervasive and realistic risks and related harms that AI could pose to humanity.

The Model is based on the assumption that humans are ultimately accountable for the development and use of AI, and must therefore preserve that accountability. Hence, it stresses transparency of AI reasoning, applications, and decision making, which will lead to auditability and validation of the uses of AI systems.

Layer 1: Charter and Principles: *To create a society of AI for a better world and to ensure peace, security, and prosperity*

AI “society” is defined as the society consisting of all objects that have the characteristics of Artificial Intelligence. Any object in this society is an AI Citizen. There must be rules that govern the behaviors of these AI Citizens, as there are rules that govern human members of society. The standards and requirements for an AI citizens must also include the need to manage and supervise them. AI citizens are to be transparent in structure and process, and AI citizens are to meet AIWS Standards of AI citizenship.

- AI Citizens cannot threaten or put at risk the health, safety, dignity and freedom of any human.
- AI Citizens cannot take actions which violate the law and social norms of the societies in which they are deployed.
- The design and performance of an AI Citizen must be sufficiently transparent so as to expose its behavior and ensure that its behavior will not harm other AI Citizens or humans, nor violate the law and social norms of the societies in which they are deployed.
- The performance of AI Citizens must meet basic standards of auditability and be subject to audits to ensure compliance with the above.

Layer 1 establishes a responsible code of conduct for AI Citizens to ensure that AI is safely integrated into human society.

Layer 2: Ethical Frameworks: *Guidelines for the Role of AI in Building the Next Generation Democracy*

The behavior of AI Citizens must be ethical by normal human and social standards. It must conform to the ethics codes of UNESCO and the United Nations. To be considered ethical, such behaviors must be:

- Honest, open and transparent.
- People-centric – in the service of people
- Respectful of the dignity of humans, their privacy, and the natural environment
- Deployed in the service of individuals, groups, and governments that are themselves ethical.
- Promote and foster tolerance.

Layer 2 is based on the ethics codes of the UN and UNESCO. Therefore, AI citizens must, first and foremost, respect human dignity, virtue and ethics. The ethics layer will also draw on best practices and ethics codes of top businesses and organizations involved in AI research such as IBM, IEEE, the Berkman Center, and MIT Media Lab.

Layer 3: Standards: *Standards for the Management of AI Resources and Development*

Establishment of AIWS Standards and empower the Practice Committee to develop, manage, and promote standards and other critical requisites of an AI citizen.

The Practice Committee will engage with governments, corporations, universities, and other relevant organizations to facilitate understanding of AI threats, challenges etc. These entities are ultimately responsible for implementing ethical AI standards and norms.

Layer 3 is focuses primarily on AI development and resources, including data governance, accountability, development standards, and the responsibilities of practitioners involved directly or indirectly in creating AI.

Layer 4: Laws and Legislation: *Laws for the Role of AI in Building the Next Generation Democracy*

Advise political leaders in crafting the best possible rules, regulations, and legislation regarding AI technologies. This layer will follow and apply Layers 1, 2, and 3 to transform their guidelines into legal and legislative concepts.

Layer 4 focuses on policies, laws and legislation, nationally and internationally, that govern the creation and use of AI and which are necessary to ensure that AI is used for humane purposes.

There is danger in AI development that is devoid of appropriate ethical and regulatory frameworks. Public and private entities are already considering ways to regulate AI. Regardless of what they may accomplish, there is further risk that the rate at which AI advances will outpace development of these frameworks. The goal of this layer is to guide leaders in these endeavors so that their work is responsible, effective and timely.

Layer 5: International Policies, Conventions, and Norms: *Global Consensus*

To be effective, the development of AI in the support of humanity depends on a global consensus. International conventions, regulations, and agreements for AI development in support of Next Generation Democracy are therefore essential for the success of AIWS.

This layer will promote the adoption of the AIWS ethics, standards and legislative proposals consistent with, and integrated in to, international law through conventions, regulations, treaties, and agreements.

Layer 5 will focus on the global application and diffusion of AIWS-established norms and concepts. The responsible development and use of AI depends on acceptance by the global community. If even one state or actor uses AI irresponsibly or maliciously, the threat they could pose would be significant.



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AIWS calls upon the leaders of the G7 nations to sign an agreement on the Ethical Development and Deployment of AI. Such an agreement would prohibit the development of

autonomous AI weapons and mandate that AI be developed only for peaceful purposes. The threat posed by a potential AI arms race is alarming and states must act now to prevent such a possibility.

Layer 6: Public Services and Policymaking: *Engage and Assist Political Leaders*

AI can assist political leaders in effective and practical decision-makings by providing AI-based evaluations, data, and suggestions to solve social and political issues.

Layer 6 emphasizes the role AI should play in providing analysis and data to inform political leaders. While AI per se cannot perform the functions of leadership, it can assist leaders. Examples of current AI projects for policymaking include SAM (the world's first AI politician, created and operating in New Zealand) and GROW360 in Japan.

Layer 7: Business Applications for All of Society: *Engage and Assist Businesses*

As AI is deployed to be used by business, industry, and private citizens, it is essential to that AI technologies remain benevolent and free from risk of misuse, error, or loss of control. Therefore, it is imperative to work with the private sector in developing best practices for the applications of AI in society.

Layer 7 emphasizes the applications of AI and the services it can (and does) provide to citizens. AI is already being sold to, or tested for, consumer use in a variety of sectors. This includes fully autonomous vehicles, smart home assistants (e.g., Alexa and Google Home), and others. It also includes more subtle uses in social media, aviation, and other large sectors. With AI becoming more integrated in the lives of the average citizen, the technology will increasingly change our society.

Through Layer 7, and the Model as a whole, AIWS hopes to ensure that inviting AI into our lives will have a beneficial effect.

APPENDIX: The Concept of AI-Government

AI-Government is a component of the Artificial Intelligence World Society (AIWS). Two of the layers of the *7-Layer Model* pertain to AI-Government.

E-Government is the use of communication and information technology for improving the performance of public sector agencies. AI-Government transcends E-Government by applying AI to assist decision making for all critical public sector functions – notably provision of public services, performance of civic functions, and evaluation of public officials. At the core of AI-Government is the National Decision making and Data Center (NDMD). NDMD collects, stores, analyzes, and applies massive amounts of data relevant to the provision of public services and the evaluation of public programs and officials. It does not replace governance by humans or human decisional processes but guides and informs them, while providing an objective basis for service provision and evaluation.

AI supported public services span major critical functions to enable:

- *AI for healthcare, social services*
- *AI for law, legal services.*
- *AI for education*
- *AI for tourism*
- *AI for public transportation*
- *AI for labor*
- *AI for agriculture, fishing, and natural resource management*
- *AI for public finance*
- *AI for public housing*

Structure of AI-Government:

- National Decision Making and Data Center (NDMD) lies at the core of AI-Government. It would link to all ministries, departments, and collects data from ministries, departments, provinces, provincial sub-units, cities, villages, schools, and other administrative units. NDMD would be located in the office of the President or Prime Minister.
- NDMD would serve as the basis for automated public service functions. It would be a broad-based support system for public sector decision-making

Tasks required to develop AI-Government:

- Build National Decision Making and Data Center (NDMD)
- Create regulations for automated public services
- Provide mechanisms to evaluate the performance of leaders or officials
- Facilitate feedback for civil society
- Set rules for decision making in all organs of government
- Set regulation to collect data from levels of governments, Party Office, National Assembly.
- Establish a taskforce for implementation and evaluation
- Create methods to assist citizens through use of block chain ID for entities that would include corporations, institutions, social organizations

Create automated public services assisted by AI, notably:

- *Health care, public health, and social services:*
Build AI hospitals and other social services for remote, rural, and mountain area.
- *Education*
AI schools for remote, rural, and mountain areas.
- *Law, legal services:*
Build AI law, legal services
- *Public transportation:*
AI public transportation information, and support system.
- *Tourism:*
AI public services for tourism.
- *Labor:*
AI labor, job guidance system.
- *Agriculture, fishing, and natural resource management*
AI agriculture, fishing, and natural resource guidance systems.
- *Public Finance:*
AI revenue collection and monitoring system.
- *Public Housing*
AI public housing targeting, allocation, and monitoring system.