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| **Abstract:** | This contribution responds the questions in AI4H FG in ITU-WHO OPEN CODE PROJECT regarding to AI Software License and provides a recommendation on how to proceed through the *3-Clause BSD License* (Modified BSD License). The *3-Clause BSD License* is a permissive licence that allows the almost unlimited freedom with the software so long as it includes the BSD copyright and license notice:Considering that AI algorithms for health manages sensitive data (metadata), the Big Tech Firms will face the annual investigations under the European Commission on how they are managing user data (The Digital Services Act and the Digital Markets Act ). Thus, this document provides a Governance Mechanism for filling the Compliance that does tangible the Human Rights principles and Ethical Standards into AI design and architecture."The copyright in this software is being made available under the BSD License, included below. This software may be subject to other third party and contributor rights, including patent rights, and no such rights are granted under this license"The ANNEX A (Legal Opinion) is added in order to do Risk Management at ITU-WHO AI for Health Open Code Assessment Platform since the WIPO recommended to the licensing process the use of the legal skills through legal assistance when drafting procedures to mitigate the risks on litigations and disputes. |

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# Introduction

The scalable potential of AI for health depends on openly shared implementations to increase usability and interoperability that will be possible by the AI Open Code Software.

By a comprehensive understanding about the purpose and scope of ITU AI4H - WHO Initiative to global health by delivering a AI Inclusive Software is imperative the clarification about the use of terminology related to "open source" software and "free software".

Thus, to fill this ITU AI4H - WHO purpose, the "open code" is the adopeted terminology.

The definition on “free software” and “open source” stand for deeply different values. The "free software" terminology relates to allow more *Freedom* and *Justice* for the user by using the technology for empowering these fundamentally principles. This terminology carries out the social perspective. In the other hand, the "open source" means the development methodology to practical advantage and doesn't relate about principles or social perspectives.

A proper definition about the Open Source Standard works for understanding the scope of this project.

 As per the ITU "open source" definition **[1]:**

"A common definition of open source software is that it (and any modified versions) must be shared freely, and that source code must be easily available to allow users to modify it or correct faults. Also, no additional licences should be required for shared copies."

The AI Open Code standard will allow broad data access by developing countries as well as surveillance by regulators to avoid the unfair competition also the respect for individual rights and guarantees.

As for international cooperation for Health, AI Open Code eliminates the issues on distrust among the parties due to the codes are known by all parties adding the attribute that all parties will be able for reviews and broad permissive use since it is an Assessment Platform that supports the end-to-end process for assessing health AI algorithms on a global level.

This broad interaction does affordable informations needed for global test mapping at escalable.

The international cooperation will accelerate Regulatory Compliance to access the affordable price, inclusive and available access by respecting human rights through regulatory standards as a way to reducing bureaucratization about the use of AI for Health for doctors, researchers, scientists , professionals from all areas who will work towards scalability in an inclusive way.

The digital governance and evidence-based policy for the Sustainable and Trustworthy AI Framework impacts on how the Open Code Software gains trust for being used to Global Health as the benefit for international cooperation and citizens when AI complies with the *Public Interest Principle*.

The Organisation for ***Economic Co-operation and Development (OECD) does the Technology Governance definition* [2]:**

*"Technology governance can be defined as the process of exercising political, economic and administrative authority in the development, diffusion and operation of technology in societies. It can consist of norms (e.g. regulations, standards and customs), but can also be operationalised through physical and virtual architectures that manage risks and benefits. Technology governance pertains to formal government activities, but also to the activities of firms, civil society organisations and communities of practice. In its broadest sense, it represents the sum of the many ways in which individuals and organisations shape technology and how, conversely, technology shapes social order."*

The ethical culture and principles drives the mindset on Open Code Software definition also it justifies the reasons why Open Code is the proper terminology to the ITU-WHO AI4H Initiative by building the AI Software to Global Health application.

Considering the *Fourth Industrial Revolution* opened the technological Age that has the potential to raise Global Cash Flow levels and improve the quality of life for citizens around the world. Also it brough a huge violence on human evolution by considering the cost to acquire this evolution. **[3]**

It means the non linear equation that can be solved by the balance of fundamental rights. The Open Code Software terminology embodies these fundamental rights to mitigate the cost to human evolution.

The social balance was asured when the needs of the each age was incorporated into THE UNIVERSAL DECLARATION OF HUMAN RIGHTS through dimensions of fundamental rights wrote at its articles.

The ***Fourth Industrial Revolution*** places the technology as the center of the evolution also it gives rise to ***Sixth Dimension of Human Rights*** that represents the human-centric AI technology. **[4].**

There is some misinformation about the Human-Centric at guidance since Human-Centric isn't a mechanism or scheme. ***Human-Centric is a Value*** to guide the *Expected Behaviors* from society. Human-Centric is a principle. Principles are helpful for fill out the laws and Ethical Standards.

It demanded for the **OECD** *to establish the new principles for the Ethical AI* **[5]** *to meet the articles of* **THE UNIVERSAL DECLARATION OF HUMAN RIGHTS** also the specialy the article:

Article 27

1. Everyone has the right freely to participate in the cultural life of the

community, to enjoy the arts and to share in scientific advancement and its benefits.

2. Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author. **[6]**

The Human Rights is the set of principles elected by Global Leaders to protect the human survival. Whether the consistent ethics code is enlighting by society, it cannot replace the ethical reasoning as the legitimate due to it was built and maintained an ethical culture and mind-set through public debate, education and practical learning.

In this scope, the *Sixth Dimension of Human Rights* brings the ARTICLE 27 OF THE UNIVERSAL DECLARATION OF HUMAN RIGHTS to center of the algorithm's decision making because AI scalability depends on building State capacity to develop infrastructure and human skills to address relevant sociocultural issues data selection and classification.

This modern scenario requires for the Ethical Standards must be based on PRINCIPLES HUMAN-CENTRIC design also to brings a high benefits and social advances on Trustworthy AI from the holistic and systemic perspective that encompass all involved parts.

These are factors that motivate ITU experts and consultants to build as well as it brings available the *AI Open Code Assessment Platform* for the benefit of Health at global scale. Obviously, the international cooperation on health global issues will bring back a faster response through more available technology.

***The "open source" terminology covers all aspects and applications that concern to fundamental principles present in the ITU-WHO AI for Health Project initiative. For this reason, it'll adopt the "open code" terminology because it covers the technical aspects of open code also the axiological ones that serve to public interest and Human Rights established by intrinsec values under a free software mindset.***

Part of this path in order to achieve the proposed scope by the *ITU AI4H Open Code Assessment Platform* is the proper choice of License. In this case, the option chosen was the the *3-Clause BSD License* by the below reasons.

# Reason d'être of BSD license

The BSD license aims to promote the product commercialization due to BSD code allows to sold or integration in proprietary products without any restrictions on the availability of your code or your future behavior.

***To understand the scope of Open Software Project is releveant the clarification on the difference between the terms "open code", "free" and "free of cost" that is often understood as the same of Free Software. In terms of proper definition, the "free software" spread a mindset on social moviment. The Open Code is a theory method. Thus, both works together for building a Inclusive society into technological industry. As the simplier learning, Open Code relates on Ethical Behavior expected from technological industry and the "free software" is a principle for allow this innovation.***

The term "free" on software relates to Principle of Freedom in order to the free and permissive use but it doesn't mean that it is free of cost because often involves support fees.

Form this perspective, easily the definition on public domain is confused as the BSD license terms and condictions by the error on these legal definitions with respect to the role of proprietary because BSD license and public domain are free but the owner role is different.

The owner is who retained ownership and could control resale and reuse of a software. It is about the Copyrights and Copyleft.

Whereas the Copyrights aims to protect authors of software from unauthorized copying or selling. The Copyleft, provides terms and condictions for software to allow the modified distributed to the community since it ensures the source code and the freedoms remains legally inseparable.

Regarding to the public domain, it hasn't a owner as well as nobody owns rights to a particular work and is available for use, modification and commercialization by anyone.

The technical definition to Public Domain **[7]:**

Public domain software is any software that has no legal, copyright or editing restrictions associated with it. It is free and open-source software that can be publicly modified, distributed or sold without any restrictions. [...]

Public domain software has no ownership and is available for use, modification and commercialization by anyone. Typically, public domain software is intentionally or voluntarily uncopyrighted, unpatented and is unrestricted by its developer/author. It is different from free software and freeware that does has copyrights and patents associated with it.

BSD aims to promote the broad freedom in terms of to promote the comercial use. It is the reason why the BSD license has no Copyleft Terms and Condictions. BSD license matchs to interest public principle from the fundamental rights scope since it allows everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits, article 27, session 1, The Universal Human Rights Declaration.

So, a BSD code there is no restrictions as per the availability of your code or your future applications.

The BSD license is recommended because the purpose of the *ITU-WHO AI Open Code Project* aims to provide a broad implementation to benefit the healthcare industry globally and this will reflect positively on the economy. There is no concerns about competition because the International Telecommunication Union is a specialized agency of the United Nations responsible for information and communication technologies that works to international cooperation. The focus isn't the competition. The focus rellates about the Intergovernmental policy to minimize the costs and difficulties at the research to implementation. The results will be possible under this commercialization friendly BSD license.

Among the benefits from the proper use of licence to free software model would cover are: improved reproducibility of experimental results, less bureaucracy, quicker detection of errors and repair and accelerated scientific progress.

The use of a free software license also allows commercial use without means a bureaucratic or expensive legal procedure for the user.

Inclusion is a fundamental right of individual which is part of the *reason d'être* of Open Code Project that allows commercial use and non commercial as a way to materialize the No discrimination principle against fields of endeavor, persons or groups.

In terms of the license functionality it covers the different aspects of the software at the same time as carrying out Regulatory Compliance.

The modifications and derived works do software usually cause issues. Therefore, when choosing the appropriate license it is relevant to establish the system's rigidity level on accepting the improvements and derivations.

The relevant difference between the *open code software* and *commercial software* models is into licensing of software.

 In terms of *commercial software* **[8]**, the traditional licensing relies in permission to use the software is granted to a customer in return for a fee where usually not distributed to the general public, and may not be copied or modified except in a manner provided for in such agreements. *Open Code* software is made available under conditions in order to point out the levels at rights and permissions are granted rather than impose a requirement that a fee be paid for it. It is mostly made available royalty-free to the users of the software, under terms allowing redistribution, modification and addition.

These are some **keypoints at take-decisions** on how to choose the proper license:

* jurisdiction: the legal jurisdiction the license falls under;
* advertising clauses;
* limits on closed source;
* Commercial or non commercial use: issues about a tool that incorporates the code can be sold commercially (Commercial) without releasing the incorporating program under the same license
* Modification release: whether the source code to modifications should be must be released
* Patent: checking if the code is covered by an explicit license of patents
* Cost considerations;
* Freedom: levels to adapt licence terms
* reciprocal obligations: to analyse whether any modifications should be available to the original authors
* breadth of the License: must not be specific to a product, must not restrict other software, must be technology-neutral.

**BSD 3-CLAUSE (MODIFIED BSD)**

The technological resources usage and the way we decide to use them must consider the impact on society and climate. Therefore, price, distribution methods, destination, profit and Inclusion are determining factors for collaborative use.

Collaborative use is part of humanitarian social policies transforming a product that would favor only one individual or company to a product able to transform all sectors globally by generating sustainable wealth. Collaborative use makes Open Code Software tools being remarkable.

*BSD-3-Clause*, can also be called "*Modified BSD License*". It is a permissive license made by Berkeley Software Distribute (BSD) and it does the source code available since provided the copyright and warranty notices are maintained. In addition, there is a clause that requires previously specified written permissions to use the name of the licensor and / or contributor to endorse or promote products derived from the software.

*BSD 3-clause* is a permissive licence that allows the almost unlimited freedom with the software so long as it includes the BSD copyright and license notice:

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This license states that the names of authors and contributors may not be used to promote products derived from the software without explicit permission. **[9]**

The BSD family licenses has two main versions: 2-clause and 3-clause and some features:

1. In this license, the source code doesn't require for being public when the software is distributed.

2. Changes and reviews can be made under any license.

3. Changes and reviews on the source code doesn't require for documentation

4. It doesn't establish the position regarding the use of patents.

 5. The license and use rights must be included in the documentation in the compiled version of the source code.

# A Glance To License Types And Relevance

Software license is the document to define the use limits between a user and third party product that could restrict the copy, distribution and adaptation of the application. Licensing is helpful to create an income source, disseminates the technology to a wider group of users and potential developers also it means a catalyst for further development and commercialization. **[10]**

There are several types of software licenses at different permission / restriction levels that even would be possible to permit to reach the owner level.

Regarding to importance, software is intellectual content protected by copyright: refers to the legal right of the owner of intellectual property. In simpler terms, copyright is the right to copy that describes the ownership of someone, or some company, over the distribution and use of works of creative expression.

It is a condiction with many events that justifies a software license working as an agreenment of permission to use or acquire; between the supplier and the company that seeks to use at internal processes.

Through the software license the end users will be able to access one or more copies of the system without violating the supplier's copyright, defining the responsibilities to both parties at contract.

Inside the licensing terms and conditions is likely to find the limitations or permissions of responsability, protection and security among other relevant points for the relationship among the parties into the agreenment. In terms of *Open Code Software*, these grant free (as in freedom), open, and non-discriminatory access and rights to modify licensed software and associated source code.

Beyond of *Open Source*, these are some of mostly adopted licenses by communities **[11]:**

PERPETUAL LICENSE

A perpetual software license is a type of software license that authorizes the use by the individual of a program indefinitely. Generally, outside of termination, a perpetual software license allows the holder to use a specific version of a given software program continually with payment of a single fee. These acquisition licenses exclude maintenance and upgrades and this may add unforeseen costs in the future.

METERED LICENSE

Metered license means that there is a limited access to any aspect/feature of the application: use-time of the application, the access by a user to a particular feature of an application. Any metered application will be cover under this license.

These acquisition licenses exclude maintenance and upgrades and this may add unforeseen costs in the future.

SOFTWARE RENTAL LICENSE

In this case, the product isn't hosted on the company's machines and servers. The user pays a monthly fee to enjoy its benefits.

It is greately useful when engaging part-timers or working on short-term projects. From this approach, the fixed costs can be avoided by renting the licenses instead of purchasing.

SAAS - SOFTWARE AS A SERVICE

It can be a difficult thing to manager since SAAS license is very different of a traditional software license because there is less customization also the vendor provides a service to the user that it consists of hosting its software and performing services to support the hosted software and granting access to the hosted software.

Thus, the user doesn't download or install copies of the software. The customer remotely logs into the vendor's system to access and use the software, usually through the Internet. The vendor or its provider hosts the software either on its server or in the cloud.

FREE SOFTWARE

The user has complete freedom to copy, distribute, modify and study the source code of the software. Also, he is free to adapt the application to the needs. Usually, it means that the product will be free of charge.

# BSD License: A Fair Balance

The BSD Licenses places two relevants variants: the Modified License (3-clause) and the Simplified License/FreeBSD License (2-clause). Both are a permissive free software licenses that allows a broad implementation and redistributing software under soft rules. **[12]**

Patent Clause and Copyright

There is a grant a Copyright license. BSD licenses is referred to as BSD-like because it brings a "*sui generis"* rule about Copyright, Copyleft and Reciprocity clauses due to the Free BSD License doesn't follow no one among these rules because establishes a specific regulation under the ***permissive free software licenses***.

About the Patent Clause at terms and conditions of the BSD License, the user is entitled to freely modify and distribute the software’s code in the source or binary format as long as he retains a copy of the copyright notice, list of conditions, and the disclaimer.

BSD Redistribution Terms

There is no legal hard issues. It doesn't require anyone to disclose its source code or the modified version as well. Also it allows the sub-licensing, meaning that you can change any of the original license terms or introduce any of your own.

Non-endorsement clause

Nowadays is in force the Simplified 2-clause License that removed the non-endorsement clause: the software of the users aren't not endorsed by the acknowledged developers or organizations from the FreeBSD project. It brings a disclaimer about views and opinions expressed in the software being of the authors alone.

Toward to discuss on ***JURISDICTIONS AND SOFTWARE LICENSES*** at analysing the international legal framework, there is no an unique Regulatory framework to be applied at worldwide perennial scope due to each jurisdiction has its own national laws which differents levels for protecting intellectual property rights and software licenses. Some countries there is differents ways to deal such as specific terms condictions, restrictions on use, restrictions on assignment, limitation of liability, governing law. Also some countries is silent**. [13]**

Another key point about the *Open Code* software license and jurisdictions about conducts that causes the Tort, damages and liabilities will be under national laws in case it isn't transnational crimes.

# Guidelines to Apply The Berkeley Software Distribution (BSD) License to ITU - WHO AI For Health Open Code Project

Considering all informations provided in this document, the Berkeley Software Distribution License, *BSD-3-Clause (Modified),* will be favourable match to *ITU / WHO - AI for Health Open Code Assessment* since a broad international cooperation works for public interest **[14]**, inclusion of developing countries also to share the advances to world medical science from Artificial Inteligence applications by adding the sustainable, trustworthy, freedom and safety space.

The initial step is do sure the license text expresses your intentions regarding the use of the code, that it is applicable in the jurisdictions in which you intend to distribute the software, and other issues typical of selecting a free software license for any project . It is a phase to combine legal and technical informations for reach the project goals.

In order to analyse the jurisdiction's requirements of the *ITU - AI for Health Open Code Project*, the BSD License doesn't has jurisdction's limits. it means that this license would work to regulatory Compliance in a ***Global perspective.***

Then, find the short next steps:

Considering the introduction, definition about the content and permissions of the software license for ITU-WHO *AI for Health Open Code Project*, the applicable terms and guarantees are defined by the *BSD-3-Clause (Modified)* license because it is characterized by licenses applicable to free code programs also guaranteeing more freedom regarding the work done in third-party codes by the developer.

The developer may modify the distribution model of the original source code or not distribute it. There is also the possibility of proprietary systems incorporating open code lines into the open code software. The permission to comercial use are allowed as well.

**Procedure**

The ITU - WHO AI for Health architect should open a file called LICENSE to include a copy of the BSD License also including a NOTICE file. The license and use rights must be included in the documentation in the compiled version of the source code.

Including, the BSD license guidelines are incorporated into the code and registered with the Competent Authority for the Protection of Intellectual Property. The document with the BSD license terms and conditions will be available in the software.

The names of the original authors / developers is part of this document, but the BSD license allows for wide implementation, distribution and use with a very high degree of freedom and inclusiveness a s per the above definitions at this document.

**TEMPLATE**

**1. BSD 3-CLAUSE (MODIFIED BSD)**

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# Digital Government and Evidence-Based Policy Responses for a Sustainable AI Framework

Artificial Intelligence is a technology different from others since it is not model-driven. Considering the human brain there is a high complexity, is impossible to use the human brain as the model. For this reason, AI is built on data-driven approach on accessibility to personal as well as public data.

Thus, artificial neural networks (ANNs) are created for the data serves the machine learning.

These interactions mean a high power of interference in the privacy and freedom rights of citizens that are established by companies for requiring the AI Governance to assure that technological benefits to society will be biggest than business greed for money. It is a critical challenge for Science Technology and Innovation (STI) policy.

Others emerging concerns are the equitable access, appropriate uses and users, liability and bias and inclusiveness.

Establishing a Governance mechanism will allow technological evolution and industrial advances in balance with the climate protection and Human Security requirements and to the next generations as well.

AI Governance is the political processes that comprises all of the processes of governing by undertaken by the government of a State, by a market or by a network to asure the Human Security for a social ecosystem and whether through the laws, norms, power or the cultural language of an organized society.

The Organisation for ***Economic Co-operation and Development (OECD) does the Technology governance definition,* [15]**

*"Technology governance can be defined as the process of exercising political, economic and administrative authority in the development, diffusion and operation of technology in societies. It can consist of norms (e.g. regulations, standards and customs), but can also be operationalised through physical and virtual architectures that manage risks and benefits. Technology governance pertains to formal government activities, but also to the activities of firms, civil society organisations and communities of practice. In its broadest sense, it represents the sum of the many ways in which individuals and organisations shape technology and how, conversely, technology shapes social order."*

AI technologies are not neutral but faces intereferences due to the data on which they are trained, and the choices made while training with the data that do able the AI behavior to define the social environment where human beings are inserted and ethics should put in practice periodically in all social environments.

Ethics means the values set that guides the human beings’ behavior in relation to another human beings living in society to guarantee the social well-being and Equality.

The Human Rights is the set of principles elected by Global Leaders to protect the human survival. Whether the consistent ethics code is enlighting by society, it cannot replace the ethical reasoning as the legitimate due to it was built and maintained an ethical culture and mind-set through public debate, education and practical learning.

The importance of digital technologies for social and economic developments and a growing focus on data collection and privacy concerns have made the Internet a concerning issue in worldwide politics also it increased the awareness on ethical issues such as the surveillance and privacy under the power of multinational and technological companies that are not confined to tangible local and national constraints. Thus, the storage and processing units can be anywhere.

This modern scenario requires for the Ethical Standards being based on PRINCIPLES HUMAN-CENTRIC design also to brings a high benefits and social advances on Trustworthy AI from the holistic and systemic perspective that encompass all involved parts, **[16].**

# Framework for Sustainable and Trustworthy AI

Since AI data collection and storage units can be anywhere as well as isn't confined to tangible local and national constraints, the International Cooperation will rely on a common global definition of Trustworthy AI and ***associated Ethical Standards***, and of its service characteristics. Only then can we ensure a safe fast response on Global Health Emergencies to store and access information and enjoy the technological power as far as we guarantee the **Safe Human Survival Dimensions: Economic, Nutrition, Sanitization, Environmental, Individual, Collective, Political. [17]**

***To mitigate the Risk Management*** for governments, policy makers and industry, a STRATEGIC PLANNING will stay underpinned by 4 (four) columns **[18]:**

1. to promote inclusiveness

2. Frame national policies for all-hazards risk management

3. to engage the private sector in partnerships

4. raise awareness of risks to increase stakeholder engagement in policy processes.

The digital technologies for COVID health emergency must be sustainable. It means that the digital technologies must meet the needs of the present without compromising the ability of future generations to meet their own needs. **[19]**

For reaching the sustainability on technologies the resources preservation is relevant from ***5 Pillars on Sustainability***: HUMAN, SOCIAL, ECONOMIC, ENVIRONMENTAL AND GOVERNANCE, **[20]**

As per the World Health Organization (WHO), the sound governance relates to participatory, transparent, accountable, effective and equitable processes that promote the rule of law. **[21]**

Governance is commonly addressed only by economic pillar that includes compliance and the proper risk management. In terms of Human Security, governance was included among the Pillars on Sustainability since the resources protection relates on ***all indissoluble fields***: human, social, economic and environmental. **[22]**

These Pillars on Sustainability assures the Framework for Trustworthy AI: Lawful, Ethical and Robust AI for adhering to ethical principles based on fundamental rights at Sixth Dimensions, ARTICLE 27 OF THE UNIVERSAL DECLARATION OF HUMAN RIGHTS.

Governance by driving the Sustainable and Trustworthy AI should be established under ETHICAL PRINCIPLES [**23]** and IMPLEMENTATION PRINCIPLES**. [24]**

**ETHICAL FUNDAMENTALS PRINCIPLES OF SUSTAINABLE AND TRUSTWORTHY AI:**

1. Respect for the planet bringing benefits and well-being for humanity;
2. *Participative Democracy*: to promote the inclusive growth and sustainable development. The public should have a chance to provide feedback in all stages of the rule-making process.
3. *AI systems by lawful designed*: respects the rule of law, human rights, democratic values and diversity and gender equality;
4. *Respect for human autonomy:* enabling human intervention where necessary to ensure a fair and just society.
5. *Transparency and Public trust*: disclosure around AI systems to ensure that people understand AI-based outcomes and can challenge them;
6. *Robustness:* AI systems must function in a robust, secure and safe way throughout their life cycles and potential risks should be continually assessed and managed;
7. *Prevention of harm:* should include appropriate safeguards also the Organisations and individuals developing, deploying or operating AI systems should be held accountable for their proper functioning in line with the above principles.
8. *Flexibility:* Any approach should be able to adapt to rapid changes and updates to AI applications.
9. *Scientific integrity and information quality*: Policy decisions should be based on science.

**PRINCIPLES TO IMPLEMENTATION OF THE SUSTAINABLE AND TRUSTWORTHY AI:**

1. *Integrity and Robustness*

Scientific integrity and information quality. Policy decisions should be based on science. The government must promote reliable, robust, and trustworthy AI applications;

1. *Risk assessment and management.*

Agencies should decide which risks are and aren’t acceptable

1. *Benefits and costs.*

 Agencies should weigh the societal impacts of all proposed regulations.

1. *Fairness and non-discrimination*.

Agencies should make sure AI systems don’t discriminate illegally.

1. *Safety and security.*

Agencies should keep all data used by AI systems safe and secure.

1. *External Surveillance to AI algorithms:*

To safeguard citizens’ digital rights also to define a clear governance framework for digital government **[25]**

1. *Multilateralism and International Cooperation*

Interagency coordination and solidarity among all government leaders.

The Sustainable and Trustworthy AI governance requires conscious design and engagement by multilateralism and international cooperation for the balance between profits and Human Rights for the worldwide society's benefits, especially developing countries.

Understanding how socioeconomic events, emerging technologies and governance interact is relevant for developing policy recommendations and contribute to shaping the health sector governance by Artificial Intelligence policy agenda.

As we know, the responsible and verifiable AI is built through the ethical principles. The issues arises during the building the algorithms when the difficult on embedding the abstract principles comes evident.

This document addresses the proper and reliable Digital data Governance to propose a scheme to make the abstractness find the materiality that the Artificial Intelligence (AI) algorithms need to guarantee the Governance, explainability, robustness, security and Compliance.

Many documents referred to difficulty on explaining the regulatory framework and ethical standards for allowing the designers to insert them into the AI designing processes. [**26]**

The grounds for further issues of Human Rights on the context about the use of AI during Covid Pandemic is justified by the legitimacy of tools for oppression and violation of Human Rights as health tools. This behavior in decision-making by government leaders shows how the knowledge about Human Rights is suboptimal in terms of definition, reason d'être and applicability. **[27]**

This knowledge has been lost over time also it was reduced to conference topics or academic texts. In general, the Public Policies have been facing hard issues to materialize the humanitarian principles through the laws due to the real scope and importance is diluted between time and bureaucracy apparent in the abundance of laws.

The Coronavirus Pandemic exposes the weakness on to make the academic knowledge for finding the best Public Management Practice.

This is the dangerous path because laws created and took effect are under the risk on to become definitive due to the legal instrument for abrogation or derogate the law must follow the same formal and material procedure as the legal introductory vehicle.

Regarding on the reasons that led congressmen to pass laws that override Human Rights may not be the same to overturn these laws or the economic criteria will weigh more than Human Rights.

The economic power coming from the big technological powers weighs against the fundamental rights of society that it makes difficult to cancel the oppressive laws also that puts humanity at risk.

The Coronavirus Pandemic enabled the abusive data collection and the data was also misused due to the pandemic required a fast response from governments to ensure the life and cure without enough time to discuss the better driver on data collect and use.

As an example, the user’s data was collected and used to deport foreign nationals for violating of the quarantine. It means the abusive measure because it is disproportionate and unreasonable which exposes these foreigners to risk without demonstrating the nexus on the reasons that authorize the deportation procedures among the conducts of quarantine violations since the deportation procedures lay on criminal behavior and another one lay on civil disobedience. **[28]**

Another example, the autistics achieved their rights after many years and financial investments that were overlooked during the use of AI in the pandemic. They experienced a rollback across the COVID-19. **[29]**

 The use of technologies for health solutions and especially to emergency condition should establish security and efficiency to Planning and Containment stages for all people as well as non-excluding individuals for reasons of race, color, religion, language, gender, sexual option, age or disabled people.

Violating these humanitarian rules compromises the security, resilience and sustainability into emergency events such as Pandemic Action Plans.

All technological solutions should bring lasting results and it must ensure safety and sustainability due to it enhances the justice, health, education and development opportunities insofar the achievement of full human potential, human resiliency and of sustainable development is not possible if human beings are denied their rights onto any worldwide conditions.

Therefore, to coat the algorithms with values and principles will result on more resilient, sustainable and security algorithms to mankind because the principles will set the best choices.

Principles and values are different as far as the principles don't establish the behaviors that should be adopted, but it determines which one better meets survival needs for life's protection.

In the other hand, Values bring the axiological and historical burden printed by the common sense that was adopted by society as well the degree of acceptance.

Thus, for determining the technological solutions of AI technology by setting the emboding the principles of Human Rights into the algorithms, if there is a collision among them, the measurement on proportionality of the values involved, will deliver the best and sustainable solution.

The current algorithm's architecture model offers predictions despite they are able to introduce the ethical biases and increased risk model for Governance.

Despite a current technological scenario sounds reliable a Governance and Compliance sustained growth is required by the *human-centric* approach to define operate controls on users data inputs and outputs. Also, a frequent performance monitoring, constant data review and benchmarking and contingency plans that were built under human thoughts and surveillance. **[30]**

By establishing the scheme to build of Responsible and ethical algorithms to AI, should adopted the layers of values and principles are superimposed to form the dimensions that are integrated for a resilient, integrity and explainable algorithm.

In this way, the abstract principles and values are incorporated into the resulting technological approach in the materialization of the ***human-centric* algorithms based**.

Regarding on collaborative tasks between design, ethical standards and laws, this document proposes the sixth dimensions of values and principles for adding to design process.

Back to the world's history, the social facts always inaugurate new legal conducts and brings changes to society. The end of World War II (1945) was a major social event that is the source to the UNIVERSAL DECLARATION OF HUMAN RIGHTS (1948) that recognized the inherent dignity to human beings and of the equal and inalienable rights of all members of the human family as the foundation of freedom, justice and peace in the world. Also, it considers that the disregard and contempt for human rights results in barbarous acts which outrages the conscience of mankind as well as the human beings shall enjoy freedom of speech and belief and freedom from fear, Preamble, Universal Declaration of Human Rights. **[31]**

Accordingly, the UNIVERSAL DECLARATION OF HUMAN RIGHTS means the introductory vehicle of the dimensions of fundamental rights. By establishing the scheme to build the Responsible and ethical algorithms to AI, should adopted the layers of values and principles are superimposed to form the dimensions that are integrated for a resilient, integrity and explainable algorithm.

In this way, the abstract principles and values are incorporated into the resulting technological approach in the materialization of the human-centric algorithms based. Regarding on collaborative tasks between design, ethical standards and laws, this document proposes the 6 dimensions of values and principles for adding to design process.

In order to establish the driver humankind principle, Freedom was addressed by the FIRST DIMENSION of Human Rights. Following to ensure the human race security the SECOND DIMENSION HUMAN RIGHTS came up to cover it. At the beginning of the XX Century, World War I shows the need to establish social rights. The Second Dimension are social, cultural and economic rights corresponding to the rights of equality. The historical documents are: Constitution of Weimar (1.919) in Germany and Treaty of Versailles (1.919).

THIRD DIMENSION are transindividual rights that have resulted from the shifts that the international community and the mass society have undergone. It is the phenomenon of Globalization to establish the right of communication and the property right over the common patrimony of humanity. But economic and sustainable development wasn't the goal. The focus was on the rights of solidarity as the right of everyone to live in a healthy environment.

FOURTH DIMENSION means individual rights that includes the right to democracy, information and pluralism. Fundamental Rights belonging to an autonomous dimension and globalized in the institutional field. **[32]**

FIFTH DIMENSION is about the right to peace: it is from right of collectivity to guarantee the Human Rights and the peace is the axiom of participatory democracy and the sovereignty. Right to life, being an indispensable condition for the progress of all nations and in all spheres. Fifth Dimension guarantees all peoples the right to self-determination.

The Fourth Industrial Revolution is the introductory vehicle to SIXTH DIMENSION OF HUMAN RIGHTS. **[33]**

In this scope, the Sixth Dimension of Human Rights brings the ARTICLE 27 OF THE UNIVERSAL DECLARATION OF HUMAN RIGHTS to center of the algorithm's decision making because the scalability depends on building State capacity to develop infrastructure and human skills to address relevant sociocultural issues data selection and classification.

This modern scenario requires for the Ethical Standards must be based on PRINCIPLES HUMAN-CENTRIC design also to brings a high benefits and social advances on Trustworthy Algorithm from the holistic and systemic perspective that encompass all involved parts.

This was a milestone that triggered others perceptions about the whole social and economic bias where technology proved to be fundamental for Human Security and Sovereignty.

The Pandemic COVID-19 displayed these interactions since the negative impacts affected the Global Economic and Health System in the same time that it becomes the fast and proper responses much more complex for keep the same pace for solving.

The suggestion for adding to Algorithms's design process through the incorporation of 6 protective layers of values and principles is to add the dimensions that relates on how technological solution will reach the Human Rights and benefits.

**1. Adding the FIRST DIMENSION OF HUMAN RIGHTS at AI algorithms architecture**

 It considers the rights related to public liberties and political rights, that is, civil and political rights translating the value of freedom.

Trust Digital Data Governance address a design process across these questions:

Does the solution violate any Charter Constitutional? Does this respect all values on freedom?

In case there is a conflict among some principles, the *Principle of Proportionality* suggests the valuation of what would be the acceptable reduction. The total elimination of an amount is not acceptable under current laws. The concept of proportionality is used as a criterion of Justice in judicial interpretation processes.

In case the first layer was added to the design, the second layer must be added. This means that when adding the second protection, it will expand into a new dimension.

**2. Adding the SECOND DIMENSION OF HUMAN RIGHTS**

It means the social, cultural and economic rights on rights of equality. It includes the right to education, right to adequate housing, access to food and water as well as access to dignity on working conditions and life.

Does the solution eliminate, reduce or extend these rights?

**3. Adding the THIRD DIMENSION OF HUMAN RIGHTS**

Following the same dynamics of dimensional additions, the rights of solidarity as the right of everyone to live in a healthy environment should take place to establish the peace.

Does the solution allow the Inclusion of all peoples to participate in economic, social, cultural and political development? Does the solution make it possible to enjoy the healthy environment and it does the power to hold people accountable who destroy it? Does the solution contribute to a healthy environment? Does the solution meet the laws of rights and duties? The Compliance are growing alongside the fundamental rights. Is the solution limited to the main field or is it radiating to other fields of civil life?

The measurement of these values must be established.

**4. Adding the FOURTH DIMENSION OF HUMAN RIGHTS**

The right to reach the future by the next generations and the right to get a dignified citizenship must be approached from a genetic perspective: the human being should not be the object also has the right about to be considered as unique and to receive the respect from the community.

Does the solution mean risk to civilization? Does the solution get close to genocide? Does technological solution pose a risk to humans? Does the solution provide harmony between human beings and the environment?

Do robots have any self-defense devices? If the answer is positive, the solution threatens human existence because human beings should not be the object of robotic action. The human being must be the target to protection. The healthy environment must coexist with human life. The elimination of human life is not allowed.

**5. Adding the FIFTH DIMENSION OF HUMAN RIGHTS**

It is about the right to peace and sovereignty.

Does the solution offend cultures? Is it inclusive? Does the solution respect territorial limits?

If the answer is no: The Proportionality Principle applies.

Sovereignty is the right to protect people and allow peoples to self-determine. It is not an absolute right and can be relativized to guarantee peace. **[34]**

Humanitarian interventions are permitted when authorized by the competent authority. **[35]**

**6. Adding the SIXTH DIMENSION OF HUMAN RIGHTS**

Does the solution bring to the impoverishment of the population? Can the solution be distributed under fair tax? Does it match the accountability? Does solution build the dignified work and health? Does the solution come close to social control? At what stages? Does the solution respect the patients about the client's rights when they are in the hospital?

Despite the Patients' rights vary in different countries and in different jurisdictions, there is an international consensus that all patients have a fundamental right to privacy, to the confidentiality of their medical information, to consent to or to refuse treatment, and to be informed about relevant risk to them of medical procedures. **[36]**

The AUTONOMY of patients should find a proportionate use of control techniques in technological solutions and Ethical Standards.

The relevance of this Scheme for Adding the *six dimensions of values and principles* on Algorithm design's process relates techniques and approaches to fight the health emergency events through the fast response since it should be just as robust, resilient, effective, transparent and explainable as any other architecture procedure in any other situation also it should respect and enhance Human Rights, ethical principles and legislation. Beyond, it should also be voluntary for prevent that of any temporary tool could become permanent.

Thus the AI solution contributes to international cooperation and it allows the end-user experience all benefits from available technologies to increase the Global Cash Flow and Equitable Justice from sustainable mechanisms.

The signs of this evolution are the principles that should guide the *Ethical Standard and Laws* applied to AI technology.

The ***Organisation for Economic Co-operation and Development - OECD*** Principles on Artificial Intelligence promote Artificial Intelligence (AI) that is innovative and trustworthy and that respects human rights and democratic values. They were adopted in May 2019 by OECD member countries when they approved the OECD Council Recommendation on Artificial Intelligence. The OECD AI Principles are the first such principles signed up to by governments. Beyond OECD members, other countries including Argentina, Brazil, Colombia, Costa Rica, Peru and Romania have already adhered to the AI Principles, with further adherents welcomed.

The OECD Recommendation **[37]** identifies five complementary values-based principles for the responsible stewardship of **Trustworthy AI:**

* AI should benefit people and the planet by driving inclusive growth, sustainable development and well-being.
* AI systems should be designed in a way that respects the rule of law, human rights, democratic values and diversity, and they should include appropriate safeguards – for example, enabling human intervention where necessary – to ensure a fair and just society.
* There should be transparency and responsible disclosure around AI systems to ensure that people understand AI-based outcomes and can challenge them.
* AI systems must function in a robust, secure and safe way throughout their life cycles and potential risks should be continually assessed and managed.
* Organisations and individuals developing, deploying or operating AI systems should be held accountable for their proper functioning in line with the above principles.

Also, the *White House* in the United States of America **[38]** has released the **10 principles** for government agencies to adhere to when proposing new AI regulations for the private sector:

1. Public trust in AI.

The government must promote reliable, robust, and trustworthy AI applications.

1. Public participation.

The public should have a chance to provide feedback in all stages of the rule-making process.

1. Scientific integrity and information quality.

Policy decisions should be based on science.

1. Risk assessment and management.

Agencies should decide which risks are and aren’t acceptable.

1. Benefits and costs.

Agencies should weigh the societal impacts of all proposed regulations.

1. Flexibility.

Any approach should be able to adapt to rapid changes and updates to AI applications.

1. Fairness and nondiscrimination.

Agencies should make sure AI systems don’t discriminate illegally.

1. Disclosure and transparency.

The public will trust AI only if it knows when and how it is being used.

1. Safety and security.

Agencies should keep all data used by AI systems safe and secure.

1. Interagency coordination

Agencies should talk to one another to be consistent and predictable in AI-related policies.

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# Annex A

**LEGAL OPINION LETTER: BSD LICENSE**

**THE INTERNATIONAL TELECOMMUNICATION UNION (ITU**) is the United Nations specialized agency for information and communication technologies – ICTs. Founded in 1865 to facilitate international connectivity in communications networks, ITU allocates global radio spectrum and satellite orbits, develop the technical standards that ensure networks and technologies seamlessly interconnect, and strive to improve access to ICTs to underserved communities worldwide. **AI4H Focus Group** is the Topic Group Participation by Artificial intelligence (AI) that epects to contribute to provide the basis for tools that improve global health care, bringing us closer to the realization of the third sustainable development goal: good health and well-being for all. The **OPEN CODE PROJECT** produces software comprising the foundation of the FG-AI4H Assessment Platform in the field of AI for health submitted to legal review and analysis about the usage of BSD license as per the challenges, issues and prospectives that it involves when in free software.

1. **BACKGROUND**

As per the World Intellectual Property Organization (WIPO), one of the specialized agencies of the United Nations, in general, last years brought a software licenses proliferation of new licensing practices appears to reflect the development of collaborative creativity and a new, more dynamic position of the user in the network environment. In the other hand, this scenario has new challenges. Also WIPO does alerts about the copyright licensing transactions, in particular when they are cross-border, are prone to dispute [[1]](#footnote-1). Given this complexity of patent documents, WIPO recommended to the licensing process the use of the legal skills through legal assistance when drafting procedures to mitigate the risks on litigations and disputes [[2]](#footnote-2).

Considering *ITU - WHO AI4H Open Code Project* is going to do application of 3-Clause BSD License (Modified) by the worldwide scope, a full details about the legal issues is recommended.

Thus, kindly, find bellow the enclosed "Legal Opinion" about the BSD licenses to *ITU - WHO AI4H Open Code Project*.

**2. PRELIMINARY ABOUT THE LEGAL DEFINITIONS AT THE KEY TERMS THAT INVOLVES THE ITU - WHO AI4H OPEN CODE PROJECT**

**ARTIFICIAL INTELLIGENCE [[3]](#footnote-3):** There is no universal definition of artificial intelligence (AI). AI is generally considered to be a discipline of computer science that is aimed at developing machines and systems that can carry out tasks considered to require human intelligence. Machine learning and deep learning are two subsets of AI. In recent years, with the development of new neural networks techniques and hardware, AI is usually perceived as a synonym for “deep supervised machine learning.

**COPYLEFT [[4]](#footnote-4):** Copyleft is a licensing method by which the work is protected by copyright, but it will have a specific clause that allows a work to remain “open” through a share-alike or viral clause.

**COPYRIGHT [[5]](#footnote-5):** Copyright (or author’s right) is a legal term used to describe the rights that creators have over their literary and artistic works. Works covered by copyright range from books, music, paintings, sculpture, and films, to computer programs, databases, advertisements, maps, and technical drawings.

**FREE SOFTWARE [[6]](#footnote-6)**: Free software is computer software distributed under terms that allow users to run the software for any purpose as well as to study, change, and distribute it and any adapted versions

**INTELLECTUAL PROPERTY [[7]](#footnote-7):** Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. IP is protected in law by, for example, patents, copyright and trademarks, which enable people to earn recognition or financial benefit from what they invent or create. By striking the right balance between the interests of innovators and the wider public interest, the IP system aims to foster an environment in which creativity and innovation can flourish.

**LEGAL OPINION LETTER [[8]](#footnote-8):** An opinion letter is a formal expression of a judgment or advice based on an expert's special knowledge. The term is commonly used to refer to a document containing a lawyer's understanding of the law that applies to a particular case.

**OPEN SOURCE** [[9]](#footnote-9): A common definition of open source software is that it (and any modified versions) must be shared freely, and that source code must be easily available to allow users to modify it or correct faults. Also, no additional licences should be required for shared copies.

**PATENT [[10]](#footnote-10)**: A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. To get a patent, technical information about the invention must be disclosed to the public in a patent application.

**PUBLIC DOMAIN [[11]](#footnote-11)**: From a legal perspective, the public domain is the space where no intellectual property rights exist. This means that works in the public domain may be used without any restrictions whatsoever. Works enter into the public domain in different ways. First, works whose copyrights have expired are in the public domain.

**TRADEMARK [[12]](#footnote-12):** A trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises. Trademarks are protected by intellectual property rights.

**3. THE GENERAL RELEVANT ISSUES ON LICENSING**

**3.1 DIFFERENCES AMONG THE LICENSE TYPES**

The Proprietary software licenses generally restrict the licensee's right to copy, redistribute, or modify the software. It means that the licensor would do not grant access to the software's source code.

3.1.1- PERPETUAL LICENSE

A perpetual software license is a type of software license that authorizes the use by the individual of a program indefinitely. Generally, outside of termination, a perpetual software license allows the holder to use a specific version of a given software program continually with payment of a single fee. These acquisition licenses exclude maintenance and upgrades and this may add unforeseen costs in the future.

Highlighted considerations:

* Belgium[[13]](#footnote-13), Italy[[14]](#footnote-14), Spain[[15]](#footnote-15) – a perpetual licence or a licence for an indefinite period can be terminated on reasonable notice
* France[[16]](#footnote-16) - a licence has to be for a definite term, and a perpetual licence or a licence for an indefinite period can be declared null and void

Usage restrictions:

* It can looks like abuse of a dominant position (Art. 81 and 82 Treaty of Rome)
* Specific site
* UK, the best practice suggests to permit free transfer re hardware, location and user in return for a new licence agreement between new user and licensor
* Germany, these restrictions are usually to be void, but may still place original licensee in breach.

3.1.2. COMMERCIAL SOFTWARE: Copyrighted software developed, usually by a commercial company, for sale to others

3.1.3. SHAREWARE: Copyrighted software distributed on the honor system; consumers should either pay for it or uninstall it after the trial period

3.1.4. FREEWARE: Copyrighted software that may be used free of charge

3.1.5. PUBLIC DOMAIN SOFTWARE: Software that is not copyrighted and may be used without restriction

3.1.6. OPEN SOURCE SOFTWARE: Programs with source code available to the general public.

3.1.7. FREE SOFTWARE GNU LICENSE [[17]](#footnote-17): it is a free software in price that grants to copy, distribute, study, change and improve the software. The GNU General Public License guarantees end users the freedom to run, study, share, and modify the software. The Freedom is a large measuring key.

3.1.8. CREATIVE COMMONS[[18]](#footnote-18): non-profit organisation that has allowed creative people to release their works whether it be art, fonts, code, manuals, video work, graphic design, photographs, with a license that suits the person creating the work.The Creative Commons is an resource to share, learn and use works without payment.

3.1.9. PERMISSIVE: The mostly popular is Apache, MIT or BSD. They contain minimal requirements about how the software can be modified or redistributed. The BSD Licenses places relevants variants: the Modified License (3-clause); the Simplified License/FreeBSD License (2-clause) and BSD +Patent. Those are a permissive free software licenses that allows a broad implementation and redistributing software under soft rules.

3.1.10. METERED LICENSE: Metered license means that there is a limited access to any aspect/feature of the application: use-time of the application, the access by a user to a particular feature of an application. Any metered application will be cover under this license. These acquisition licenses exclude maintenance and upgrades and this may add unforeseen costs in the future.

3.1.11. SOFTWARE RENTAL LICENSE: In this case, the product isn't hosted on the company's machines and servers. The user pays a monthly fee to enjoy its benefits. It is greately useful when engaging part-timers or working on short-term projects. From this approach, the fixed costs can be avoided by renting the licenses instead of purchasing.

3.1.12. FREE SOFTWARE: The user has complete freedom to copy, distribute, modify and study the source code of the software. Also, he is free to adapt the application to the needs. Usually, it means that the product will be free of charge.

3.1.13. SAAS - SOFTWARE AS A SERVICE: It can be a difficult thing to manager since SAAS license is very different of a traditional software license because there is less customization also the vendor provides a service to the user that it consists of hosting its software and performing services to support the hosted software and granting access to the hosted software. Thus, the user doesn't download or install copies of the software. The customer remotely logs into the vendor's system to access and use the software, usually through the Internet. The vendor or its provider hosts the software either on its server or in the cloud.

3.1.14. PROPRIETARY SOFTWARE LICENSE: in this kind of license, any type of copying, redistribution, modifications and other changes is strictly prohibited. The only way to acquire these applications is through their official channels or through certified representatives. In the other hand, if the expert wants to contribute to the development of this tool, he should contact the developer and purchase a more specific license. Some of the corporations using this type of license: Adobe Photoshop, Dreamweaver, Illustrator, Apple - Mac OS, Microsoft - Windows, Office, among others.

**NOTE:** This list is not exhaustive but it does provide the relevant licenses to the subject.

**3.2 ASSIGNMENT:**

* Germany: there is restriction on assignment of package software unenforceable
* Spain: if non exclusive and perpetual restriction on assignment is unenforceable
* Italy, Belgium and Spain: the silent on assignability isn't allowed, assignment needs licensor’s consent;
* UK: silence implies assignability of licensee’s rights
* Denmark: any restriction on assignment means a harmful practice that promotes the restrictive of competion.

**3.3** **ORPHANED SOFTWARE ISSUE**

The orphaning is a issue associated with proprietary software when a simple business fails or change in the strategy of a product causes a chain on systems and companies that was connected to this product to fail because they couldn't hold the control. Decades of experience have shown that a software vendor's size or momentary success is no guarantee that its software will remain available, as current market conditions and strategies can change very fast.

The GPL tries to prevent orphaned software by cutting the link to proprietary intellectual property.

A BSD license grants a small business the equivalent of software-in-escrow without any complications or legal costs. If a BSD licensed program becomes an orphan, a company could get easy take over, on a proprietary basis, the program on which they are dependent. An even better situation occurs when a BSD code base is maintained by a small informal consortium, as the development process does not depend on the survival of a single company or product line. The development team's ability to survive when they are mentally secure is much more important than the simple physical availability of the source code.

**3.4.** **GENERAL INTELECTUAL PROPERTY PERMISSIONS AND RESTRICTIONS**

France: licensee can correct defects unless licensor reserves the right

Belgium: restriction on licensee making alterations is prima facie permissible, but may be invalid if it deprives the licence of substance but Directive 91/250 interoperability rights cannot be excluded.

Singapore – licences can prohibit alteration and modification, but there are statutory defences similar to the position in Australia.

China: Article 32 Ambiguity that establishes specific copyright rules under the chinese governments decisions on time the infringiment conduct.

**4. ABOUT THE INQUIRIES BY ITU-WHO AI4H MANAGEMENT TEAM AND THE FINAL LEGAL OPINION**

 ***4.1 Question: Free in software tends to mean libre, not gratis, not sure if this is intended***

**ANS:** The free software definition presents the criteria for whether a particular software program qualifies as free software. The "term free" regards on Freedom as the Human Rights Principles that came up from French Revolution by Jean-Jacques Rousseau that advocates for the principles:Liberté, égalité, fraternité.

Thus, about the Free Software it means the Freedom as per Jean-Jacques Rousseau advocates also it was established by the First Dimension of Human Rights. When, the First Dimension meets the Fourth Industrial Revolution it opened the Sixth Dimension of Human Rights and a moviment for Free Software was born to incorporate to dignied life.

Despite that, a Free Software as the social moviment for the dignified life didn't prevent that A Free Software could be a free in price as well only for convenience or not.

Conclusion: a Free Software can be non free in price. The term "free" on software relates to Principle of Freedom in order to the free and permissive use but it doesn't mean that it is free of cost because often involves support fees. For this reason, a definition on OPEN CODE carries the values and principles that relates on "Free Software" mindset.

**5.** **CONCLUSIONS**

A **3-Clause BSD License (Modified)** is a good option for long-term research or other projects that need a development environment that costs close to zero, will evolve over a long period of time and also allows anyone to keep the option of sell the products. This reach the scope with minimal legal problems.

Generally, developers tend to find the BSD license family attractive because it keeps legal problems out of the way and allows them to do what they want with the code (freedom).

In the other hand, those who primarly expect to use a system instead of programming it or who expect others to evolve the code, or those who don't expect to make a living from their work associated with the system, may choose to use the GPL or BSD, because it forces the code developed by others to be given back to them and prevents their employers from retaining copyright and therefore potentially eliminates the problem of orphaned software.

A BSD license sounds like an invitation to freedom but the question: "why should we help our competitors or let them steal our work?" it often appears in relation to a BSD license.

Under a BSD license, if a company comes to dominate a product niche that others consider strategic, the other companies could, with minimal effort, form a small consortium aiming at restoring parity, contributing to a competitive BSD variant that increases competition and competition. Justice in the market.

This allows each company to believe that it will be able to profit from any advantage it may provide, while contributing to flexibility and economic efficiency. The faster and easier cooperating members can do this, the more successful they will be. A BSD license is essentially a minimally complicated license that allows for such behavior.

So, a key effect of the GPL is to make a complete and competitive *Open Code Software* system widely available at the media cost, and that is a reasonable goal. A BSD license can achieve this goal without destroying the economic premises built around the final implementation of the technology transfer pipeline.

Who should use the BSD license?

The BSD license means a good option for the transfer of research results in a way that is widely deployed also that most benefits an economy. Thus, research funding agencies can encourage the use in the early stages of funded research projects. The incentive to form standards based on *Open Code Software* systems is suggested because government policies could minimize the costs and difficulties of moving from research to implementation. When possible, grants should require that the results be available under a commercially friendly BSD Modified style license.

From a large perspective, the long-term results of a BSD license more accurately reflect the goals proclaimed in the universities' research charter than whe happens when the results are *copyrighted* or patented and subject to proprietary university licensing. There is evidence that universities are financially better off in the long run, promoting and sharing the research results also calling for donations from successful commercial alumni.

Companies have long recognized that creating de real standards is a fundamental marketing technique. The *3- BSD license (Modified)* serves this function well if a company really has an exclusive advantage in the evolution of the system.

 Sometimes and under some condictions, the GPL can be the appropriate choose for an attempt to create such a pattern, especially when trying to harm or to incorporate others. However, the GPL penalizes the evolution of this standard, because it promotes a set rather than a commercially applicable standard. The use of such a set constantly suffers from an increase in legal and commercial issues. Also it may not be possible to mix standards when some are under the GPL and others are not. A true technical standard should not compel the exclusion of other standards for non-technical reasons.

When the companies expects to promoting an evolving standard due to it could become the core of other companies' commercial products and atrategies, should be careful with the GPL. Regardless of the license used, the resulting software will generally be transferred to those who actually make the most engineering changes and who most understand the state of the system. The GPL simply adds more legal friction to the result.

The Big Companies, in which *Open Code* is developed, should be aware that programmers appreciate Open Code Software because it makes software available to employees when they replace employers. Some companies encourage this behavior such as an employment advantage, especially when the software isn't strategic. Thus, it is an previous benefit with possible missed opportunity costs, but without direct costs.

The Small Companies with software projects vulnerable to orphaned software should try to use the 3-BSD license (Modified) whenever possible.

To companies of all sizes should consider forming such *Open Code Projects* when it is beneficial to keep the legal and organizational expenses associated with a true 3-BSD license (Modified) project to a minimum.

The Non-profit organizations should participate in Open Code Projects whenever possible. To minimize software engineering problems, such as mixing code under different licenses, BSD licenses should be encouraged. Suspicious of the GPL should be particularly the case for non-profit organizations that interact with the development world. In some places where law enforcement becomes an expensive and bureaucratic exercise, the simplicity of the BSD license, compared to the GPL, can be of considerable advantage.

This analysis isn't exaustive. Based on the analysis above, we conclude that *3- BSD license (Modified)* are a diligent choice to ITU-WHO AI4H OPEN CODE because it allows a large usage with less legal or bureaucracy issues also it mitigates the risk on litigations and disputes by all the evidences above that it makes true this statement.

**This is my legal opinion.**

December 1, 2020

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