



FOR HUMANITY

# TAXONOMY:

## AI AUDIT, ASSURANCE & ASSESSMENT

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*Introduction*

# AMBIGUITY LEADS TO CONFUSION

In the growing field of AI Ethics and Governance, the call for “Algorithm Audits” as a means of mitigating the risk posed by the rapid integration of AI into our everyday lives has been getting louder. However, ambiguity over what constitutes an AI audit has led to confusion and uncertainty, and as the rhetoric around recent “audits” ramps up, the industry is in danger of misusing terms that have well-established meanings in the world of financial auditing. Casual use of the term audit simply means “to do a deep dive into fairness, accountability, and transparency of the algorithm”, an audit with a small ‘a’, as it were. Audit and Assurance, with a capital ‘A’, is different, and well understood to practitioners to refer to a robust, long-established, set of principles and approach first developed in the financial services sector. We watched as the AI Ethics industry has mistakenly deployed these terms creating harmful confusion for the public and for the owners of algorithms.

This taxonomy is critical to guiding the contractual relationships and the descriptions of those services.

What it means to  
**AUDIT**



ForHumanity has adapted an established taxonomy to distinguish between audit, assurance, and assessments which makes clear the important roles that independence and liability must play in this burgeoning industry. Below we lay out the features and benefits which define and explain the differences of five different services that are routinely misused.

	Internal Audit	3rd-Party, Independent Audit	Assurance	Assessment	Consulting
<b>Certified Practitioners Required?</b>	No, Employees	Yes	Yes	No	No
<b>Objective/Subjective</b>	Objective	Objective	Objective	Subjective	Subjective
<b>Independent</b>	Yes	Yes	Yes	No	No
<b>Known 3rd Party transparent Binary, Rules or Laws</b>	Yes	Yes	No	No	No
<b>Known 3rd Party transparent non-binary, Standards, Frameworks or Guidelines</b>	No	No	Yes	No	No
<b>Service provided for?</b>	Management	Users, Society	Users, Society	Contracting Party	Contracting Party
<b>Feedback Loop with the Company, iterative problem solving, teaching, tailoring</b>	No	No	No	Yes	Yes
<b>Consequences for False Compliance assertions</b>	job loss	Liability	Liability	No liability	No liability
<b>Written Report produced for the Public</b>	No	Yes	Yes	No	No

Sources: ForHumanity, COSO, IAASB, Sarbanes-Oxley, IFAC

# Our AI Audit TAXONOMY



*Definitions*

# CONFUSION LEADS TO LIABILITY

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Key words and phrases in this system are well-defined and understood:

**Certified Practitioners Required?** - this distinguishes who will execute the service for Target of Evaluation (ToE).

**Certified Practitioners** - means that the contracted party must have certified experts; employees who have submitted to a certification process (which includes exams to prove their knowledge base and expertise related to the specific service being offered). Certified practitioners are often governed by a local or international body that provides training, continuing education, and exam-based certification. Frequently, certified practitioners are required to have some amount of practical work with certified firms.

Assessments and consulting do not require certification but those conducting these services are not precluded from being certified.

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## Professional Standards

*Definitions cont.*

**Objective/Subjective** - the work for the ToE is either:

**Objective** - expressing or dealing with facts or conditions as perceived without distortion by personal feelings, prejudices, or interpretations

**Subjective** - based on personal opinions and feelings rather than on facts

There are often many ways to solve a problem, ( the 'how') and the process can be characterized as subjective, even if the requirement is objective. For example, if the requirement calls for all employees to be trained on a curriculum, the "all" is objective, and the fact that it has to happen is objective. But the process could be accomplished in many ways such as:

- All at once - physically in person
- All online with a completion time period
- A mixture of in-person classes and online learning

The 'how' is unspecified and therefore subjective.

Internal Audit, Audit, and Assurance examine an end result against an objective benchmark of compliance or non-compliance. Assessment or consultation may instead propose "how" to achieve compliance—the process and procedures deemed necessary to achieve the end result to be measured by the auditors. Consultants and Assessors have been requested to either help the ToE prepare for an audit or assurance or because the ToE wants to improve a process.

**Independent** - this word is defined by [The Sarbanes-Oxley Act of 2001](#) and explains that an entity (an audit provider) must receive no other remuneration from a ToE than the audit fees. ForHumanity further stipulates in its license agreements that a licensee holder cannot be an auditor and an Assessor/Consultant (or provide any other form of service) to the same ToE in a 12-month period.

This analysis designates Audit and Assurance as requiring Independence based on its function as a proxy for society, and its responsibility to objectively review compliance for public production. We deem Internal Audit to be Independent because Internal Audit is subject to these rules, as demonstrated in the [Journal of Accountancy - Internal Auditor Independence](#).

*Definitions cont.*

**Known third-party, transparent, binary rules or laws** - Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) are examples of third-party accounting rules. They are transparent and the set of rules have been adopted into law by most jurisdictions around the world. We define 'binary' to mean *that a determination can be made conclusively that a ToE is compliant or non-compliant with respect to the rules and/or laws.*

ForHumanity has dedicated itself to creating this taxonomy and supporting this taxonomy with third-party, binary, transparent rules. Additionally, we have laid the groundwork for translating and transferring the 'trust mechanisms' established in financial accounting, to AI and Autonomous Systems. ForHumanity is working to create an #infrastructureoftrust, described in greater detail here.

<https://forhumanity.center/blog/auditing-ai-and-autonomous-systems-building-an-infrastructureoftrust>

*"Audit is a form of Assurance that uses Rules and Laws. Assurance is a slightly softer version of the same service using rules, guidelines, and standards that have slightly less objectivity and often are not codified in law. Audit is a specialized subset of Assurance. Assurance does not necessarily mean 'audit'."*

During assessments and consulting, the service provider might be building systems or procedures to produce compliance, but the variance in how compliance is achieved does not present conflict with rules or laws which rarely strictly codify the "how". Many assessors and consultants abide by their own frameworks, guidance, and toolkits which are key differentiators in their service offerings.

**Known third-party, non-binary, transparent, rules, guidelines, and standards** - These may be assured, but the binary/non-binary characterization distinguishes the difference between audit and assurance. An example of non-binary guidelines is the [OECD Principles for responsible stewardship of trustworthy AI](#).

Another example is the [UK's Information Commissioners Office \(ICO\) Children's Code](#); a non-binary set of guidelines for which ForHumanity is currently drafting binary rules to enhance audit capability.

*Definitions cont.*

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**Service provided for?** - In all audit and assurance contracts, a three-party system is required.

A three-party relationship involves a practitioner, a responsible party, and intended users. "Intended users" often means society-at-large, the public, or at least a body that exists outside of the ToE and not under its control. Audit and Assurance contracts require the auditor or assurer to act on behalf of the intended user and not the ToE. Assessments and consulting contracts are two-party contracts designed to serve the needs of the ToE exclusively.

**Feedback Loop with the Company, iterative problem solving, teaching, tailoring** - Assessors and consultants focus on offering a bespoke service of problem-solving, staff education, and general expertise to the ToE. There is no public report or third-party responsibility. Depending on the nature of the contract, there may be an application of rules, standards. Here is a noteworthy aspect of The Treadway Commission of Sponsoring Organizations (COSO) Internal Audit must not create recommendations for the ToE, and must only submit its recommendations to the Board of Directors, or officers as directed by corporate governance and their applications of COSO.

**Consequences for false assertions of compliance** - The consequences of false assertions for auditors and assurers are clear - liability. Given assessors and consultants do not make assertions, but rather highlight to the ToE that compliance is not achieved and suggest remediation - there are no comparable liabilities or consequences.

For Assurance and Audit, both entities carry liability to intended users. For a further exposition of this point, a study of the fate of Arthur Anderson (AA) and its audit/assurance responsibilities for Enron and WorldCom would be instructive. AA's liability was so great it effectively bankrupted the firm. Responsibility and liability are crucial elements in building an infrastructure of trust for the public that relies on the outputs of auditors and assurers.

**Written report produced for the public** - this is the tangible evidence of "who is the client for a service contract". Intent is baked in here. Does the ToE want the review of its work? Or for public demonstration, transparency, and disclosure?. Audit and Assurance work for the intended users, for the public-at-large.

*Conclusion*

# CLARITY LEADS TO TRUST

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Referenced against this clear and robust taxonomy, ForHumanity believes that most services examining AI and autonomous systems to-date, regardless of how labeled, do not meet the exacting standards of 'Audit'. At best, they reach the standard of assessment or consultation. As explained above, Audit and Assurance require higher standards:

- Certified practitioners
- Services being rendered FOR the public, not just shown to the public
- Third-party rules
- Liability for auditors and assurers
- Written reports produced FOR the public
- Genuine independence

We believe that rigorous adherence to the well-established principles and standards of Audit, applied to AI and Autonomous systems will go a long way towards building a much-needed #infrastructureoftrust around their deployment. To enable and promote progress here, we are:

- Drafting audit rules on behalf of humans impacted by AI in the areas of Ethics, Bias, Privacy, Trust, and Cybersecurity. We do this in a transparent, inclusive, crowdsourced fashion where all are welcome
- Educating and certifying practitioners
- Licensing entities that will be required to maintain Independence, bear liability, and be certified by appropriate certification authorities
- Working with lawmakers to enact laws that mimic the trustworthy framework of financial accounting where we have a proven track record of trust (50 years of experience)

All are welcome in ForHumanity, we hope to do some good for people, maybe you can help too?

# FORHUMANITY

ForHumanity is a 501(c)(3) tax-exempt public charity formed to examine and analyze the downside risks associated with the ubiquitous advance of AI and automation. To this end, we engage in risk control and mitigation and deploy the lens and filter of Ethics, Bias, Privacy, Trust, and Cybersecurity to ensure the optimal outcome...ForHumanity.

ForHumanity is an interdisciplinary group of dedicated expert volunteers, with over 220 contributors and 30 Fellows. Its collective expertise spans the AI field, ranging from ethics to algorithmic risk and to security. Our team is drawn from the academic, legal, policy, corporate, and public sectors of over 36 countries around the world. Our mission is to help create an 'infrastructure of trust' for all autonomous systems that directly impact humans.

ForHumanity drafts comprehensive, pragmatic and implementable audit rules and standards for autonomous systems in every corner of the economy. Our experts collaborate with industry practitioners to ensure these audits achieve our mission of mitigating AI risk to humans. This system of audit rules and standards - adapted to local jurisdictional laws and regulations - is called Independent Audit of AI Systems (IAAIS).

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