

Ethics and Digital Identity

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Abstract

This article describes how identity professionals can relate their work to ethics and how imperative it is to ensure that ethical discussions and value conversations are conducted in the field of identity and access management. By providing a general introduction to ethics and what ethical theories are, this article lays the foundation for an understanding and clear perspective on the topic of ethics that can seem so far away

from technology. But technology, although not good or bad, is never neutral and most often value-laden. And when we assign identity we assign power. Identity and access impact various values and these are described in this article as well, again building the bridge between ethics and technology. The article concludes with methods to apply ethics in everyday work as an identity professional.

Introduction

Technology has impacted every day since the beginning of human history. It has changed power balances, helped to promote or restrict freedom of speech, and either advanced or reduced human rights. For example, the printing press changed society by providing knowledge to anyone who could read. If it is true that “knowledge is power” then putting information into the hands of more people changed the power balance. However, information was not equitably distributed and there were fewer benefit to those who could not read. Furthermore, not everything that was written was truthful (you heard it here first!). Technological advancements create opportunities not only for those who mean well, but also for those who mean to cause harm.

Digital technology - and specifically digital identity (and IAM) - are evolving rapidly. These developments do not just affect how organizations manage their workforce (identity and access), their customer interactions (customer authentication), or how identity providers offer federation services. Globally, nations are developing digital identity solutions for their national identification schemes. In Europe, for example, there is the amended eIDAS Regulation that stipulates every EU citizen to be able to use a digital identity wallet by 2026 (note: these are member state digital wallets and identities – there will not be a European identity or wallet). In other regions, biometrically-linked national identities are more commonly stored in centralized databases. Meanwhile, some nations reject the notion of a mandatory federally-issued identity altogether – they may be more inclined to follow the progress of ISO’s Mobile Driver’s License (MDL) set of standards.

Are these developments good? Should we even ask that ourselves that question? Yes we should. Why? Because technically perfect solutions can lead to harm when they are used in practice. A very good facial recognition solution that is used to recognize users’ emotions and deliver better service may also be used for surveillance systems or to exert undue influence on a population. It is our professional responsibility to give these risks an appropriate level of attention. This is ethics.

Ethics is time spent on thinking about and talking about the impact of something and whether it is good or bad. Ethics is about what we value, and whether this has been adequately addressed in the design, roll-out, or operation of (in the case of IDPro members) a digital identity solution.

Identity professionals need to include ethical discussions and value conversations in their work, not just as a moral imperative but also because this leads to better solutions. This article lays out the foundations of ethical thought, proposes and defines a set of values for Digital Identity practitioners, and some high-level tools for engaging

in ethical discussion. A second article, “Ethics for Digital Identity and Identity-Driven Algorithms” by Mike Kiser, delves into ethics related to Digital Identity and Algorithms and offers a deeper look at the Ethical Canvas tool for practitioners.ⁱ

Ethics vs Law

Ethics and law are not the same – and despite some assertions by vendors out there, a solution cannot be “ethically compliant.” The realm of law is where, depending on locality, polity and legal system, clear (well, ideally clear) rules are enshrined regarding what is acceptable, unacceptable, and what penalties apply to unacceptable behaviour. Law is continually updated because of changes in the world - especially changes to what we value. For example: long time ago voting by women was not valued, now it is, so the law has changed. Our laws are a result of ethics, but that statement cannot be reversed. Being lawful does *not* automatically mean being ethical: upholding the law and staying within the boundaries of the law can still be combined with morally despicable behaviour.

The realm of ethics involves discussion and thought about what is right and wrong, and why these are right and why those are wrong. While some ethical paradigms, namely Duty Ethics (which will be explored below), may seem law-like, it is still the moral discussion that is more important than the rule itself.

As stated above, laws often result from the practice of ethics: when society reaches a normative conclusion that something is ethically right or wrong, it may be enshrined in law, regulations, trust frameworks, contracts, or other institutional controls. For example, it is not uncommon for individuals that hold a degree, obtain an accreditation or join an association to underwrite a statement that they will conduct themselves professionally including applying ethical guidelines in their work, for example for software engineers in Canada that are member of the order of engineers.ⁱⁱ IDPro also has this in their value statement.ⁱⁱⁱ

Examples of Identity Ethics

Ethics become practical very fast in use cases. For example, when an organization deploys a passwordless authentication solution to its workforce and makes use of a swipe function app, how will this impact people with disabilities? Are they able to use it, or will they be excluded? Do they need to use another, more cumbersome, authentication tool? How will the solution affect those with visual or motor differences? Are they able to use it? Or doesn't the organization care, because the product is perfectly designed, and these are so-called “edge cases” (get to them in the infamous “Phase 2”)? What is important to the organization? What values are at stake here?

The same applies to customer identity management (CIAM) solutions. The way they are designed and how they operate impacts which customers are able to access services. An ethical discussion includes whether all people have an equal opportunity to become a customer and interact. So for example a CIAM solution may offer benefits to customers that buy in the app. But that means excluding, or at least disallowing benefits, for those users who do not have a smartphone (either because they cannot

afford one or cannot use it). These discussions inevitably lead into the realm of the real world, where not all individuals are able-bodied, high-earning urban natives. These conversations force organizations to consider people outside their target demographic – those who do not regularly use digital technologies or those who need to get by on a minimum wage or allowance. These trade-offs are discussed later in this article.

Trade-offs become even more impactful in relation to government services and national identity. For example, refugees that want to register in their host country may be asked to use a registration tool that contains a drop-down list of nationalities: what if the one the refugee wants to select is not available? This was the case when Rohingya refugees fled to Bangladesh: they were not able to register the nationality they wanted.^{iv}

The long-standing Aadhaar system in India is also worth observing to highlight ethical tensions.^v Aadhaar is a unique identity registration and identification system in India, where it has been incredibly successful. One of the system's founding values was voluntary use: that an Aadhaar account would not be obligatory or compulsory in order to access services. After a decade in use, however, its adoption has grown and service providers have gravitated towards its substantial benefits (e.g. strong authentication and de-duplication). Aadhaar is now integrated into other services, like mobile telephony and banking. The result is that in practice Indians increasingly miss out on benefits, or need to put in additional effort, when they do not want, or cannot use Aadhaar. It is arguably less optional, therefore, as a citizen. Is this an ethical development? And who should pay attention to these shifts in use?

These examples demonstrate why technology itself is not good or bad ... but is also never neutral.^{vi} They exemplify a few core tenets at the heart of this article:

1. Design choices lead to (ethical) consequences in the real world.
2. There are inevitable trade-offs between values that must be weighed and prioritized.
3. These evaluations are subject to cultural differences in values and ethics.^{vii}
4. That technology never operates in isolation and should be designed with respect to its interfaces with business, operational, legal, and societal context (in the case of the Rohingya, the context of legal identity and humanitarian law).

Because "when you are assigning identity, you are exercising power, and you are defining their possibilities."^{viii}

Ethics

Ethics or moral philosophy is concerned with what is right and what is wrong. It is about discussions of values and what is important, how values can be compared, and ultimately reach a conclusion about what is right or wrong. We distinguish between the main ethical theories, the main ethical values, and the process of 'doing ethics'. To be clear, this paragraph can never do justice to the wide and depth of moral philosophy, it should be considered a very high level and brief introduction.

The most common used example to explain ethics – the **trolley problem**

Almost every introductory textbook in ethics uses the famous trolley problem.

This problem starts with a trolley going down the track and the brakes malfunction. The trolley will hit five persons that are standing down the track and they will all die (in this example). But you can flip

a switch that will make the trolley switch tracks, and on the other track there is only one person (that will get hit and die). Should you flip the switch? And in a next version there is a terminally ill person standing on the bridge over the tracks. If you push this person of the bridge onto the tracks the trolley will stop before it hits the five persons. Would you do that?^{ix}

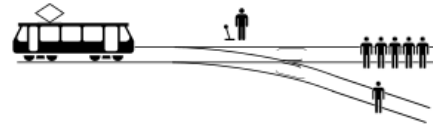


Image from [wikipedia](#).

Ethical theories

Ethical theories are rooted in society, history and culture and are always in development, just like humanity itself. Perhaps the closest to a global agreement on ethics are the declarations on human rights (the Universal Declaration of Human Rights (UN), the International Covenant on Civil and Political Rights, the Charter of Fundamental Rights of the European Union and the Convention on the Rights of the Child^x). Importantly, despite centuries of efforts by philosophers, there is no one universal & globally acceptable theory of ethics (note that ethics is not religion, most religions claim to have moral truth). The following section describes four major schools of ethical thought, humbly noting that one article can never do justice to all ethical philosophies: there are many that contain elements of these four ‘mainstream’ ethical theories and there are others focusing on specific disciplines, such as Environmental Ethics and or political theories.^{xi}

The four theories that are detailed in this article are utilitarianism, duty ethics, virtue ethics and communal ethics.^{xii}

Ethical theories			
Utilitarianism	Duty Ethics	Virtue Ethics	Communal Ethics

Utilitarianism

This is the ethics of usefulness. It is a form of consequentialism,^{xiii} meaning the result of an action determines whether the action is right.^{xiv} Utilitarianism states that when something is useful, it is right. The most common philosopher of utilitarianism is Jeremy Bentham (1748-1832), and one typical statement he made was saying that utilitarianists want *the greatest happiness of the greatest number*. Utilitarians could say that when lying brings about good results, lying is good.

The challenges with utilitarianism relate to the distribution of utility or happiness and the potential for harms. Criticisms are often boiled down to “who values the outcome” and “who determines what is valuable?”.^{xv} It may be extremely difficult to measure “utility.” For example, saying ‘if it brings more revenue, it is good’ is clearly Utilitarian. However, when it comes with costs to the health of employees or customers, or even lives, it is ethically unjust. Or is it? Who gets to do this math?

A modern example of this playing out is self-driving technology: given that self-driving cars will be safer in future, does the utility of future lives saved justify unfettered testing on today’s roadways?^{xvi}

Duty Ethics

Other philosophers consider duties (adherence to an adopted moral code) to be more important than the result of an action. One of the leading philosophers of Duty Ethics (also known as Deontology) is Immanuel Kant (1724-1804), who described the ‘categorical imperative’ that determines whether an action is permissible based on whether it can be applied universally – i.e. asking the question “what if everyone did that?”. Importantly a Duty may mean that certain actions are right to do – even when they do not result in utilitarian benefits (i.e. even if they make no one any happier). When the rule is ‘you should always speak the truth’ then that guides the decision on whether something is right or wrong. Duty Ethicists say that lying is never good, because we have a duty to be upright and honest all the time. They care less for the consequences, as long as the rules were followed or the duties are fulfilled.^{xvii} This can give rise to conflicts, for example, in situations where lying could save someone’s life or the variations on the Trolley Problem.

This means that, while a Utilitarian may consider torture to obtain critical information, a Duty Ethicist will always disapprove of torture and instead apply the so-called Golden Rule that mandates “do unto others what you would want to be done to yourself.” And because these are universal rules, according to duty ethicists, they are often in a framework that guides ethical decisions and ensures that everyone is aware of the moral expectations. Critics of Duty Ethics might suggest, however, that there are many acts for which universality cannot be easily established in the real world. Furthermore,

there are certainly cases in which Duties come into conflict and a rigid adherence to doctrine may induce harms. Duty Ethics does not wholly enable technologists to navigate trade-offs.

In the Digital Identity industry, many agree with Article 6 of the United Nations Universal Declaration on Human Rights: that we have a duty to ensure that all people have a right to legal personhood before the law. If a vendor deploys a Digital Legal Identity system that is later used by malevolent government actors to commit human rights abuses, Duty Ethics asserts that the deployment was still moral as long as it was motivated by that duty – even if those abuses would have been preventable (e.g. by implementing privacy-by-design best practices). On another level, similarly, meeting a deadline by delivering an identity management solution without some critical controls would be rejected by the Duty Ethicist, as the duty of delivering quality would be violated (although the buyer might not even notice and the goal of timelines (utilitarian) can be achieved).

Virtue Ethics

Philosophers of Virtue Ethics consider the ultimate objective to be a moral life of virtuous habits. The virtuousness of an action (not the result!) determines whether it is right or wrong. When it is a virtue to help each other, then helping each other is the right thing to do regardless of whether it was motivated by duty (as in Duty Ethics) or whether it achieves positive results (Utilitarianism). Obviously this raises the question, similar as with duties: “what are the virtues?”, “who decides what is virtuous?”, and “what is the end-goal?” [Aristotle](#), Plato, and Socrates are considered the main thinkers that developed this theory. In their time (ancient Greek civilization) their formulation of Virtue Ethics also included a clear view on what humans were meant to be, what their objective is (their ‘teleos’ in Greek) and that all actions to achieve that were good. Some examples of virtues are courage, compassion, modesty, honesty and kindness. Kant’s main critique of Virtue Ethics included the notion that a person with virtuous habits but malevolent intent would lead to a very effective malevolence (e.g. a really good thief). And, of course, utilitarians would agree since thievery does not optimize the total amount of happiness (unless that thief is Robin Hood^{xviii} or otherwise philanthropically inclined...).

Taking the same Digital Identity System example above, Virtue Ethicists would consider it moral, not if driven by the duty to provide identity for all, but instead if it has been designed virtuously. In order to cultivate the virtue of autonomy with individuals they could propose a self-sovereign identity (SSI) solution that supports more autonomy than another (central or federated) type of identity management solution (where third parties, like institutions, play a determining role in controlling the identity and data). This may also cover virtues of inclusion, a process of ethical reckoning, etc.

Communitarianism

This more modern theory of Communitarianism considers the communal aspects and suggests that, in fact, ethics cannot be separated from its socio-historic context. One of the proponents is [Alasdair MacIntyre](#) (1929) who wrote ‘After Virtue’ (1981). It rejects the

Virtue Ethics practice of separating the ends (outcomes) from the means (virtues in this case). In this paradigm, the community is the source of meaning, values, and therefore ethical practice. This occurs via community sense-making, which is a function of language, meaning, history, religion. Ethics in this theory includes the impact on the society and the community, not just what a development does in a community (but also what it does to it).

There is some critique on the communitarianism theory. Individual values like self-determination, moral autonomy, right to privacy (including control over your data) can sometimes conflict with accountability and obligations towards others (which are more relational and societal) and the responsibility for ones actions, as values more related to communitarianism^{xix}.

Overview and Example

The overview of the four theories also gives examples of probable statements made, using these theories. In addition an example is given to further clarify what type of arguments and reasoning are associated with the various theories.

Overview of Ethical Theories			
Utilitarianism	Duty Ethics	Virtue Ethics	Communal Ethics
Result, outcome, consequence. It is right if the result is right. The means serve the end.	Duty, principle. Even when it lands you in trouble you carry out your duty.	Character building, virtue development. Whatever makes us a better person.	Community and relations. What makes a better society, creates a stronger social fabric.
'It is OK to cut a few corners and hide some mistakes to get the product launched on time'	'We have to be transparent with regards to the risks of our product, it is our duty to inform every user fully'	'This design forces the user to active consider options, we want to cultivate this behavior in the user'	'This feature brings people together based on similarities instead of creater bigger divisions'

Using Artificial Intelligence as an example the four theories could view the developments related to AI like this:

- Utilitarianism: good because it speeds up production processes, helps students deliver essays more quickly, allows doctors to diagnose patients quicker and better
- Duty ethics: worrisome since AI is going to take over some of the human duties, yet technology can never be held accountable
- Virtue ethics: good because it allows humans to focus more on cultivating virtuous habits, yet bad because it is used for creating essays, yet bad when it makes humans lazy (as an example)
- Communitarianism: bad because of the impact on society, the 'race for the brain stem' and the destabilization of democratic processes, fake news, etc.

So was it useful, did you do your duty, or were you to develop a virtue, or consider the community/society? Having philosophers thinking and discussing this for centuries is at least a sign that we won't be able to come to a definite answer this decade. (just kidding)

If we want to have maximum positive impact in the world through our work as identity professionals, we need to be conscious of these ethical theories and make sure we bring the right (design) reasons to the table before we make choices. Outcomes matter, so too do the values and the virtues that have been selected to achieve those outcomes. And, embracing communitarianism means that valuable outcomes and practices may differ around the world. With this said, this paper recommends that Identity professionals - and really any professional - begin with understanding the difference between 'but this will provide a good result' and 'but this is what we ought to do' and 'but this is what professional with integrity would build' and 'but this is what our community needs', followed by a clear articulation of the values their work is designed to uphold.

Values to Uphold (or not)

When grappling with ethics on a project, the key questions are about

1. What is valued?,
2. How those values relate to each other
3. How can the project honour and reflect those values more than before.

This section proposes and explains several values relevant to Digital Identity. Note that IDPro is releasing another article, "Ethics for Digital Identity and Identity Driven Algorithms" by Mike Kiser, in which a slightly differing set of values is discussed.^{xx} There is a large overlap to be expected in values that differing authors hold and discuss, and at the same time each individual will bring their own emphasis, based on their context, background, culture, technical specialism and experience. This shows that in ethics the conversation is essential, and not having a final definitive exhaustive list of values (as that does not exist).

In practice, ethics is a process of discussing, weighing, navigating, documenting, and measuring values. Rather than adopting one or the other, the authors and the BoK Editorial Committee encourage practitioners to use these and other best-practice inputs to develop contextually appropriate value-sets. Further resources are highlighted at the end of both articles.

Well-Being

Human well-being is also expressed in the Hippocratic oath: "do no harm," but the concept must involve more than a mere defensive approach. This is a widely accepted assertion, also found in the various human rights instruments. But what does it mean? And whose well-being?

Well-being for one group may mean it comes at the expense of another. Especially in the global supply and production chains there is growing recognition for a fair

distribution of benefits and a fair distribution of the costs of production (not just financially, but also in terms of pollution, waste, etcetera). Also, the question arises what exactly is well-being: is it more income, or perhaps less income but more freedom? Perhaps it is privacy... but perhaps it is strong counter-fraud controls in the ecosystem. Are those two aspects of well-being sometimes in tension? This means exploring and documenting the interplay of interests for all parties. Key is the conversation to a) at least recognize this value and b) discuss the questions of what well-being, whose well-being and impact on well-being c) identify the requisite trade-offs. Some research in this area has been done by Women in Identity.^{xxi}

Autonomy

Autonomy refers to individuals having the freedom to decide what to do and exercising control over their own life. Most often defined as “freedom from external control or influence,” this applies within the boundaries that are set in society. Importantly, autonomy does not mean individuals can steal or abuse others. Autonomy can also include the autonomy of making up one’s mind. Often, legal frameworks (like Europe’s General Data Protection Regulation) and Digital Identity implementations uphold this value through the concept of consent.

The book *Beyond Data* by Elizabeth Renieris^{xxii} considers where the usefulness of consent ends and further regulation is required. A car offers a tangible example: you can’t buy one without brakes and a seatbelt, but you can select the brand, the horsepower and the color. What should be regulated (brake, seatbelt) and what should be for the user to decide? And a similar discussion starts related to the digital identity wallet that every citizen of EU Member States can use to authenticate and share data, where full control by the user realizes (a form of) self-sovereign identity (SSI) and on the other hand we know how easy users share data online or click ‘accept’, so where should control be augmented with restrictions? How should regulators address the risk of oversharing data^{xxiii}?

Agency

Agency is the capacity to act under one’s own free will. Everybody is influenced continuously, but when technologies enable manipulation and coercion, it deprives people of autonomy and agency: people lose their ‘free will’, either knowingly or unknowingly (e.g., in cases of misinformation or algorithmic manipulation^{xxiv}), then this is generally considered unethical.

Equality

Equality is the state of being equal, especially in status, rights and opportunities. Equality means each individual or group of people is given the same resources and opportunities, regardless of their circumstances. Digital technologies can create more opportunity for equality by expanding the ways that people can interact when digital is offered as an additional channel. However, just as easily, digital technologies can create more inequality through their design by targeting mainstream users, which can make it more difficult for those outside of the mainstream to participate. For instance, this can occur via prerequisites, such as digital literacy, devices, connectivity, or power.

Transparency

For users to hold practitioners accountable for decisions in design, development of solutions and their implementation(s), the reasons must be transparent to end users. True transparency not only answers the question of *why*, *but it breaks down the how* in a simple way. When applying this to identity, it is critical to use language that is easily understandable to the end user, as technical jargon can quickly become complex.

This transparency is more than just disclosure for disclosure's sake — it enables autonomy of individuals by having clear visibility on what is happening and why. It enables the stakeholders to timely identify necessary changes to the system when the purpose changes over time or when the operations of the solution do not meet the purposes anymore. It minimizes the risk of ending up in the situation where 'this is just how the system works, we do not know why exactly but we can't change it', leading to unintended results (and potentially including harm).

Fairness (Lack of Bias)

For Identity Systems to promote fairness, it must expose its own biases. Detection is successful only when the full range of bias is understood, and organizations such as IBM have helpfully provided a taxonomy of bias, ranging from bias due to doing too much, too quickly (shortcut bias) — to false assumptions of sound judgement (impartiality bias) — to more direct prejudices (self-interest bias).^{xxv}

The value of fairness can also include that those who put in effort also should get reward (either through income or other benefits).

Principles for Digital Identity

Various frameworks of principles and guidelines for the development of national Digital Identity solutions have appeared in the early 2020s. This article will not explore these but merely mention the many principles^{xxvi} and a study on how principles and values differentiate based on the sociopolitical configurations^{xxvii}.

Applied Ethics

With some background on the main ethical theories and a set of values, this paper turns its attention to how to 'do ethics.' This section describes several methods that have been developed to include ethics in technological design processes. When abstracted, every approach generally contains at least these four main elements:

1. Consider the context and the use case (what do we have here)
2. Identify all stakeholders (who do we have here)
3. Discuss the use case (what values are impacted)
4. Adjust the design/operation of the solution.

The scope for this evaluation should not be limited to technical functionality and, instead, should extend to the end-to-end experience of the actors in the eco-system.

This broad view is essential in facilitating a holistic ethical discussion. This is true whether implementing a commercial authentication solution or a national Digital Identity eco-system that integrates with global payments.

Having completed those stages, the changes can be implemented. However, ethics needs to be continuously practiced. For example, when asbestos was invented it was great because it was so fire-resistant; only later did we find out it was a carcinogen. Another example is DDT, which was an insect repellent that worked really well to increase crop yields ... until we found out it also poisoned ground water.^{xxviii}

This could also happen to Digital Identity and Access Management solutions as solutions take root in the real world and technologies move on (e.g. encryption practices will need to move on with quantum computing), so continuous assessment of their impact on individual and society is required.

Value Sensitive Design

Value Sensitive Design (VSD) is a framework to systematically integrate values of ethical importance into technological designs, described by [Batya Friedman et al.](#) In 1996, and expanded in the following years. The methodology has three parts that it addresses: empirical, conceptual and technical. The empirical part identifies relevant stakeholders and their values and priorities, the conceptual part explores these values and their trade-offs, and the technical part clarifies how the technology either gives rise to value issues, or can 'implement' values in the design of technology. For technology that continues to change (i.e., it does not remain fixed after go-live) reflexivity is added as a fourth aspect, which periodically reflects on the technological design, its operation, and the values of ethical importance that play a role.^{xxix}

Guidance Ethics

The [guidance ethics approach \(GEA\)](#) positions the ethical observer not as a judge to a process or a result, but as a guide and consultant. This has evolved as a method where a workshop is conducted to discuss a new technology (such as digital wallets for digital identity and attributes). Facilitators gather all relevant stakeholders, discuss the use case, and deep dive into the impact of this technology. This is a guided value conversation during which the group discusses what values are impacted and, towards the end of the workshop, the actionable items and deliberations for the (design of the) technology are formulated. For example: when applying Digital Identity wallets for age verification (for buying alcohol online) the value of health was identified, but **also** the safety (of the cashier), autonomy and ease of use. In this approach theorists, designers and practitioners are jointly discussing the technology and the use case(s).^{xxx}

Ethics Canvas

The [ethics canvas](#) is based on the value proposition canvas,^{xxxi} but adds the dimension of impact (the consequence space), where impact on the individual and society is described. Choices and outcomes may be explored and centrally documented using an ethics canvas. Identification of the affected individuals, their relationships, and

worldviews help to give concrete insight into what groups might be in conflict and what trade-offs are being implicitly agreed to with each decision/implementation choice. This allows for all participants — from designers to implementers — to contemplate the ramifications of their decisions, and to embed a mindset that seeks to underscore the morality of their actions more clearly. This central document establishes the ethical standard that all participants agree to abide by; it is a guiding force throughout the rest of the process.^{xxxii}

Example of Applied Ethics in Digital Identity

The 2013 process for the development of the British Columbia (BC) Services Card^{xxxiii} reports how this process successfully realized civil participation to discuss values and impact. The lessons learned were that the forum, panel and survey worked well. The clarity of the need and the aspect of 'reporting back' to those who provided input (do not merely use them for input at the start), painted a clear picture of what was to be achieved and how it will look like (practical and concrete). Lastly, it will make sure everyone is heard, including those groups in the population with a 'softer' voice.

Another example is the Horizon2020 IMPULSE ("Identity management in public services") project that developed an innovative digital wallet for citizens to assess SSI and blockchain based approach to digital identity could be implemented into the public administration. The project [published](#) on the assessment of ethical societal and legal issues. IMPULSE used a decentralised and SSI management system based on a verifiable credential (VC) model (using blockchain). Users request identity verifiable credentials through a digital onboarding process with biometric face recognition and document validation. From there the users present identity verifiable credentials for authentication to online public services. The ethical assessment was done with a deontological approach and a Value Sensitive Design approach.

Finally

It takes time and dedicated conversation to create ethical identity solutions that have been built to express a clear set of values. One of the values most business hold is that a good cost-benefit analysis is done before expending resources on a project. The cost-benefit analysis for 'being ethical' seems hard to make, and isn't it something that everyone should be? Who wants to be unethical? In addition there is evidence of a positive business case. Inclusive solutions that take more time and effort to develop can result in more revenue/use because they achieve higher adoption. In general, businesses with an ethical approach to doing business outperform comparable companies by 12,3 percentage points in 5 years on the Large Cap Index.^{xxxiv}

Ethical behavior affords premium pricing, attracts ethical employees and associates – so the whole network becomes more ethical (investors, business partners, etc.). For identity professionals it is important and possible to create solutions that contain the results of ethical and value-driven conversations. This leads to better results, whether working on enterprise IAM solutions, customer and market solutions, or even national solutions and global standards.

Other sources

The whitepaper [“Human-Centric Digital Identity: for Government Officials,” co-branded by 13 non-profits \(including UNHCR\)](#) describes the connection between Human Rights and Digital Identity Initiatives, specifically Legal Identity, and includes five paradigms on digital identity.

A book on [Ethics for People Who Work in Tech](#), detailing more on the ethical thoughts and the various approaches to applying ethics.

More on ethics at the ‘e’ in the [Stanford Encyclopedia of Philosophy](#).

A 4 page workshop report on ‘ethical digital identities’ (<https://dl.acm.org/doi/abs/10.1145/3526073.3527586>) with a problem description and a specific definition of an ethical digital identity (EDI) - a digital identity of an object (e.g. unique identifier) that also states what ethical ‘level of assurance’ is given.

ⁱ Kiser, M. (2024) “Ethics for Digital Identity and Identity-Driven Algorithms.” IDPro Body of Knowledge 1(14) doi: <https://doi.org/10.55621/idpro.105>.

ⁱⁱ Engineers Canada. “Public Guideline on the Code of Ethics | Engineers Canada,” n.d. <https://engineerscanada.ca/guidelines-and-papers/public-guideline-on-the-code-of-ethics#the-code-of-ethics>. [Accessed 31 July 2024]

ⁱⁱⁱ IDPro. “IDPro® Mission, Vision, Values, Services - IDPro,” n.d. <https://idpro.org/mission-vision-services>. [Accessed 31 July 2024]

^{iv} Covered in <https://msf.org.au/rohingya-worlds-largest-stateless-population>, but more complex than mentionable in one sentence

^v Government of India, Unique Identification Authority of India. “Aadhaar,” n.d. <https://uidai.gov.in/en/>. [Accessed 31 July 2024]

^{vi} Melvin Kranzberg, “Technology and History: Kranzberg’s Laws,” *Technology and Culture* 27.3 (1986): 547.

^{vii} Note that public and private actors may hold and promote different values, but values vary across cultures as well as well.

^{viii} Francesca Morpurgo, “Panel: Human Rights by Design for a Fast-Changing World.” European Identity & Cloud Conference 2024, <https://www.kuppingercole.com/sessions/5564/2>.

^{ix} See a Yale lecturer on the Trolley Problem (lectures 14-15) at <https://oyc.yale.edu/philosophy/phil-181/> and assess your own morality versus others at moralsensetest.com

^x Respectively <https://www.un.org/en/about-us/universal-declaration-of-human-rights>; <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>; <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=OJ:C:2007:303:TOC>; and <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child> See more Human Rights Instruments at <https://www.ohchr.org/en/instruments-listings>

^{xi} See [Environmental Ethics \(Stanford Encyclopedia of Philosophy\)](#) for example

^{xii} The book by Michael Sandell on Theories of Justice provides an excellent further exploration of these theories.

^{xiii} “Consequentialism (Stanford Encyclopedia of Philosophy),” October 4, 2023. <https://plato.stanford.edu/entries/consequentialism/>. [Accessed 31 July 2024]

^{xiv} Another type of consequentialism is hedonism, which basically states that when it gives pleasure, it is right.

^{xv} “Bernard Williams (Stanford Encyclopedia of Philosophy),” January 28, 2023.

<https://plato.stanford.edu/ENTRIES/williams-bernard/>. [Accessed 31 July 2024]

^{xvi} “Elon Musk’s Appetite for Destruction.” Narrated by James Cronin. The New York Times, February 26, 2023. <https://www.nytimes.com/2023/02/26/podcasts/the-daily/elon-musk-tesla-self-driving.html>.

^{xvii} Furthermore, they believe that the duty itself must be the motivation for the act. For more on Duty Ethics see “BBC - Ethics - Introduction to Ethics: Duty-based Ethics,” n.d.

https://www.bbc.co.uk/ethics/introduction/duty_1.shtml.

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^{xxii} Renieris, Elizabeth M. *Beyond Data: Reclaiming Human Rights at the Dawn of the Metaverse*. MIT Press, 2023.

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<https://open.overheid.nl/documenten/ronl-0662761f27b090409a5b68476bf4e550c69c9562/pdf>.

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