***RegTech:* the good, the bad and the seriously scary: responses to unanswered questions on sli.do**

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| **Anne Lenz** |
| Question:  Do you use technology to support other compliance approaches, or only for enforcement? |
| That’s a great question and the short answer is a strong yes! In almost all circumstances, our compliance approach is to inform and educate before enforcement activity takes place. A perfect example of this is the use of AI to detect pools that may not have a safety certificate. We know that first step in achieving compliance and improving safety is to identify opportunities to educate pool owners and so we are using AI, not to enforce, but to educate. There are actually only very few tools we use in general that only apply to enforcement activity. |
| Question: How hard is it to stop moving inexorably from profiling dangerous dogs to (racially) profiling dangerous people? |
| What an important and thought provoking question! I would say that ethical decision-making in the technology space is a specific example of our general ethical decision-making responsibilities and so yes, it important to get right, but it doesn’t have to be hard. Is it hard to create systems and processes that create a culture of ethical decision-making? If you have an organisational culture that values inclusiveness, fairness and compassion, then it shouldn’t be hard to implement governance that safeguards us from unethical choices.  At the same time, new technology can sometimes create blind spots that lead to unintentional consequences and so the hard part is making sure that the governance and decision-making frameworks are constantly being updated with the help of experts who see into those blind spots.  To answer the question directly though, we do make sure we work hard to have the right culture, governance, frameworks and people involved in all technology-related decisions. This is to ensure that we treat all people with the respect and dignity that they deserve. It is also not hard to discuss and agree on limits to the use of technology. Profiling people was one of the first things we agreed to simply not do. We don’t draw the data into our models and we actively assess and discuss to ensure that we continue to not slide, accidentally or otherwise, into this space. |
| **Katie Miller** |
| Question: Do you think our regulators are well informed on the pace and advancement of regulatory technologies to assess and determine their availability? |
| There is a broad range of technologies that can assist regulators and regulatory technologies often combine technologies that we use in our daily lives – cameras, mapping software, voice recognition, databases and search. It is not necessary for regulators to be informed about every commercial product. Rather, I encourage regulators to be informed consumers and purchasers of technology. Read and listen widely – about both successes and failures, regulatory uses and non-regulatory uses. Be prepared to borrow and adapt, but don’t expect that you can copy and paste a solution used by one regulator into your regulatory practice. Communities of practice can be a great way of sharing information about both great solutions and good vendors and your procurement process will help to ensure you find a reliable vendor. |
| Question: Following your comment about seeking legal advice, is there sufficient capability in the legal market to address RegTech issues? |
| The legal market is a broad and diverse one and there are plenty of lawyers providing advice about technology. The question for regulators is whether their current legal services provider is the best provider for advice on regulatory technology. I encourage regulators to engage early with their lawyers about your emerging needs for regtech advice, which may extend beyond the ‘traditional’ categories of procurement and privacy advice and into issues of how legislative powers operate when exercised through or by technology, rather than a human. If you are not satisfied that your current provider can meet your needs, then use your existing procurement processes, such as panels and tenders, to find a provider who will. Communities of practice are a great way of sharing information and finding the stand out legal services providers. |
| **Monika Sarder** |
| Question: Is there any form of ‘Hippocratic Oath’ for RegTech which exists in draft for government agencies to sign onto? Preferably an international one? |
| There are currently several international initiatives underway to codify ethical principles for RegTech, along the lines of the Hippocratic Oath. These include the [Oxford — Munich Code of Conduct](http://www.code-of-ethics.org/code-of-conduct/) and the Data Science Associations’ [Code of Professional Conduct](https://www.datascienceassn.org/code-of-conduct.html). There are also several codes specific [to the application of learning analytics](https://melbourne-cshe.unimelb.edu.au/__data/assets/pdf_file/0004/3035047/LA_Ethics_Discussion_Paper.pdf) in education, recognising the unique vulnerability of students in relation to algorithms.  All of these initiatives have drawn from the core principles embedded in medical ethics to some degree. These principles can be broken down into the following:   * Respect for autonomy – the patient has the right to refuse or choose their treatment * Beneficence – a practitioner should act in the best interest of the patient * Non-maleficence – to not be the cause of harm. Also, "Utility" – to promote more good than harm, and * Justice – concerns the distribution of scarce health resources, and the decision of who gets what treatment.   The above principles are largely transferable to RegTech simply by switching out ‘patient’ for ‘data subject’, and ‘practitioner’ for ‘data scientist’, as a start.  In the EU some of these principles have been codified into law. For example, in relation to the right to autonomy, under Article 22 EU citizens have a right to refuse “*a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her*.”  While we do not have a similar code or law in Australia, we do have a voluntary [AI Ethics Framework](https://www.industry.gov.au/data-and-publications/australias-artificial-intelligence-ethics-framework/developing-the-ai-ethics-framework-and-principles) which sets out 8 highly sensible principles to help business and governments to responsibly design, develop and implement data analytics processes that may significantly affect the agency of individuals.  Ultimately a stronger commitment by government agencies to something like an International Code of Ethics for data science would be desirable, in light of the increased use of algorithms in decision support and decision making, and the significant risk of harm to individuals. |
| Question: Is there a role for RegTech to play in decision making, where an individual will struggle to put their inherent, natural and unconscious bias aside? |
| Broadly speaking, the application of algorithms in RegTech does have the potential to reduce the prevalence of bias in a decision-making process, but only under specific circumstances and with careful implementation.  Algorithms, by definition, are designed to discriminate. That is, an algorithm takes an array of human attributes for a given individual, and combines them with an array of attributes observed from other individuals, in order to determine what that individual may be like in relation to some outcome (eg meeting performance targets for a role, providing honest answers in a probity check, reoffending after being offered probation). Because the weighting of these attributes is not necessarily visible to the human decision maker, an algorithm can end up perpetuating, obfuscating and in some cases introducing bias into a decision-making process.  Past learnings have shown that algorithms frequently embed historical and contextual bias. For example [Amazon’s recruitment algorithm](https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G) was scrapped as the training dataset consisted largely of male employees, and consequently the AI did not like women for technical roles.  Bias can also commonly arise through the use of proxy variables. For example, the use of neighbourhood information and social security information by [child protection agencies](https://www.wired.com/story/excerpt-from-automating-inequality/) in the US resulted in an referral system that disproportionately sent investigators to poorer households.  Unfair or biased decisions may also be generated through RegTech applications, when the algorithm is too complex for the government agency to assess what is actually going on. Questions have been raised as to whether the Pearson’s IELTS oral exam scoring, conducted by an algorithm, is actually robust to different [accents](https://www.dailytelegraph.com.au/subscribe/news/1/?sourceCode=DTWEB_WRE170_a_GGL&dest=https%3A%2F%2Fwww.dailytelegraph.com.au%2Fnews%2Fnsw%2Fcrazy-visa-fail-as-computer-marks-down-english-lawyers-perfect-diction%2Fnews-story%2F3210300e45e92eae55b361d1de78f844&memtype=anonymous&mode=premium). This test outcome provides a threshold for visa applications in a number of jurisdictions around the world, yet to date none have sought assurances as to the relative fairness of their tool across accents (and hence cultures).  An interesting side effect of the novel risks of bias introduced through the application of RegTech is the growth of [algorithmic auditing services](https://hbr.org/2018/11/why-we-need-to-audit-algorithms). ‘Algorithmic auditors’ apply a multi-disciplinary approach to ensuring that applications are ethical and free from bias. Some of these even incorporate algorithms to audit algorithms. |