

Indeed, two key provisions of the GDPR seem *a priori* incompatible with Blockchain, namely the “right to rectification” and the “right to be forgotten” – i.e. the right to rectify or obtain the erasure of personal data (Articles 16 and 17 of the GDPR). The immutable nature of blockchains makes it very difficult to update, erase, change or correct data. Some in the community argue that a possible solution is to keep personal data off the chain, with only its evidence (cryptographic hash*) exposed to the chain, thereby maintaining the integrity of the transaction while making it possible to erase the transaction itself (Deloitte, 2017; IBM, 2018). The deletion of the data stored externally would mean that the hash stored on the blockchain would point to a location which has been deleted. Others note, however, that hashed data qualifies as personal data under EU law (Finck, 2017).

It has also been argued that, while blockchains and the GDPR seem incompatible at a conceptual level, both pursue the same goal of giving individuals more control over their personal data, but through different mechanisms. Consideration could be given to whether the GDPR's underlying objectives could be achieved through means other than those originally envisaged (Finck, 2017). Interestingly, Blockchain's built-in tracking and auditability functions could help organizations comply more easily with another GDPR provision, regarding internal record-keeping requirements. While the GDPR has *a priori* no direct relevance to international trade, as most information contained in trade documents relates to companies, not individuals, it could have an impact on trade in specific situations, when the contact details of a person at a firm need to be given (e.g. for exports of dangerous goods). Ultimately, the need to find a compromise between ensuring legal protection of personal data and encouraging innovation is one issue that regulators may have to address, and that highlights the need for proper governance fora to be established.

(iv) Closing the gap between the world of law and the world of code

Although the relationship between the world of law and the world of code has evolved significantly following the advent of digital technologies, with the digitalization of law and the emergence of the “code is law” concept popularized by Lawrence Lessig (Lessig, 1999) (i.e. the notion that code sets the terms by which the behaviour of internet users is regulated), law remains difficult for machines to read but easy for humans to apprehend. Conversely, the codes used to programme machines and smart contracts are particularly obscure and complex for humans.

Closing the gap between the two, while not a precondition for the deployment of Blockchain, could be a powerful enabler for the use of smart contracts. Legislation and contracts are often written for a paper-based world, in a way that makes them difficult to use in digital contracts. A new approach to regulation is emerging that