

Second, Blockchain enables the automation of government procurement procedures via the use of smart contracts, thereby ensuring efficiency, neutrality and fairness of processes. Smart contracts, i.e. self-executing contracts stored on the blockchain, can help to improve both the tendering process itself and the management of awarded contracts. Indeed, not only is it near impossible for any party to manipulate the data stored, but no-one can bypass the smart contract and its permissioning logic. The automation of submissions, reviews and payments, and the near impossibility of manipulating data can help to prevent fraud involving actors within the process and reduce costs, and allow for a fair, efficient and impartial process, as required under the GPA.

How would a blockchain-based tender process run? A government agency – the procuring entity – would publish a notice of intended procurement. Interested suppliers would submit their bid via the blockchain application used by the agency within the required timeframe (a permissioned ledger). Bids would be hashed and encrypted\* upon submission. Upon closure of the submission period, all bids would be analysed and assessed by the smart contract on the basis of the encoded criteria, and a winning bid would be identified. Once the winner was identified, authorized signers could examine the documents submitted by the winning supplier and validate them. The winning bid would be formally announced, and unsuccessful suppliers would be automatically informed.

Once the contract has been awarded, a smart contract could set the terms of delivery, fulfilment of the contract, and payment. Work could be verified by authorized signers and goods supplied under the contract automatically recorded onto the blockchain using blockchain-based logistics. When the terms specified in the smart contract are met, payment would be automatically made to the supplier.

Third, using Blockchain to run tender processes can be particularly interesting to help fulfil another requirement of the revised GPA, namely electronic traceability. The revised GPA mandates parties using electronic means to ensure appropriate traceability of the conduct of covered procurement processes for at least three years.<sup>70</sup> This provision is meant to ensure the availability of data during a certain period of time in case of litigation. Given the immutable nature of Blockchain, using a distributed ledger to conduct procurement processes *de facto* ensures that all data will remain accessible to authorized users automatically and indefinitely.

Various countries are currently investigating the potential of Blockchain for government procurement. The US General Services Administration, for example, is