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## **Digitization of national identities of citizens using Blockchain Technology**

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Every citizen holds a unique identity, which they use to prove themselves as an authentic citizen in a situation where they are requested to do so. These identities hold a very crucial part, for both the provers and the verifiers, because it is one of the most reliable sources of proof for a citizen. As technologies evolve, these manual identities are becoming easier to tamper and that eventually leads to several false claims and fraudulent activities. Hence, it is becoming harder for a verifier to trust this information and the verification of the authenticity of such false identities is not an easy process. Therefore, the digitization of identities is one of the key steps for a nation when moving forward into a digital era. However, it is not quite as easy as being implied, because this sensitive information should be handled with the highest security and it should not be prone to any digital vulnerability. Therefore, this research proposes a way to digitize the identities of citizens in a very secure manner by deploying the control to the user without relying on any remote data storage. This solution proposes to store transactions of identities from the origin (government) to citizens inside a public distributed ledger, known as a blockchain that helps the verification of transactions to prove the legitimacy of an identity. The main advantages of this approach are that the users will have control over their identities, can decide with whom they want to share their identities and can also be revoked anytime per the wish of the user. The verifiers will be able to verify the identities by checking whether the transaction of this information (identity) from the government to the prover (citizen) has been recorded within the blockchain. Hence, this would bring a very secure and reliable digitization solution for a government to manage their citizens' identities.

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