

What is a Smart Contract?

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A smart contract is an autonomous computer program running on a Blockchain network. Blockchain is a digital, distributed and decentralised record keeping system on which tokens (cryptocurrencies) are stored chronologically and publicly. Given a set of instructions, a smart contract will carry out a number of tasks on the Blockchain network it is deployed on, at the appropriate time. All parties involved remain anonymous.

Smart contracts and smart lawyers

Smart contracts have become synonymous with disintermediation. For many, this simply means moderators are being pushed out the equation. This could not be further from the truth. In reality, go-betweens like lawyers will be highly sought after for some time to come. In the example of a smart contract handling the rental of property to tenants, rules can be coded which state that, 'If an apartment is vandalised, it warrants the eviction of the tenants'. This is very straightforward but it becomes less so when distinguishing between vandalism and acceptable wear and tear. This is where a lawyer's advice would be needed. Working closely with Blockchain developers, a lawyer can make this sort of distinction clear at the time of coding.

- **Rentberry** is one such Blockchain company. This platform allows landlords to check the identity of tenants



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through smart contract technology and ensure rentals are fully insured, all through a decentralised system.

Smart contracts and identity

Today identity rights sit with a handful of processors. Data subjects have little or no way of making sure that their information does not get passed into the wrong hands. With Blockchain technology, a single, open repository linked by multiple data processors can be set up. Data subjects would own the rights to smart contracts which operate based on parameters that these subjects have specified. This can be described as a digital twin. The digital twin would record all requests that have been made by the likes of credit agencies, immigration, banking, employers and so on. This would not only place control in the hands of those who are being reported about but also give them an audit of where their data is currently being used as well as the purpose of these requests. See Charlie Brooker's Black Mirror episode White Christmas for a macabre but effective dramatization of digital twins.

- **uPort** provides self-sovereign identity. Smart contracts allow users to decide which parties have access to their records.

Smart contracts and asset management

Currently, asset management is a very manual process. If an asset manager is holding some shares which they wish to sell, they have to place calls with others in their network and advertise to them. This gets even more tedious when the shares are illiquid. It becomes a very time-consuming process. Enter Blockchain, which as explained, is an open ledger system. In a perfect world, a host of Asset managers will be connected to one common Blockchain network, allowing all present parties to see which assets are available to be bought and sold. This can be done in an automated fashion using smart contracts so that if one manager's 'buy' conditions match another manager's 'sell' conditions, trades can be made in a very streamlined fashion. In addition, this will bring trading costs down and provide better security thanks to Blockchain's immutability.

- **Ripple**, which is on the tip of everyone's tongue these days, allows digital asset managers to provide liquidity through a decentralised, scalable and robust system.

Conclusion

Smart Contracts are ushering in the future of decentralised autonomous technology. These will allow more transparency, speed, security and more economic transactions. The rate of adoption is directly related to how quickly consumers are educated about their benefits.

Ade Molajo is not affiliated with any of the companies which are mentioned in this article.