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# Smart Contracts: How they work and legal issues

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**OLSWANG**



“I hear more and more people talking about 'smart contracts' these days. But when you push them to define the term, the concept often dissolves in their hands.”

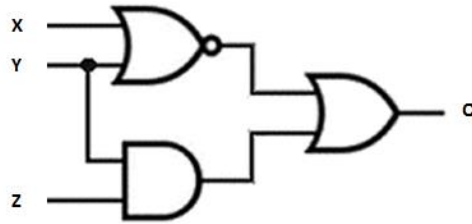
Richard Gendal Brown, A Simple Model for Smart Contracts, Gendal.me, 10 February 2015

“A smart contract is a set of promises, specified in digital form, including protocols within which the parties perform on these promises.”

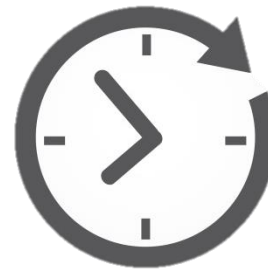
Nick Szabo, Smart Contracts: Building Blocks for Digital Markets, 1996

# Smart contracts

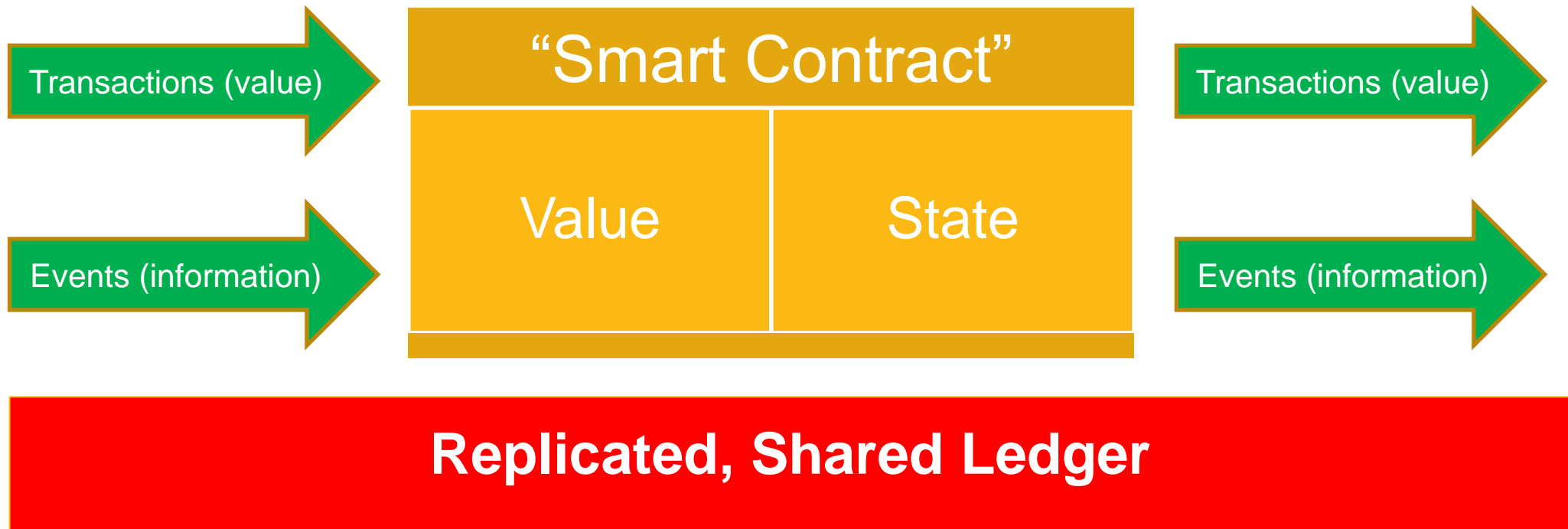
- Parties reach an **agreement**,
- which is reduced to **binary**,
- then written into **code**,



- **hashed**
- and **submitted** to a blockchain.
- The code is **executed** on the blockchain,
- which **triggers events** according to the agreement.



## Smart contracts



Source: Richard Gendal Brown, a Simple Model for Smart Contracts, <https://gandal.me/2015/02/10/>

# Smart contracts

- Automated processes
  - Reduction in contract lead time
  - Reduction in contract administration
  - Reduction in legal involvement on churn contracts
  - Automated internal approvals
  - Automated execution



# Smart contracts

- **Business integration**
  - Auditable categorisation of legal risks
  - Custom reporting
  - Integration with business functions, eg, sales pipeline and risk



# Legal Considerations





## Smart Contracts v the Law

“Smart contracts "replace judges with code... They are enforced by cryptographic algorithms. The rules of the game are determined before the contract executes, rather than at the foot of a judge's podium

Alyssa Hertig, Code of Law; How Bitcoin Could Decentralise the Courtroom, [www.motherboard.vice.com](http://www.motherboard.vice.com), 3 July, 2014

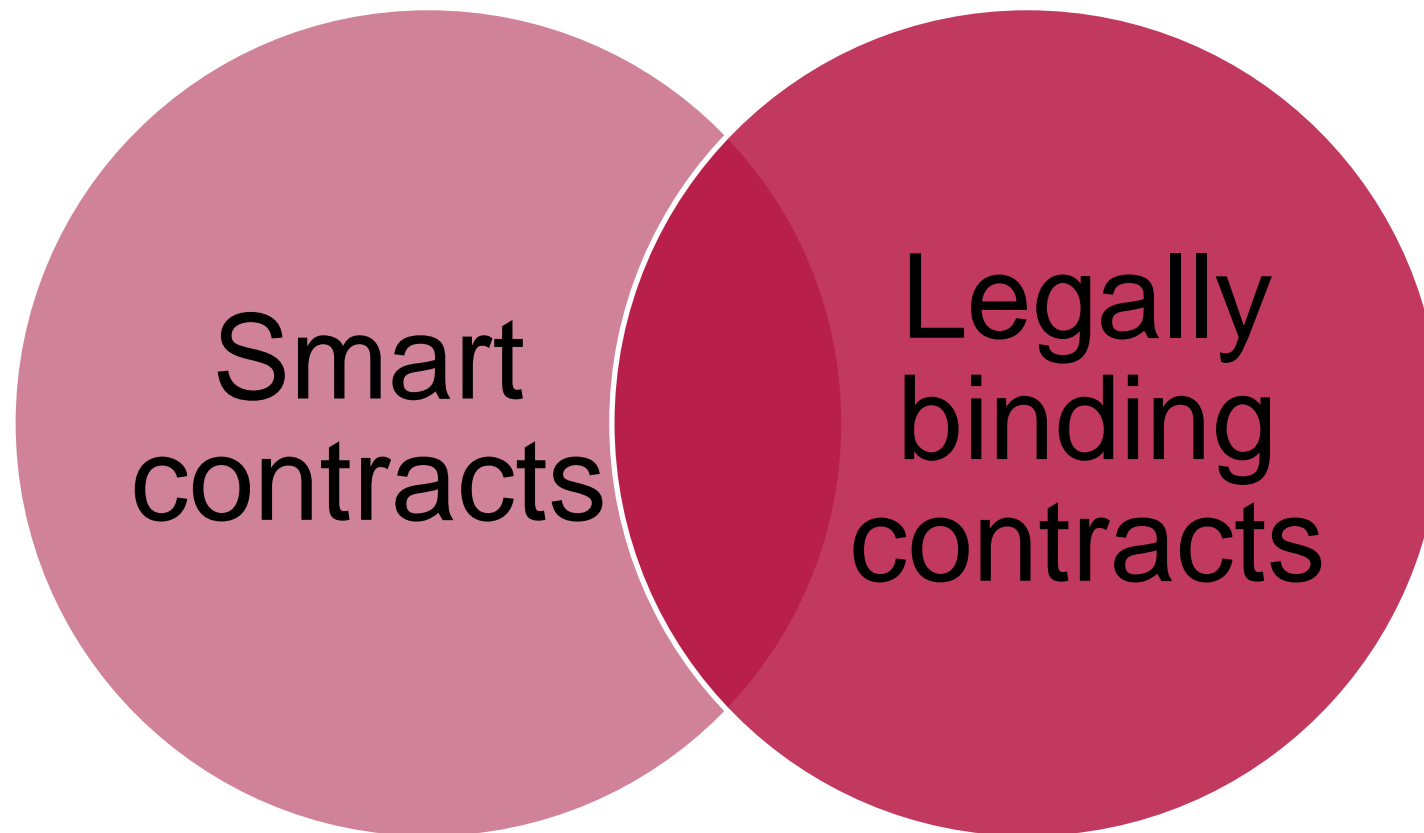
“...technology developers leveraging the power of blockchain technology may find themselves drastically altering contract law, and reducing the need for lawyers...

Andrew Hinkes, Blockchains, Smart Contracts, and the Death of Specific Performance, [www.insidecounsel.com](http://www.insidecounsel.com), 29 July 2014

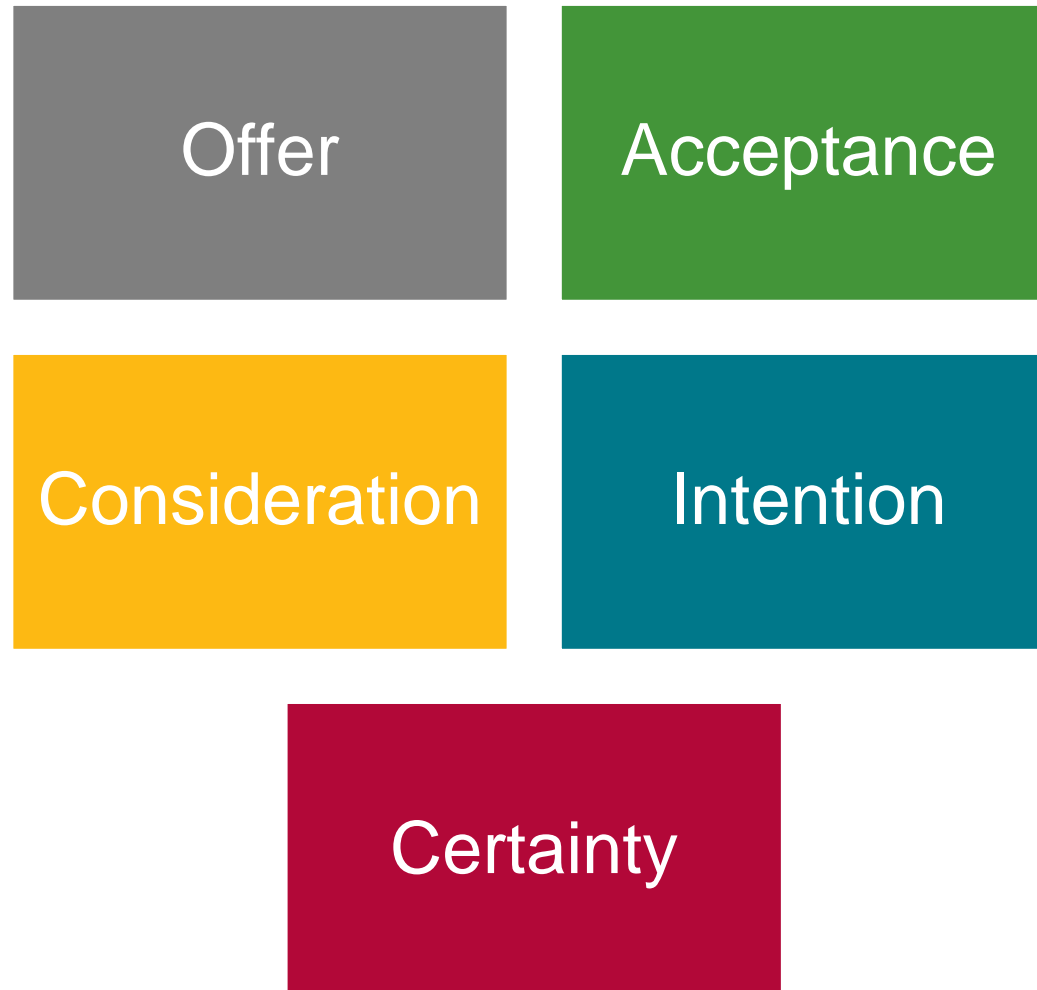
... you can use mathematics to replace regulation ...

Paul Snow, CEO and lead develop at Factom, as reported in The Banker, Technology – Bitcoin – Chain Reaction: Bitcoin's Radical Tech, 1 June 2015

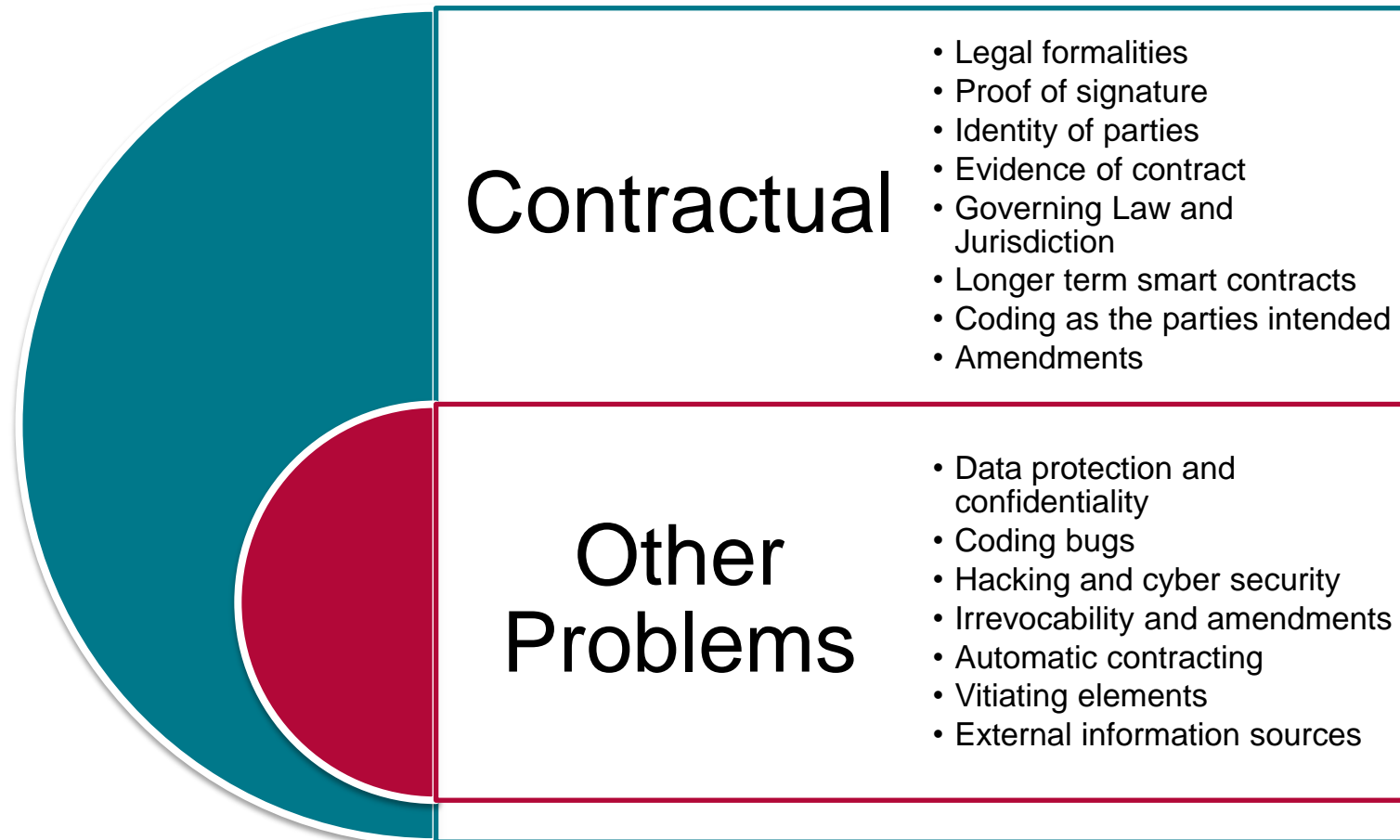
Is a smart contract a legally binding contract?



## What elements are required?



## Smart contracts: Legal / operational issues



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## For more information

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