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# Blockchain / distributed ledger technologies (DLT) and smart contracts: legal issues

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# Blockchain – legal considerations

- **Uncertainty as to parties**
- **Competition/ anti-trust**
- **Intellectual property**
- **Litigation and dispute resolution**
- **Tax**
- **Data privacy**
- **Governance**

# Data protection considerations

- **Addresses on the blockchain:** are public and may be linked to individuals
- **Permissionless blockchains:** no central controller – users and service providers must provide own notices/ obtain consents
- **Permissioned blockchains:** gatekeeper can provide notice/obtain consents for users
- **Service providers to the blockchain may be controllers:** in respect of the blockchain data or processors on behalf of users

**DP REQUIREMENTS: EASIER TO ADDRESS IN PERMISSIONED MODELS**

- Expansive definition of personal data
- Privacy notices
- Grounds for processing
- Retention – no longer than necessary
- Accurate
- Subject rights
- Security and breach notification
- Export
- Data localisation laws
- Smart contracts could be used to show DP accountability

# Smart contracts - Some definitions

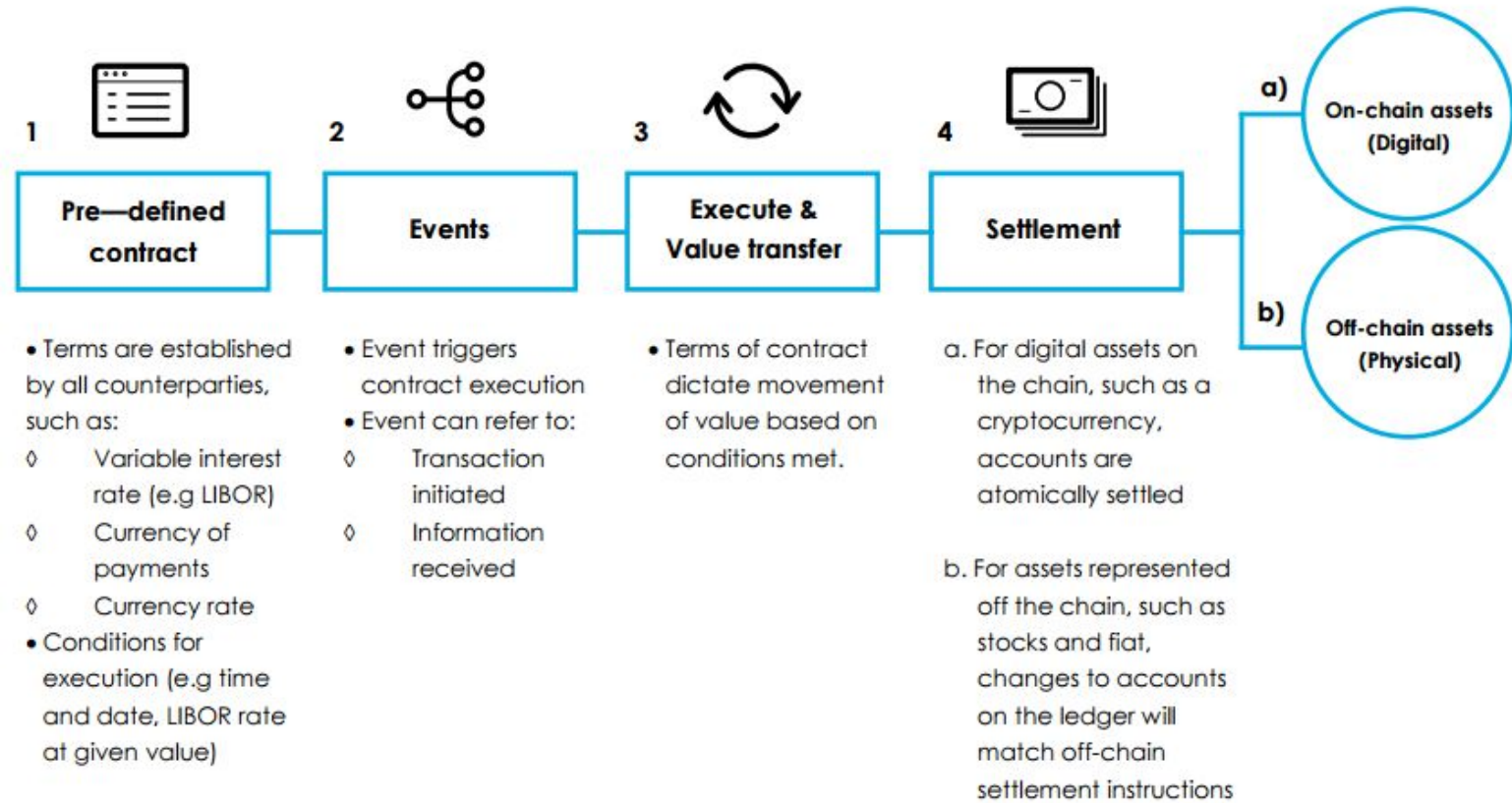
“I hear more and more people talking about ‘smart contracts’ these days. But when you push them to define the term, the concept often dissolves in their hands.”

*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*

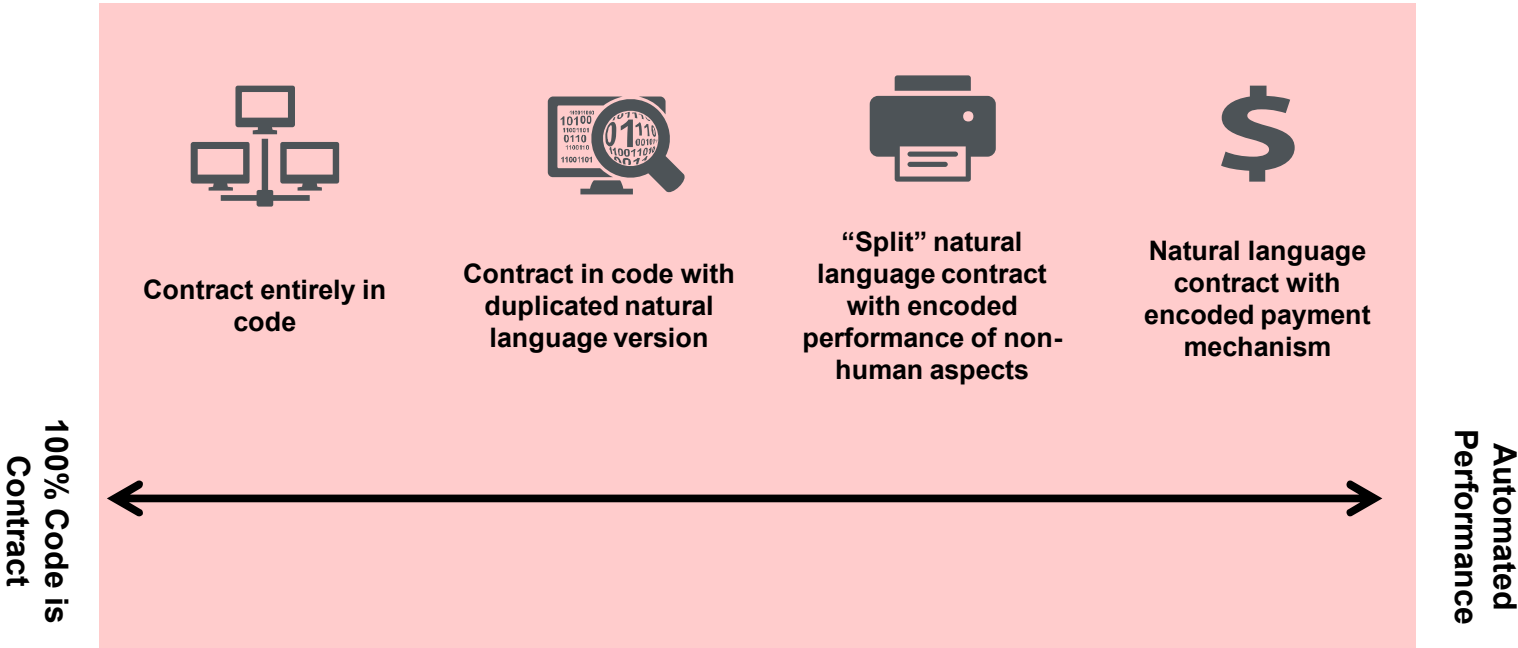
# Smart contract basics



Source: [www.sharethelidger.com](http://www.sharethelidger.com)

# Are there different smart contract models?

Smart contracts lie on a spectrum



# Is a smart contract a legally binding contract?



Smart  
“contract”  
suggests a  
contract –  
is that  
correct?

Will normal  
contractual  
principles  
apply?

Smart contracts  
raise issues the  
law has already  
addressed:

- In the EDI context
- Contractual impact of new methods of communicating (e.g. email / the Internet)
- Electronic signatures

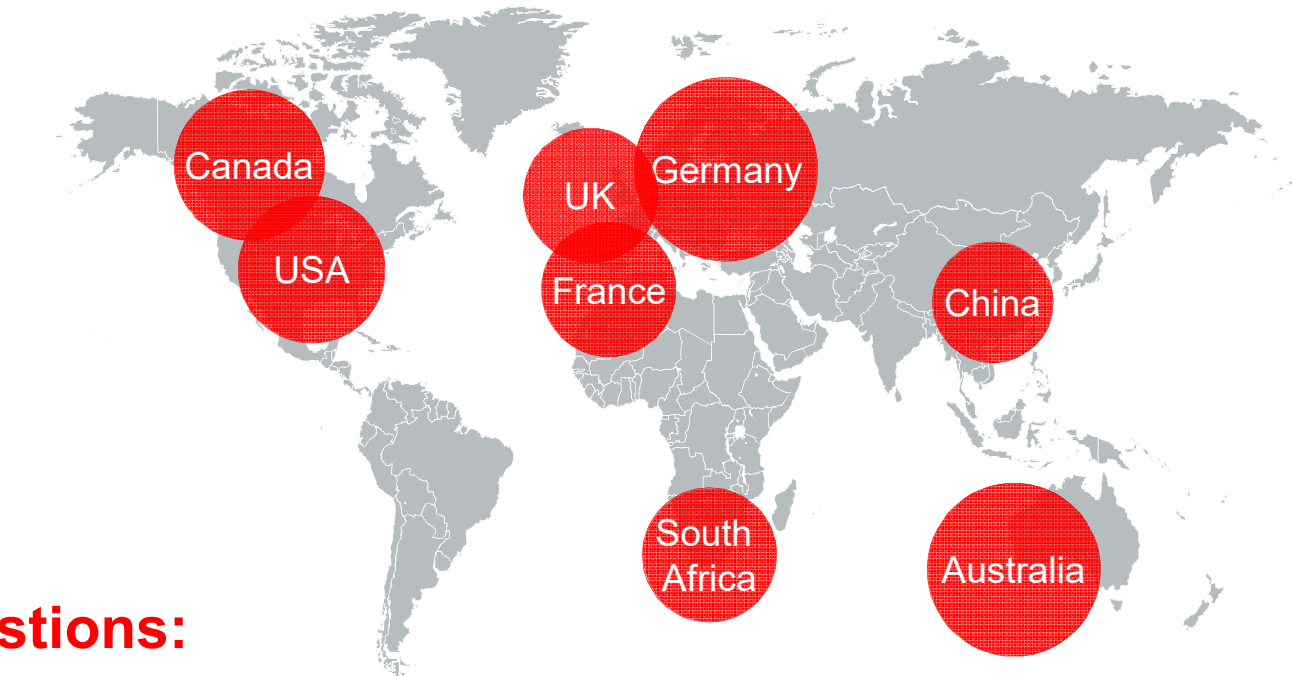
# Smart contracting legal issues

- **Contract law not “cyber-jurisdiction”**
  - Supported by relevant “ecosystem”
- **Formalities**
  - Courts respectful of freedom to contract
  - Certainty of terms
- **Proof of identity, signature & authority**
  - One and the same or different
  - The Deed wrinkle
- **Jurisdiction and governing law**
  - Long arm laws – changes, e.g. trade sanctions
  - Unfair contract terms legislation
- **Bugs in the code**
  - Typo, mistake, rectification
  - What is the legal position if a bug or error in relation to a smart contract results in an error or mistake in what the parties thought they had agreed or in an outcome that was not intended?



# Our research

**A legal review from across these regions:**



## **Key questions:**

- Can a smart contract give rise to a legally binding contract?
- What are the other key legal issues?

The answers may sometimes depend on the model of smart contract used, the factual matrix and the applicable law

# What are the key findings of our research?

<b>Electronic status</b>	Electronic nature not problematic for many (but not all) jurisdictions in establishing contractual formation
<b>Certainty of terms</b>	<p>Certainty as to contractual terms often a critical factor: can the code be understood by a party?</p> <p>Smart contracts that merely automate a particular process but do not include (or operate in conjunction with) contractual terms may not satisfy such requirements</p>
<b>Follow-on contracting</b>	Follow-on contracting (by which a later, separate contract is brought about by performance of an earlier smart contract) may not give rise to a legally enforceable contract in some jurisdictions
<b>Other technical requirements</b>	Other technical requirements of the applicable jurisdiction's law (typically prescribed by legislation) may, in a few jurisdictions, be a potential impediment to legally binding contractual effect

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