# Blockchain, Smart Contracts and Cryptocurrency

**Research into the underlying ideas behind the Bitcoin cryptocurrency – known by the terms Blockchain and Distributed Ledger Technology – which are applicable to a range of other applications, including financial services infrastructure, legal automation, provenance, supply chain management, international trade and health informatics.**

## More Information

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## Competitive advantage

- An interdisciplinary group of staff who are developing this new area of technology and studying its technical, legal, business and societal implications
- Expertise in:
  - Computer Science
  - Electrical Engineering and Telecommunications
  - Law and Business

## Impact

- The Bitcoin cryptocurrency took several ideas and made them into the first successful real-world deployment of a cryptocurrency. These include the blockchain data structure, a distributed consensus protocol, and the ‘smart contract’ – a code that enforces legal terms.

## Successful applications

- Smart contract representation languages and verification
- Blockchain for electricity trading
- Blockchain in Internet of Things and Automotive Systems
- Liability in Distributed Ledger Systems
- Business models for Bitcoin companies
- Software licenses on Ethereum
- Unify Rewards: a trial of a customer loyalty program that rewards shoppers with loyalty points convertible to the Ethereum cryptocurrency

## Our partners

- Loyalty X