

SMART LEGAL CONTRACTS

// NEXT GENERATION
CONTRACTS

CONTRACTS OF THE
FUTURE WILL
BE COMPUTER
PROGRAMMABLE
DIGITAL ASSETS

**STIRLING
& ROSE**

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WHAT IS A SMART LEGAL CONTRACT?

Behind every transaction, every sale, and every deal, there is a contract. Smart legal contracts are the next generation of legal contracts, documents that are no longer static pieces of paper but instruments that can connect and react to live data streams.

A smart legal contract (SLC) is a legally binding digital contract in which some or all its obligations are defined in, or performed automatically, by a computer program.

Through Application Programming Interfaces (APIs), smart legal contracts will interact with regulators, legislation, other contracts and back end user systems like enterprise resource planning (ERP) systems and in some cases internet of things (IoT) devices.

In the future, most if not all contracts will be smart. This means that there will need to be changes to the way we contract and the tools and platforms we use. Because contracts are critical assets, they need to operate on enterprise grade infrastructure with appropriate user permissions. SLCs may or may not use Distributed Ledger Technology (DLT) or blockchain technology.

Whether you are drafting or operating a lease, a banking document or a managed service agreement, there will be important new natural language terms to consider. These may deal with, for example, contract data, intellectual property, choice of platform and failures by code in the contract (which should be expected and risk allocated).

A related concept is the “smart contract”. A smart contract is executable code running on a blockchain. Smart contracts are also known as crypto assets or digital tokens. Smart contracts can be legally binding, but more often they are not suitable for

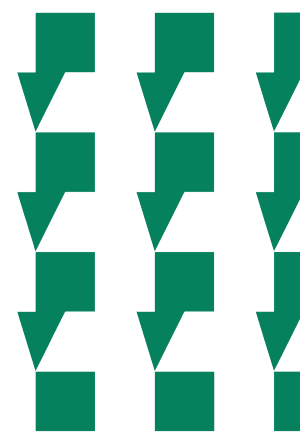
enterprise legal agreements and are best suited to natural language that can only be expressed as executable code.

At present there are still multiple ways to structure the “contract stack” of smart legal contracts. Questions are still being asked as to whether developers should attempt to capture all of the relevant contractual documentation in machine readable code, or whether it is better to encode only part of the contract and leave parts of it in natural language in a more static (electronic or paper) document. Most of these questions will become less important as more sophisticated and user-friendly contracting tools and platforms become available.

Like the digitisation of money, smart legal contracting will not happen overnight, but in time it will profoundly change the way we do business.



FIVE KEY COMPONENTS OF AN SLC



A smart legal contract is composed of the following five elements.

Limbs 1 – 3 are the ‘Rule-Making Components’, these are based on the traditional legal, rule-setting functions of a contract. Limbs 4 – 5 are the ‘Active Components’ these are the new components unique to an SLC.



1. Legally Binding

RULE-MAKING

As with any contract, an SLC must be a legally formed, valid and binding contract in a given jurisdiction. Consider the legal implications of unmet performance, whether any applicable statutory regimes apply, and the enforceability of the SLC.



2. Digital & Machine Readable

RULE-MAKING

The digital or coded elements of an SLC operating on a digital platform, such as a blockchain or DLT infrastructure, should be in a structured data format that can be processed by a computer without human intervention.



3. Natural Language & Code

RULE-MAKING

An SLC that is composed of both natural language and code is flexible and dynamic, allowing for greater legal nuance. An SLC can incorporate language to achieve legal efficacy digitally with coded representations of rights.

4. Active Function

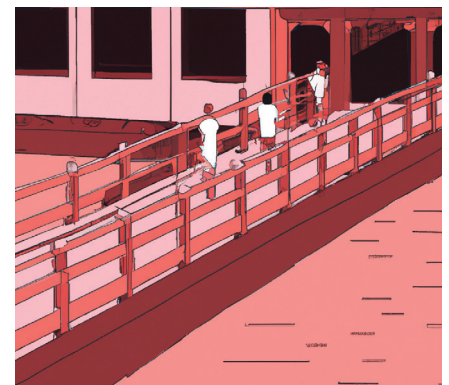
ACTIVE

The how, when and why of the digital components of an SLC are triggered or affected by data or events generated from external or internal data sources, including the results of previously executed algorithms. Flows of data form part of the operation and can be recorded immutably on the digital platform.

5. Digital Execution Mechanism

ACTIVE

The digital hosting or domain of the SLC and how it integrates with the Active Function is a new critical element. The platform specification (such as blockchain or DLT) must be considered during the construction phase of an SLC, like one would when considering the jurisdiction of a legal entity.



USE CASES FOR SLCs

While any legal contract can be a smart legal contract, there are some obvious use cases for industry to explore.

BANKS AND FINANCIAL INSTITUTIONS

Beyond cryptocurrency and peer-to-peer trading, smart legal contracts offer significant opportunities in the banking sector. The adoption of smart legal contracts will reduce or remove settlement delays and continue the push towards the standardisation of certain financial instruments, such as credit swaps and ISDAs.

This will bring clarity, predictability, auditability and ease of enforcement to these financial contracts. Smart legal contracts, in combination with Smart Policy Documents, also stand to streamline the process of regulatory reporting and compliance (such as KYC reporting) and can be coded to give regulators transparency over certain transactional data or to automate regulatory filings.

SUPPLY CHAIN, PROCUREMENT AND ESG

Smart legal contracts can automate communications and notifications between parties in real time, enabling rapid response and adaption. SLCs will have a profound impact on the ability of businesses to meet their ESG requirements. For example, if a SLC detects that an event occurs which impacts on compliance with contractual obligations (for example, the temperature in a van carrying perishables has risen

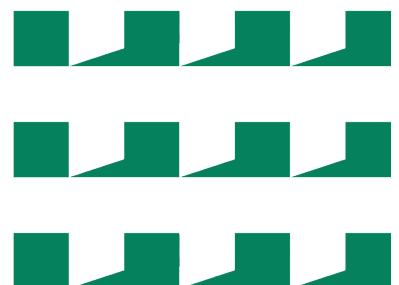
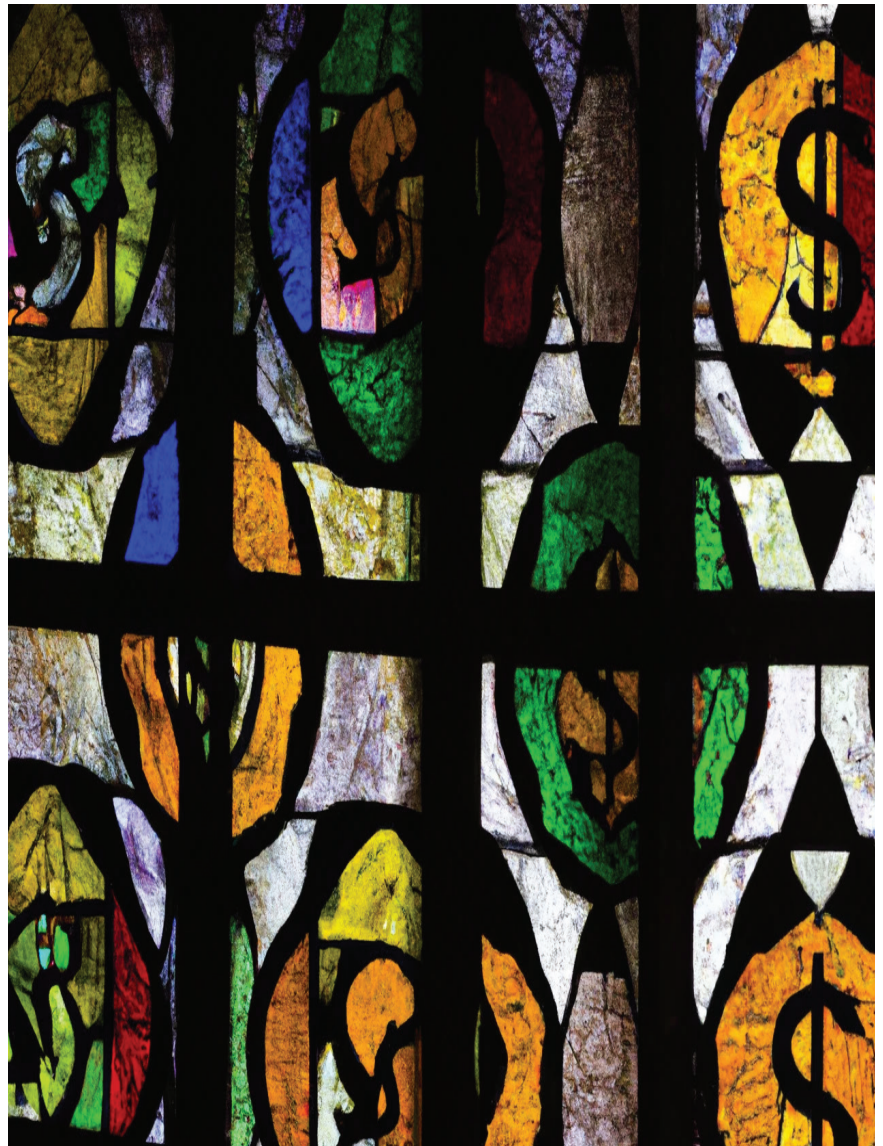
above the contractual limit, or the quality of a product does not meet pre-determined specifications), it can automatically enact aspects of the parties' agreement, such as triggering notifications, or even performing more substantive actions, such as payments or regulatory reporting.

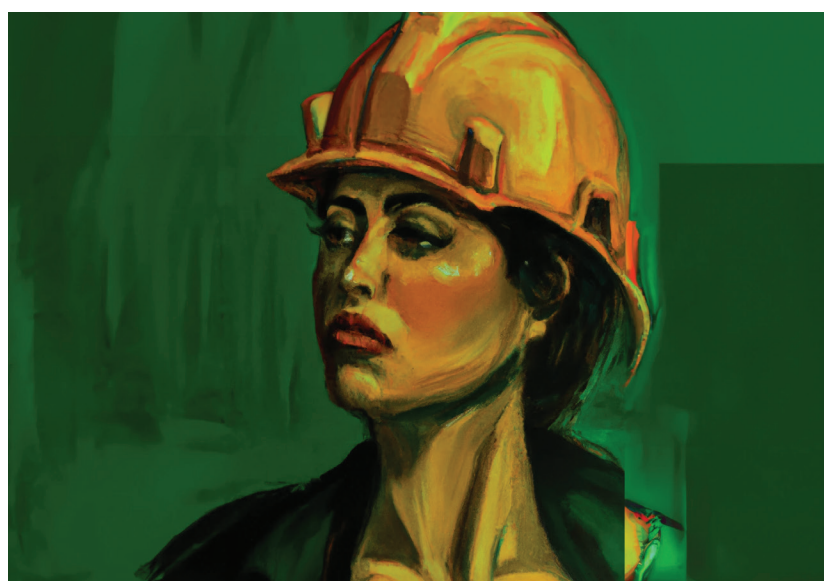
Smart legal contracts also create a secure audit trail, thereby improving inherent trust in transactions. For example, use cases in the mining industry currently focus primarily on tracking commodities through the supply chain. SLCs are of particular use in enhancing the resilience, fluidity and ability to adapt and respond to unexpected events in the supply chain, including the ability to amend contracts and

ensure all rights can be preserved following force majeure events and delays.

REAL ESTATE

Smart legal contracts offer an opportunity to record and track property transactions in real time (including acquiring, selling, financing, leasing, and managing of real estate), thereby streamlining the registration process, reducing future title search time, and increasing confidence and transparency.





“The integration of code into a contract brings it to life. The SLC is a digital ‘mirror’ to real world events where obligations such as deliveries, payments and reports occur.”

INFRASTRUCTURE PROJECTS

The multiple suppliers, contractors and sub-contractors generally involved in large infrastructure projects can often create a complex network of contractual rights and responsibilities. As things stand, analogue contracts fail to keep up with the increasing digitisation of the projects that they are intended to enable and govern. Smart legal contracts promise to embed operational data within contractual obligations, for instance through the use of sensors installed across a development site. This enables contractual rights and obligations to be more easily verified, maintained, updated and performed (and for that performance to be tracked).

TRANSPORT AND LOGISTICS

Smart legal contracts offer possibilities to support toll automation with instantaneous payments, better tracking of cargo and their security, and transparent pricing. SLCs can also be used to track vehicle servicing and maintenance as well as fleet capacity. Smart Policy Documents can similarly be used to track real-world activity for real-time compliance, monitoring, response, and reporting.

OCCUPATIONAL HEALTH AND SAFETY

Global annual expenditure on occupational health and safety obligations is more than \$50 billion, and the space is heavily regulated with obligations to provide safe working environments. In certain contexts, such obligations are passed on to subcontractors or suppliers, and manifest themselves as contractual obligations. Linking backend systems and IoT data to these regulatory and contractual obligations can reduce the cost and provide greater visibility to possible opportunities and risks for all parties.

CREDENTIALS

A WORLD CLASS TEAM

TOP TIER EXPERTISE WITH
BOUTIQUE SERVICE



Natasha Blycha - Managing Director

Natasha is one of the world's pre-eminent smart contract and distributed ledger technology experts. The former Global Head of a Digital Law practice of a major international law firm spanning 15 offices, Natasha is regarded as a world leading expert on blockchain and digital assets, web 3.0, digital ethics, and human rights. Natasha sits on the Law Council of Australia's Digital Commerce and Financial Services Committees. Natasha co-authored the Oxford Smart Legal Contracts textbook and was named the Financial Times' Most Innovative Lawyer and Lawyers Weekly Thought Leader of the Year.

James Myint - Managing Partner

James was the Australian Head of a major international law firm's Digital Law practice. A banking and finance expert, he has significant local and global experience in high complexity, first of their kind transactions with a cross-jurisdictional focus, working in New York, Tokyo and Sydney. He advises major companies, funds, investors, financial institutions and blockchain platforms, specialising in Smart Legal Contracts, CBDCs, DeFi, digital investments and novel financings.



Dr Jason Allen - Founding Partner

Jason is widely recognized as a leading expert on digital platforms and financial systems architecture. He has advised central banks, regulators, and technology companies in Europe, the USA and APAC. Author of the seminal text on SLCs together with leading publications on blockchain and DLT, the role of law in cyberspace and machine learning. Jason has vast cross jurisdictional expertise on Digital Assets, FinTech and RegTech.

Jenny Kiss - Founding Partner

Jenny is an experienced General Counsel and Senior Executive with over 30 years expertise in law, governance and strategic corporate advisory in the private and public sectors. She has deep experience with Boards and implementing major legal projects across industries and rights for Indigenous Australians. Jenny specialises in emerging tech law and legal risk management to transform traditional business operations.



Rachel Howard - Chief Operations

Rachel is an experienced tech and strategy leader. She was the Head of Frontier Technology, a global tech policy initiative, and a former senior McKinsey consultant serving some of Australia's largest institutions in strategy and innovation. Rachel led data focused impact investments for a family office and leads our fees-at risk investments. Rachel specialises in digital transformation, product innovation, AI risk, governance, operating model design and scale up programs,