

# CATALYST // SMART LEGAL CONTRACTS - SHORING UP SUPPLY CHAINS IN A TIME OF CRISIS

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Digitised contractual networks promise to head off supply chain disputes when disruption hits

The impacts of Covid-19 on businesses, supply chains, and traditional legal contracts are already being realised and will continue to escalate. However it is during these times of crisis that new innovations and opportunities are conceived so that society, businesses and economies can in some way be better prepared should another crisis occur. So what will the future look like post-pandemic for legal contracts?

While traditional contracts govern our business relationships, **Smart Legal Contracts**, the second generation digitised form of legal contracts, further extend the scope of the contract to enable specific areas of the contract to be performed automatically by including coded instructions (or pre-set rules). For example a business may pre-set the rule (through the legal contract) for “pandemic resistant” machines to continue operations where humans are unable. This will help reduce systemic business and operational risks.

Assuming broad network connectivity, over time we expect to see increasing use of Smart Legal Contracts to shore up continuity of business as they become embedded in supply chains and are digitally connected into identified data sources (particularly where those data sources are machines - think robotics, internet of things devices, sensors, drones, or as is more likely, the back end systems that manage them). While this might sound like ceding control to the machines, a better comparison for the transition to digitised contractual networks, is the already digitised global payment systems. Financial systems continue to operate notwithstanding a time of crisis – mortgage and on-line shopping payments can still be *processed* even in a time of pandemic. The same continuity of business in payments should also play out in our contractual networks, but requires investment in secure Smart Legal Contract digital infrastructure, as well as new tools and smarts to draft digitised contracts.

Where there is no network connectivity, well drafted Smart Legal Contracts also have analogue or natural language terms that support the continuance of traditional rights and obligations.

## **AN EXAMPLE OF DE-RISKING OPERATIONS USING SMART LEGAL CONTRACTS IN A TIME OF PANDEMIC**

The scale of the impact of the 2020 novel coronavirus (“**Covid-19**”) on the global economy is significant – not just for business, but also on the human level as economies become unable to respond to and handle demand for necessary goods and services. Going forward, we anticipate that Smart Legal Contracts will become increasingly connected to external data sources (including other relevant contracts) that will enable a more accurate, responsive and therefore efficient allocation of obligations, rights, goods and services across the global economy.

As supply chains break down, a number of key contractual terms take central focus. Colloquially they might be expressed as: *Do I have to do the work? Do my suppliers have to do their work? How long can we hold out if work is not done?* Formally these might be: *Am I complying with contractual time limits? Do I need to suspend, terminate, vary (or formally hand sign) a contract? Have I breached a contract or has my contract been breached? Do I have recourse to any legislative protections? What activates my force majeure clauses? Is there a material adverse change provision in the contract, and what are the consequences if the pandemic triggers that provision? What are my dispute resolution provisions and when do I need to activate them or consider their activation? Does my business need to take active, demonstrable steps to mitigate loss? Does my business have recourse to the applicable insurance policies and provisions, including business interruption insurance?* - to name just a few. At the moment those questions are often only addressed after sizeable delays where analogue evidence must be collected and presented to counterparties.

In a pandemic, *without* a Smart Legal Contract (or network of connected Smart Legal Contracts speaking to highly automated sites, or backend systems), the following scenario might play out: Party A is a supermarket who procures rice from Party B, the dry goods distributor. The supermarket requires that the distributor guarantees supply of between 2000 and 10,000 bags of rice every month. In March and April, the supermarket has a customer run on rice and calls for its full allocation of bags of rice, but by April, shelves sit empty as the distributor cannot fill the supermarket’s order, having a similar contract with three other supermarkets who are also asking for their maximum delivery and a failure of up-stream contracts to deliver, as large numbers of rice farmers and truck drivers are down with illness, the government has imposed mobility restrictions, and shipments from overseas have not arrived due to an outbreak on the docks. The relationship between the supermarket and the distributor becomes hostile and the supermarket activates the dispute resolution mechanism for breach of contract. No one is happy and the shelves are still empty.

In a pandemic, *with* a well-drafted Smart Legal Contract (or network of other Smart Legal Contracts, connected to automated, back-end systems of the supermarket, farm supplier and docks) we would expect to see greater agility of performance response real time, where the parties to the primary procurement contract are privy to a central repository of information about the running of that contract and the ecosystem that contract performs in. The contracts between the distributor and the truck drivers, docks and farms are pre-agreed to auto-issue notices to the distributor of their real-time ability to perform (including pulling from their internal record systems of absences from work). This then, via an API call, also triggers a notice to the procurement contract that lets the supermarket know that the distributor is unable to meet its April supply requirements. This gives the supermarket enough warning to immediately begin investigating potential alternate suppliers, while at the same time limiting the quantity of bags of rice available to each customer and avoiding empty shelves.

Within the same procurement contract, the parties might also elect to connect the force majeure clause to the World Health Organisation (WHO) website, where that clause is triggered by the WHO declaring a state of pandemic, or earlier with the declaration of a public health emergency of international concern (PHEIC). This would assist the distributor in a timely activation of the force majeure provision (they are often highly time critical), excusing its non-performance and de-escalating the need for the supermarket to issue a breach notice triggering dispute resolution proceedings. The same change of status report to the contract could also be used as a trigger to activate contractual rights sitting in either (or both) of the supermarket and distributor insurance contracts.

In this connection, the Smart Legal Contract becomes a board-level tool that generates a real-time, shared (arguably difficult to dispute) digital audit trail of how a business relationship performs (or performed) during a crisis. Recourse to that audit trail also has the potential to reduce the occurrence, duration and expense of disputes during the “clean-up” post pandemic assessment of who is responsible for any deviations from intended performance outcomes, or activation of third party responsibilities in respect of those obligations.

## WHAT IS A SMART LEGAL CONTRACT?

A Smart Legal Contract (SLC) can be described as:

*A legally binding, digital agreement in which part or all of the agreement is intended to execute as algorithmic instructions.*

The Blycha and Garside model sets out five key components to an SLC:<sup>1</sup>

1. *Status: legally binding – an SLC must conform to the established rules of contract;*

2. *Form: the machine-readable or digital state;*

3. *Contents:*

1. *Natural Language, as in any traditional legal contract being any typical contracting and business language used in the jurisdiction of the contract; and*

2. *Computer code, or other forms of machine-readable or algorithmic instructions intended to run digitally.<sup>10</sup>*

4. *Active Function: the how, when and why 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*

5. *Digital Execution Mechanism: the digital hosting or domain of the SLC and how it integrates with the Active Function.*

A word of caution - A Smart Legal Contract should be distinguished from a Smart Contract, where a widely accepted definition of Smart Contract is some version of:

*Computer code that, upon the occurrence of a specified condition or conditions, runs on a distributed ledger (or blockchain).*

Equating a Smart Contract *ipso facto* with a legally enforceable contract because it contains the word “contract”, is technically the same as suggesting that any software program could be called a contract. To find out more about the distinction between Smart Legal Contracts and Smart Contracts read here.<sup>2</sup>

### ENDNOTES

1. Natasha Blycha and Ariane Garside – [Smart Legal Contracts: A Model for the integration of code into contracts](#)
2. Natasha Blycha, Brenda Horrigan and Guillermo Garcia-Perrote – [Smart Contracts versus Smart \(and\) Legal Contracts: Understanding the distinction and the impact of Smart Legal Contracts on dispute resolution](#)

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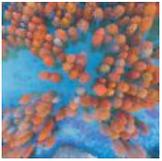
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