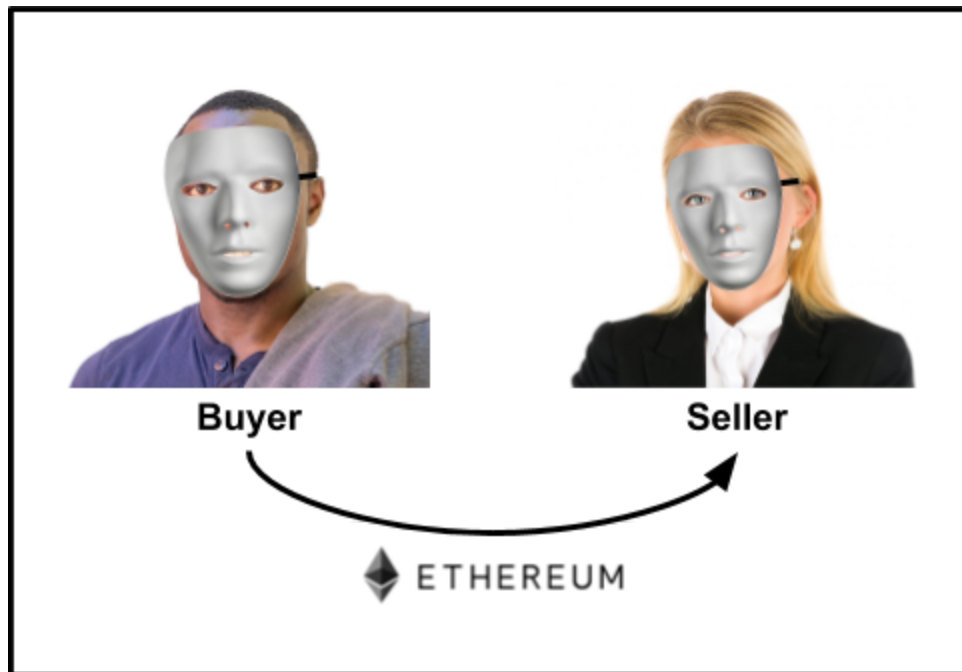


White Paper

Ashish Bhatt



Despite lacking trust, we need to transact through smart contracts.

What Smarter Contract Does

It resolves disputes between the parties to smart contracts. Some smart contracts require third-party human judgement to resolve disputes. Suppose you enter into a smart contract with me to do some work. I say I finished the work, but you say I did not. Then we need a third-party expert to determine whether I *actually* finished the work. That expert determination is what Smarter Contract provides to smart contracts.

1. Executive Summary

Market Size. The size of the contract dispute resolution market that Smarter Contract addresses is approximately [\\$156 billion \(USD\) globally and \\$73 billion in the United States](#). When there is a contract dispute, Smarter Contract's [patent pending](#) system will resolve it by enforcing the contract.

Savings. Today, dispute resolution requires expensive lawyers. Smarter Contract requires no lawyers. It can therefore **save \$100 billion in legal expenses annually**. [1] Whether you sell plumbing services or a multinational company, Smarter Contract will reduce the cost of resolving a dispute by more than 90%.

Present-Day Dispute Example. Today, if you buy an e-commerce business and learn the former owner made a material misrepresentation about it, you might have to

- select an attorney,
- pay a retainer,
- file a complaint,
- file a summons,
- submit responses to motions,
- go through depositions,
- hire an expert witness,
- pay the attorney to spend days in court,
- deal with delays,
- go through an appeal, and
- try to collect the judgement awarded to you.

Cost: Over \$10,000¹

Time Required: 6+ months

For fear of that process and expense, you might not buy the e-commerce business in the first place.

Smarter Contract Example. In the future, with Smarter Contract, if you learn about the material misrepresentation, you would simply

- complete a quick online form,
- pay a refundable amount of SMTR tokens worth a few hundred US dollars into escrow, to cover dispute resolution costs if you lose,
- upload evidence,
- respond to questions, and
- automatically get the amount you are owed from the former owner, and get back the amount you paid into escrow.

Cost: 0 SMTR tokens if you win, and an amount of SMTR tokens worth a few hundred US dollars if you lose

Time Required: weeks

Lower-Cost Disputes. The simplest disputes' cost can be an amount of SMTR tokens worth **\$10 (USD)**.

How Costs are Minimized. Smarter Contract's cost (which is only paid by the losing party) is low because

¹ This is unless you win and your contract has a "loser pays" provision, in which case this expense can be reimbursed by the losing party.

1. Smarter Contract **crowdsources a global pool** of experts. As a result, experts are available at lower rates compared to a traditional arbitrator or attorney.
2. **No attorney** or administrative expenses need to be paid.
3. Experts are only paid for the time required to review evidence and answer factual (non-legal) questions, such as “What was total revenue in 2016?”
4. No one is paid to interpret the full contract or analyze legal issues.

Smarter Contract Benefits. Smarter Contract makes contract dispute resolution low cost, quick, and certain.

Differentiation. Smarter Contract enforces smart contracts, which is how it achieves the above benefits. Competing platforms enforce English-language contracts, which is what the traditional judicial system does.

Customer Acquisition. Partner platforms will require all of their contracts’ disputes to be resolved through Smarter Contract. That is how Smarter Contract acquires customers. The list of partners is growing, and includes Elemental, DIW token, Pico Ventures, and Next Bridge Advisors, as described in [section 3.4](#).

Team and Advisors. The 10-person Smarter Contract team includes the former CTO of one of the first crowdfunding platforms (Unreasonable Institute), a smart contracts entrepreneur, an M&A advisor and investor who has written or signed on over 100 agreements, and three Solidity engineers, among others. The 8-person advisory board includes a legal advisor who was a Rhodes Scholar, the former CEO of an online dispute resolution service active in 49 countries, an ICO veteran, and two other legal tech CEOs.

Token Sale. Smarter Contract Inc is selling up to \$2.5 million (USD) of its ERC-20 compatible SMTR tokens, which will be required to use its dispute resolution service. Version 1 of the service is available at [smartercontract.network](#) (“Version 1”). The proceeds of the token sale will fund the ongoing development of Smarter Contract services and the creation of a community of future Smarter Contract users. More information on the token sale is included in the [Token Sale Summary](#) and the [Terms and Conditions](#).

Utility Token. Read a description of how tokens will be used in [section 10](#).

2. Problem

2.1. The Need on Blockchain-Based Platforms

Transaction Cost Reduction. A key benefit of smart contracts is that they reduce transaction costs. Those costs include the cost of dispute resolution and risk of non-performance (reneging), among others. Below are three platform types that could benefit from reduced transaction costs by operating through smart contracts:

2.1.1. Platform for Selling Services

Upwork. For third-party arbitration, Upwork.com, a leading freelance platform, charged \$291 (USD) to each party of the dispute in 2017. [2] This amount exceeds the cost of many Upwork transactions, eliminating third-party dispute resolution as a remedy for many Upwork freelancers.

Need for Third-Party. Imagine a platform for selling services (e.g. freelance services) built on a blockchain. Once work is completed, if the client refuses to pay, there must be a trustworthy third-party that will enforce the contract.

Platforms Should Not Self-Adjudicate. The platform should not adjudicate contract disputes on its own platform for the reasons given below. Instead, Smarter Contract should enforce the platform's disputed contracts.

- Illegal. It is illegal or invalid in the United States and other jurisdictions for a platform to adjudicate disputes on its own platform if it earns fees tied to the completion of transactions. [3]
- Bias toward Clients. Since the service-selling platform is motivated to retain clients and earn fees, it might be perceived as biased toward deciding in favor of clients, and against service providers.
- Loss of Focus. The platform should focus on developing its product and network -- and allow an outside network to handle contract enforcement.
- Insufficient Accountability. The platform would not be able to decentrally evaluate its adjudicators to cull those doing poor-quality work.
- Other Reasons. The platform would be less efficient, less able to handle complex contracts, biased toward parties more likely to write negative reviews, and more susceptible to foul play.

2.1.2. Crowdfunding Platform

Problem. Consider a crowdfunding platform on a blockchain. The promoter (fundraiser) has made many promises to their investors, such as for regular financial reporting. However, many promises were not kept.

Solution. First, Smarter Contract should have helped the platform generate standard smart contracts that would specify penalties for the promoter's non-compliance. Second, those contracts would need to be enforced. The issues that apply to a platform for selling services would similarly apply to a crowdfunding platform. Smarter Contract should therefore handle enforcement.

2.1.3. Platform for Selling Digital Assets

Problem. Consider a platform on a blockchain that sells complex digital assets such as source code. The problem is that the buyer may need to possess or access the digital assets in order to inspect them to determine whether they are as advertised. The buyer must be prevented from backing out of the transaction unless specific descriptions of the digital asset are untrue.

Solution. Smarter Contract should help the platform generate standard smart contracts to govern its buyer-seller relationships and should also handle their enforcement.

More Use Cases. See more use cases in [section 9](#).

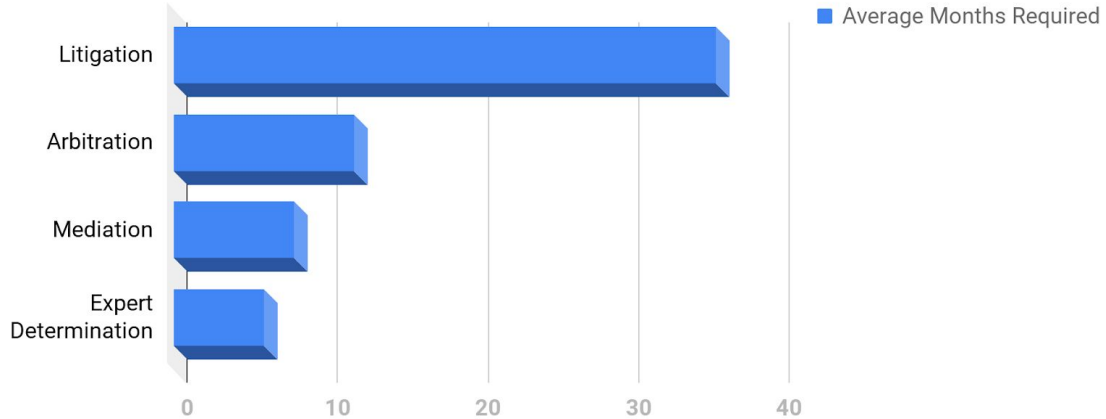
2.2. The Problem Broadly Defined

2.2.1. Global Magnitude of Transaction Costs

Monetary Cost. Transactions governed by contracts total tens of trillions of dollars annually, given that the mergers and acquisitions market alone is [\\$5 trillion](#) and global GDP is over \$75 trillion. [4] If transaction costs account for 2% of those transactions' value, then transaction costs total several hundred billion dollars annually. Contract dispute resolution expenses represent just a portion of transaction costs -- and these expenses total approximately [\\$156 billion](#) annually.

Time Cost. Another problem is that the time required to resolve a contractual dispute in the traditional judicial system is significant. A study of dispute resolution in global technology transactions measured the average time required per dispute type. [5]

Months Required for Resolution of Tech Transaction Disputes (2013)

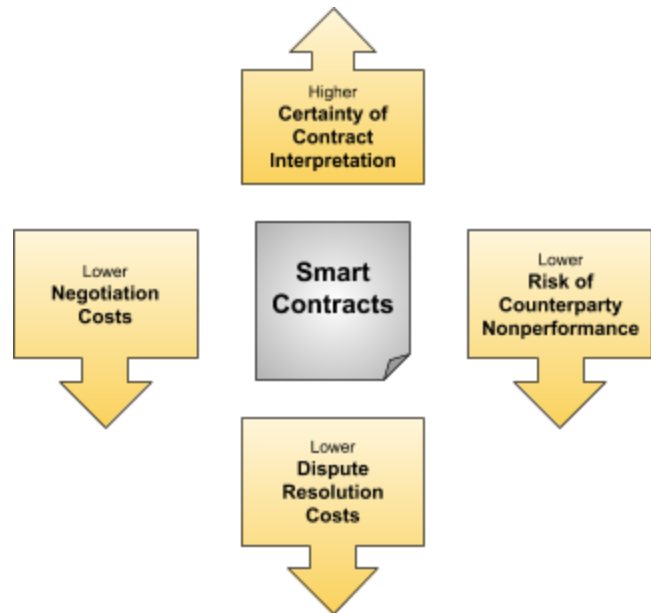


[5]

2.2.2. Smart Contracts Can Reduce Transaction Costs

Transaction Cost Reduction. Unlike traditional contracts, which require the traditional judicial system, smart contracts can have lower transaction costs for the following reasons:

1. Lower Dispute Resolution Cost. They have a much lower cost of dispute resolution, both in time and money, because what the parties agreed to happens programmatically, which means smart contracts can avoid expensive and time-consuming litigation and arbitration.
2. Less Non-Performance. They bear lower risk that a party will not perform their obligation with knowledge that their counterparty lacks a practical means to enforce the contract. In smart contracts, non-performance carries automatic consequences, which disincentivize non-performance.
3. More Certain Interpretation. They have greater certainty in how they are interpreted, because they are governed by the simple logic of computer code, rather than by the law, which is complex and open to subjective interpretation.
4. Lower Negotiation Cost. They are less costly to negotiate because they rely on pure logic and therefore do not require expensive attorneys to interpret the law, with all its complex precedents and vagaries.



2.2.3. Limitation to Smart Contract Adoption

Need for Human Judgement. Despite the great value smart contracts promise, a key reason their adoption is limited is that the vast majority of real-world contracts cannot function without applying human judgement to determine what the contract dictates should happen under any scenario. Smart contracts

natively do not support the inclusion of human judgement. As a result, smart contracts are inadequate when parties might disagree on their obligations, which happens often.

Smart Contract Failure. Suppose Andy enters into a smart contract with Sandra where Sandra agrees to paint his wall for \$100. The smart contract would need to be coded such that when Andy approves the job as complete \$100 is automatically released to Sandra. Suppose Sandra finishes the job but Andy claims she did not. Then Sandra has no way to get the \$100 without suing Andy in small claims court. However, when Sandra sues Andy, the smart contract loses a key benefit it promised -- the benefit of reducing the cost of dispute resolution.

3. Introduction to Smarter Contract

Below is a description of Version 2 of Smarter Contract. Both Version 1 and Version 2 are fully described in the [Technical Paper](#).

3.1. Summary

A Mad Libs Analogy to Oracles

<u>Oracles</u> NOUN	feed	<u>public data</u> PLURAL NOUN	into smart contracts.
<u>Smarter Contract</u> NOUN	feeds	<u>determinations of fact</u> PLURAL NOUN	into smart contracts.

Similar to Oracles. As oracles feed smart contracts with streams of public data, so does Smarter Contract feed smart contracts with expert determinations of fact that resolve disputes.

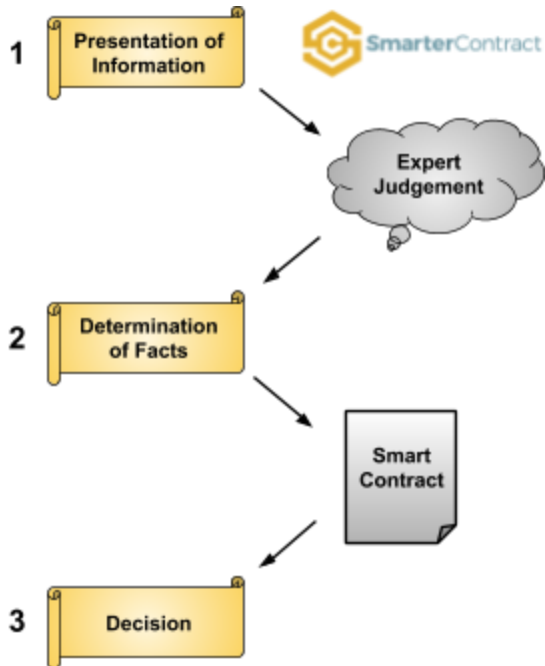
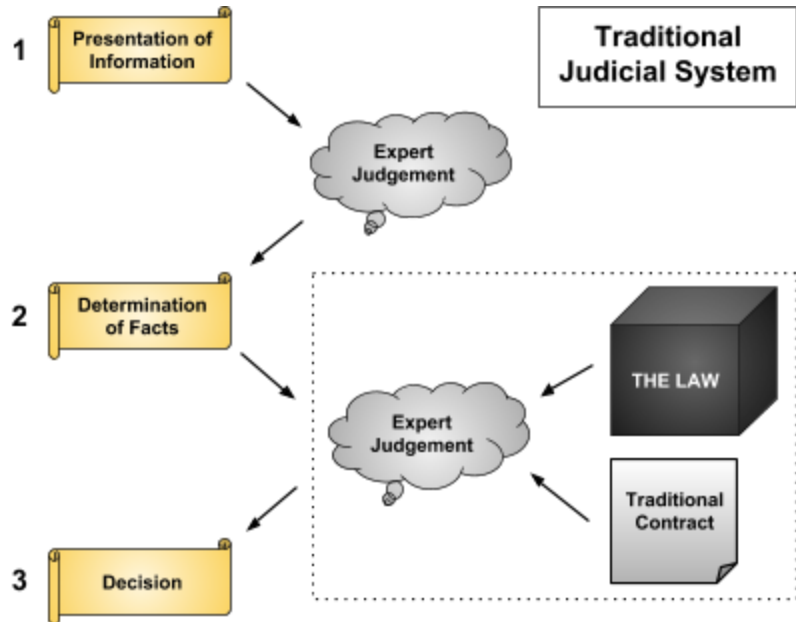
Incorporating Expert Judgement. Smarter Contract allows any smart contract to incorporate the judgement of third-party experts without accessing the traditional judicial system. By doing that, Smarter Contract allows a smart contract to be used for most of the tens of trillions of dollars of contractual transactions executed annually, allowing them to realize the transaction cost reductions described in section [2.2.2](#).

How It Works. Recall the example where Andy hires Sandra for painting services. First, Smarter Contract asks Andy to propose a value for the contract variable(s) requiring judgement (i.e. whether painting is complete). If Sandra does not accept Andy's proposed value (i.e. that work is incomplete), the system offers Sandra and Andy a means for settling on the value(s) of their contract variable(s). If they continue to disagree, expert(s) review information provided by both parties. The decision of the expert(s) on the value(s) of the contract variable(s) is sent to the smart contract governing the painting job. If the decision is that work is complete, then the smart contract sends Andy's money to Sandra. The cost of dispute resolution is paid by the losing party and is based on the number of characters of information shared with the expert(s). This makes the cost of simple disputes low. See the [Technical Paper](#) for a full description.

3.2. Traditional Judicial System vs. Smarter Contract

3.2.1. Traditional Judicial System

The diagram to the **right** shows how disputes are typically resolved in the traditional judicial system. (1) Information is presented to a judge, jury, or adjudicator who applies their/its judgement in order to (2) determine an opinion of the facts. The judge, jury, or adjudicator then applies those facts and their/its judgement to the contract and the law. The law includes legislation, precedent, and the subjective ideal of fairness, all of which are vague, vast, and complex -- and are the reason traditional contracts have high transaction costs. The end result is a (3) decision on the outcome of the case.



3.2.2. Smarter Contract

The diagram to the **left** shows how disputes are resolved in the Smarter Contract system. Note how it is simpler than the traditional judicial system illustrated above. (1) Information is presented to experts who apply their judgement in order to (2) determine the facts. The determined facts are then communicated to the smart contract, which automatically generates a (3) decision on what the outcome will be.

3.3. Where Smarter Contract Fits in the Ecosystem

Serving Platforms. Smarter Contract will serve the multisided platforms that connect parties for the purpose of entering into transactions. As shown below on the next page, only when there is a potential dispute would the parties to the smart contract interact with Smarter Contract.

3.4. Partner Platforms

Elemental. Smarter Contract will resolve disputes between developers and owners for Elemental's real estate development contracts, and between tenants and landlords for its rental contracts.

DIW Token. Smarter Contract will resolve disputes between parties to escrow contracts on [DIW's](#) escrow platform. DIW's escrow can be used for any transaction, small or large.

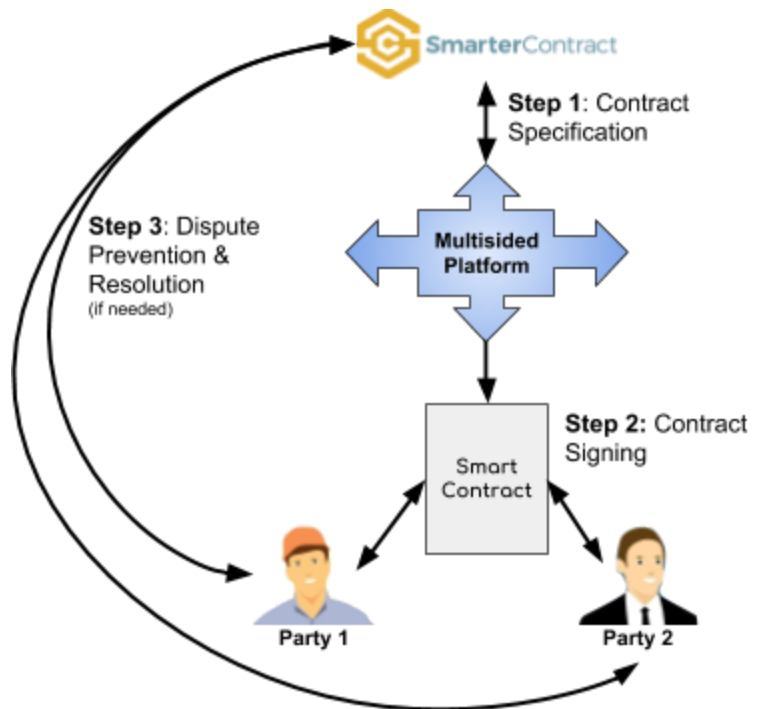
Pico Ventures. Smarter Contract will resolve disputes between furniture buyers and [Pico Ventures'](#) furniture financing business. Disputes will relate to non-payment and repossession of furniture.

Next Bridge Advisors. Smarter Contract will resolve disputes arising from [Next Bridge Advisor's](#) business sale agreements.

3.5. Go-to-Market Strategy

Multisided Platforms. Smarter Contract will acquire users by interfacing with two types of multisided platforms:

1. On-Chain Multisided Platforms. These platforms use smart contracts as part of their architecture, which allows them to leverage Smarter Contract to its fullest potential, as described in the [Technical Paper](#). Smarter Contract will enable smart contract use cases whose existence is tenuous today. Here are the mechanics of how it works: On a decentralized platform, parties agree to smart contracts **A** and **B**. When a payment is supposed to be made, smart contract **A** tells Smarter Contract which of its contract variables require third-party judgement for the determination of their correct values. (A contract variable could be 'whether the job was completed,' for example.) Smarter Contract determines the values (the facts) for those contract variables. (A value could be 'the job was completed,' for example.) Smarter Contract then sends those values to smart contract **B**, which is able to fully enforce the agreement between the parties.
2. Off-Chain Multisided Platforms. These are multi-sided platforms built solely on centralized servers. The benefit of these platforms is that they presently have more users than on-chain multisided platforms. Because off-chain platforms do not use smart contracts, they would implement Smarter Contract differently.



Relationship Development Approach. Smarter Contract's Chief Product Officer will reach out to multisided platforms directly and through connections; and collaborate with them to develop combined solutions. The marketing message to platforms will follow the theme of "Don't transact 21st century money through 20th century contracts hiding in 21st century smart contracts."

4. Comparison with Competing Platforms

The Key Difference. Smarter Contract enforces smart contracts. Competing platforms enforce English-language contracts, which is what the traditional judicial system does.

- Cost and Uncertainty of Enforcing English-Language Contracts. On other platforms, the interpretation of English-language contracts is governed by **LAW**. Law requires a complex, holistic understanding of the contract; is vague and subjective; varies from culture to culture; and depends on precedent. Law can either be casual (e.g. the law of common sense) or rigorous (e.g. English common law). In either case, if we allow humans to make a subjective judgement about what they believe is a lawful outcome of an English-language contract, we not only incur the high **COST** of human interpretation, but we also increase the **UNCERTAINTY** about whether the contract will be interpreted the way its parties intended.
- Benefit of Enforcing Smart Contracts. The interpretation of smart contracts can be more certain and lower cost because it is governed by computer code rather than **LAW**. Processing computer code is lower cost and produces more certain outcomes than interpreting law. That said, although smart contracts are governed by computer code, determinations of fact (e.g. percent of work completed) must be made by humans and fed into smart contracts. The point is that Smarter Contract limits the scope of human involvement to where it is necessary -- the determination of certain facts. That reduces cost and increases certainty.
- Further Discussion. See further discussion in an article titled, "[What is a Smart Contract and Why It Should Contain Less English.](#)"

Other Differences. This and other differences between Smarter Contract and other platforms are described below:

Feature	Smarter Contract	Mattereum	Jury.Online	Kleros
What Contract is Enforced	A smart contract , written in computer code, which can contain any conceivable term and govern any conceivable contractual relationship. An English translation of the smart contract will be made available to the parties.	An English-language contract , not a smart contract.	An English-language contract stored within a smart contract. The only enforceable terms in the smart contract are in the English contract contained within it. Other natural languages may be acceptable.	An English-language contract including a list (stored in a smart contract) of all the allowable outcomes adjudicators can select. No other outcomes are allowed. Other natural languages may be acceptable.
Overall Structure	Adjudicators determine values of disputed variables within a smart contract. That smart contract (which receives those values from adjudicators) determines outcomes for its parties. Adjudicators do not select outcomes. Read more on Smarter Contract's structure.	Adjudicators determine contract outcomes by arbitrating an English-language contract that is paired with the parties' smart contract. The judgement is entered in a "traditional" court.	Adjudicators determine contract outcomes by adjudicating a natural language (e.g. English) contract.	Adjudicators determine contract outcomes by selecting from among a list of allowable options. No other outcomes are allowed
Requirement for Becoming an Adjudicator	Adjudicators not meeting objective qualifications for their stated areas of expertise are not allowed to serve as adjudicators.	Adjudicators must be professional arbitrators with qualifications expected of such professionals.	See 'Adjudicator Assignment' below. We are uncertain whether there is a distinct qualification step before adjudicator assignment.	Any token owner may be an adjudicator.

Adjudicator Assignment to Disputes	The highest-rated adjudicators who have the needed expertise, whose minimum rate is less than the rate offered, and who are available are automatically selected . The parties cannot reject any thereby-selected adjudicators.	The mechanism for adjudicator selection is likely specified in the English-language contract between the disputing parties.	Adjudicators are randomly selected out of a pool of people with necessary expertise or brought to the platform by the disputing parties. The parties can reject any thereby-selected adjudicators.	Token holders choose whether to “activate” their tokens. A number of activated tokens are randomly selected. The owners of those tokens serve as adjudicators. The parties cannot reject any thereby-selected adjudicators.
How Decisions are Reached	The decision is based on a vote of the adjudicators , where each vote is weighted by the adjudicator’s rating.	The decision is based on a vote of the adjudicators.	The decision is based on a vote of the adjudicators.	Each selected token receives one vote, even if one party owns multiple selected tokens. The median vote is the final decision.
Adjudicator Accountability	Third-party observers rate adjudicators in a double-blind process . More highly rated adjudicators receive either assignments at higher rates of pay or more assignments.	Mattereum’s arbitration association would likely establish rules for holding adjudicators accountable.	Several metrics on each adjudicator are published, including percent of disputes where their vote agreed with the final decision.	The selected tokens are re-distributed evenly among the 75% of adjudicators whose votes most closely match the median vote.
IP Protection	Smarter Contract’s system is patent pending .	None stated.	None stated.	None stated.
Website	smartercontracttoken.com	mattereum.com	jury.online	kleros.io

Notes: (1) Different platforms refer to “adjudicators” by different names. A neutral, common term (“adjudicator”) is used here to reduce confusion. Smarter Contract refers to adjudicators as “experts.” (2) This table is based on our interpretation of other firms’ public documents. Our interpretation may include errors or omissions. If we are informed of such, we will make a correction immediately. (3) There may be other firms that seek to adjudicate smart contracts.

5. Team

5.1. Vladimir Dubovskiy, CTO

Vlad is a serial entrepreneur and a 3-time CTO. In 2017, seeing the potential of crypto markets, he started to consult on ICOs, smart contracts, and helping folks to demystify blockchain. Vlad started a design lab called Elemental aimed at disrupting the prefab housing market. The platform has been partially developed on Ethereum Blockchain using Solidity. In his early career, Vlad co-founded a startup accelerator called Unreasonable Institute. Since inception, over 500 companies from over 90 countries participated and raised over \$220M. At Unreasonable, Vlad led the development of the crowdfunding platform (before crowdfunding was a buzzword).

Before Elemental, Vlad spent 4 years in New York as a Chief Data Scientist at DonorsChoose.org. There he hired a team, built data infrastructure on AWS from scratch; integrated business intelligence tools, powered by Looker, across the organization; deployed predictive models, classification algorithms, and answered a series of key business questions with machine learning. Prior to a career in Data Science, Vlad lived in India and launched India's largest startup festival in Bangalore (later became known as konstrukt.me) with over 15,000 participants across featured events. Vlad was the CTO and the CMO: he led all technical API integrations as well as creative marketing for the properties.

He's received a degree in Applied Mathematics and a Masters in Engineering Management from the University of Colorado at Boulder - a degree with a focus on how statistics can drive decision making in organizations. After graduation from a master's program, Vlad started Greenlighted, where as a CTO he led a team of engineers to develop 3 web products in referral marketing industry. As a co-founder Vlad managed a series of contracts, term sheets and other agreements that exposed him to the world of contract dispute resolution. Vlad sees Smarter Contracts as an opportunity to usher widespread adoption of smart contracts in industries that are not quite ready to make the full switch, or where dispute resolution is more nuanced.

<https://www.linkedin.com/in/dubovskiy/>

5.2. Ashish Bhatt, CEO/CPO

As an investor and M&A advisor, Ashish reviewed, was a signer of, or drafted (as principal) over 100 contracts. He has been a principal in several contractual disputes and an advisor during several others. Because of Ashish's M&A work, many of those 100+ contracts were related to business sales. Since business sale contracts encapsulate agreements rooted in varied areas of law -- including corporate, securities, IP, labor, real estate, international, and tax -- Ashish is broadly acquainted with the many applications of contract law. He will apply his contract and dispute resolution expertise to enable Smarter Contract to support all contract use cases, including M&A and private company investing.

Ashish founded M&A advisory firm Next Bridge Advisors Inc in 2015 and its predecessor Alignment Acquisitions LLC in 2008. Since 2015, he has made several private debt and equity investments, including alongside co-investors through Pico Ventures Inc and Mini Search LLC. In 2012, he started a virtual conference business called Second Meeting. In 2007-08, Ashish worked in the internal M&A group for E-Trade Financial.

Ashish has seen first-hand how deals suffer or fail because of transaction costs such as the expected cost of dispute resolution and risk of a counterparty backing out of their obligations without practical recourse. That is why Ashish became interested in the Smarter Contract concept.

Ashish has an MBA from the Kellogg School of Management, where he specialized in Entrepreneurship. He has a BA from Amherst College, where he majored in math and economics. Ashish is also an amateur Java and Python coder.

<https://www.linkedin.com/in/arbhatt/>

5.3. Ji Guo, CMO

Ji is a serial entrepreneur who previously co-founded a YC company, a music events-management company, a gourmet burger restaurant, and most recently a digital marketing agency focused on b2b SaaS. He most recently oversaw the launch of Polymath's record \$100 million ICO.









Previously, Ji was a foreign correspondent working for Newsweek Magazine. His journalism career started at The New York Times in college, with stints at Time Magazine and The Economist. He's been published in The Washington Post, Foreign Affairs, and The Christian Science Monitor. He's lived on 6 of 7 continents, including Antarctica. He has a bachelor's in economics from Yale.

www.linkedin.com/in/jiguoyale

5.4. Other Team Members

Steven Blinn, Solidity Engineer
Sumair Muhammed, Solidity Engineer
Jamil Sukhera, Solidity Engineer
Trevor Mesnik, Software Engineer
Michael Parisi, Software Engineer
Christine Christopherson, UI/UX Designer
Duane Brown, Growth Hacker

5.5. Advisors

Andrew Shipley, Esq Partner at AGS Law JD, Yale Law School Rhodes Scholar 	Jeffrey Eschbach CEO at PageVault (legal tech) 	Mike Hendley CEO at ICO Creations 	Lee Moulton Director of Partnerships at SeatGeek 
Tosin Onafowokan Product Manager, Mobile at Box 	Jack Berkery VP of Sales and Marketing at EmOpti, Inc. 	Nabeel Ebeid Director of Strategic Initiatives at Cheetah Digital 	Jai Anand Sekar Manager at Strategy& 

6. Open Source

At Smarter Contract, we believe in the power of a decentralized internet to facilitate transparent and painless dispute resolution. Part of building a decentralized, people-powered internet is to open source new technologies. That is why we will be open source licensing a major portion of our codebase. For Version 2, we will create a public Github repository with code for embedding our plug-and-play Smarter Contract solidity code into the backend of any third-party application.

7. Anticipated Questions and Answers

1. Contract and Dispute Resolution Structure. Why does Smarter Contract enforce smart contracts whose terms are written in computer code rather than English? Why do you break up the dispute resolution process by judgement variable instead of having experts decide the outcome for the full contract? Are you limiting the ability of experts to take a holistic view of the contractual relationship and produce a fair outcome? [Answer](#)
2. Preventing Unfair Influence. How do you prevent unfair influence and bribery of the experts? [Answer](#)
3. Preventing Expert Slacking. How do you prevent experts from slacking or being lazy in their decision-making? [Answer](#)
4. Redacting Expense. Is redacting each message not worth its cost? [Answer](#)

5. Legal Legitimacy. It seems as if Smarter Contract is trying to replace the traditional judicial system. Isn't what you're doing illegitimate because you don't have authority granted by a sovereign nation to make judicial decisions? If a party lost a dispute as a result of Smarter Contract and then sued in a traditional court to undo that loss, couldn't the court reverse the outcome produced by Smarter Contract? [Answer](#)
6. Expert Accountability. Smarter Contract keeps experts accountable by having third-party observers rate them. Is there no better or lower-cost way to hold experts accountable and incentivize them to make good decisions? [Answer](#)
7. No Appeals Process. Why doesn't Smarter Contract have an appeals process? [Answer](#)
8. Tampering with Evidence. If a disputing party is providing evidence via screen capture (e.g. of websites), how do you prevent them from using image-editing software to modify the text that appears in those screenshots? [Answer](#)
9. Need for Human Readability. If parties cannot understand the meaning behind the code of a smart agreement, they might not agree to it. How do you address this problem? [Answer](#)
10. Enforcement in the Traditional Judicial System. If a natural-language translation of a smart agreement is made available to its parties and one party initiates litigation in the traditional judicial system, will a court enforce the natural-language translation of the smart agreement or the code of the smart agreement itself? [Answer](#)

8. Timeline

2016

- 3Q: Conceived initial version of Smarter Contract concept.
- 4Q: Researched potential for a fixed price dispute resolution service.

2017

- 2Q: Worked with attorneys to understand legal matters.
- 3Q-4Q: Designed Smarter Contract system.
- 4Q: Conducted market research.
- NOV: Developed white paper.
- DEC: Grew tech and marketing teams.
- DEC: Filed [provisional patent application](#).

2018

- JAN: Launched [Version 1](#).
- 1Q-2Q: Form 10 partnerships with multisided platforms for implementing Smarter Contract.
- MAR-MAY: Pre-sale and token sale.
- 2Q: Build back-end for Version 2.
- 2Q: Design and build user interface for Version 2 in collaboration with users.
- APR: Implement Smarter Contract for Pico Ventures' furniture financing business.
- JUL: Launch Android app.
- AUG: Launch IOS app.
- 3Q-4Q: Implement Smarter Contract on 3 additional platforms.

2019

- Implement Smarter Contract on 10 additional platforms.

- Create a WYSIWYG editor for creation of smart contracts that work with Smarter Contract.

2020

- Implement Smarter Contract on 25 additional platforms.
- Create a smart contract platform where humans or software can read, write, or enter into smart contracts.
- Add functionality for creation and automated negotiation of any smart contract involving any number of parties.
- Build a market for smart contract translations and translation insurance.

Smarter Contract's budget for achieving the above is discussed in the Technical Paper [here](#).

9. Discussion on Selected Use Cases

9.1. Crowdfunding Platform

Crowdfunding Platforms. On these platforms, disputes can relate to whether the promoter (fundraiser) fulfilled their promises with regard to meeting milestones, providing regular financial reporting, sharing books and records, sharing updates, involving funders in decisions, and the list goes on. It is impractical for funders to seek dispute resolution for many of these infractions, because they each might be minor. As a result, the promoter is allowed to take advantage of their funders. Smarter Contract can withhold some of the funds in an escrow account, releasing them to the promoter only over time as they keep their promises.

9.2. Platform for Selling Services

Services Platforms. (includes freelance platforms) There are many ways that service providers can be incentivized to meet customers' goals through rule-based rewards and penalties. It is because of the difficulty of enforcing incentives and the cost and uncertainty of resolving disputes involving incentives that they are often left out of contracts. This potentially hurts both customers -- who seek better alignment with service providers -- and service providers -- who seek ways to improve their earnings through linking their fees to customers' goals. Smarter Contract would enable contracts to include incentives and be enforceable at low cost. Those incentives can be tied to the following, for example:

- Completion. Extent to which work was completed. Workers can offer to pay penalties for failure to complete projects. Often, the damages caused by non-completion vastly exceed a project's cost.
- Delays. Number of days that delivery was delayed, to the extent it was the service provider's fault.
- Repairs. Repairing bugs on time during a warranty period.
- Qualified Leads. Number of leads captured that meet semi-subjective criteria for qualification.

9.3. Startup Governance Platform

Startup Governance Platforms. The problem is ensuring everyone on a start-up team does what they promise to do. Without the costliness and distraction of the traditional legal system, Smarter Contract can align interests by taking away equity from team members who are found to have done the following, for example:

- Completion. Fail to complete projects as promised and on time.
- Goals. Fail to deliver on sales targets.

- Breach. Take actions not allowed by the founders' agreement.
- Commitment. Reduce commitment below specified levels.

9.4. Platform for Selling High-Value Assets

Asset Types. Assets for sale can be digital or non-digital. Digital assets include digital businesses and source code, for example. Non-digital assets include businesses, real estate, any other tangible asset, or smart shares of those assets. There are several problems with selling high-value assets:

- Payment over Time. Buyers of businesses generally prefer to pay part of the purchase price over time rather than all upfront. One reason for payment over time is so that if promises or representations of the seller prove false, the buyer has some recourse for the damages incurred as a result. However, sellers dislike payment over time because they fear that buyers will withhold excess money, falsely claiming that promises were not kept or representations were untrue. Sellers are also wary of the huge cost of using the traditional judicial system to ensure they receive what they are owed. As a result, many transactions do not happen because sellers are too afraid to allow payment-over-time and buyers are too afraid to complete a transaction without the protection of payment-over-time. Smarter Contract would minimize the cost of dispute resolution and therefore make payment-over-time feasible, which would allow more transactions to occur.
- Recourse in Event of Non-Payment. Smarter Contract could be used to make the determination of whether the buyer fulfilled their promise to pay money owed to the seller after the closing of a transaction. Such a determination in the negative could trigger an automated process or the hiring of a decentrally selected party to undo the transfer of assets. Converting property and control rights to "smart rights" stored on a blockchain would help with this.

10. Token Use

Pre-Distribution Token Use. Although the SMTR tokens you purchase will be distributed to you weeks after your purchase, you will be able to use Version 1 of the service immediately. When you select one or more experts who have bid to resolve your dispute (either on an hourly basis or fixed-fee basis) work will proceed only after a Smarter Contract administrator informs the experts of (a) the number of SMTR tokens you have purchased (but not spent) and (b) the number of experts you have selected. That will limit the time or scope of the experts' work on your dispute. Upon the completion of work, based on work completed, the number of SMTR tokens you have spent will be deducted from the number of SMTR tokens you have purchased. This will reduce the number of SMTR tokens that will be distributed to you. The number of SMTR tokens not distributed to you as a result of work completed will be distributed to the experts.

Post-Distribution Token Use. After SMTR tokens are distributed, payment of those tokens will be required for use of Version 1 and Version 2. Dispute resolution services may only be purchased with SMTR tokens. While dispute resolution services are being performed, the SMTR tokens required to pay for those services will be held in escrow accounts.

11. References

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