

**DataOnBlock Whitepaper**

**Revision 1.0.12**

Raynus Sieborne, Hendrik Norvessen, Maxim Sbojevetz

<http://dataonblock.io>

## Introducing DataOnBlock

Decentralized storage, computing and authenticity are intrinsic features of blockchain technologies. Our mission is to make these technologies accessible to both corporate and individuals.

Our name "DataOnBlock" is a shortened representation of our mission. Put data on the block, make it accessible, and useful.

## Why publish data to the blockchain?

Distributed form helps mitigate against single point of failure.

When combined with publicly visible data that is *irrefutable*, new possibilities are created for the use of such data both within the blockchain itself and externally by connected applications that are empowered by the blockchain ability to ensure authenticity of the data being published.

Furthermore, in a society where data is increasingly utilized by algorithms, applications and users, a globally accessible infrastructure to store such data with explicit controls and permissions, settable by its owner, is an important and critical asset/driver for improved workflows and adoption.

Whilst any blockchain address can verify its own authenticity by use of a private key, there is still a missing link (lack of) connecting a private key and actual identity (eg. name of person or company).

If we could enhance the blockchain, our additions would be to add protocols (and platforms) for mapping real identity, the ability to control visibility of data via strong encryption and user controllable permissions and simplified protocols and user interfaces for interacting with these sources connecting the blockchain to external data sources.

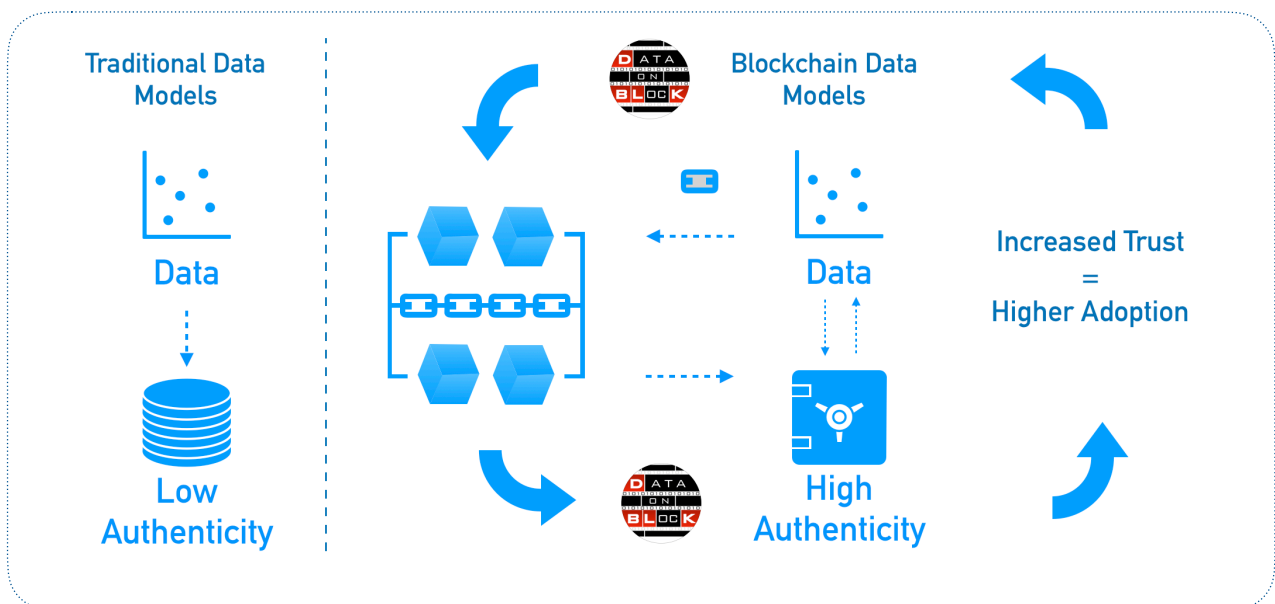
## Opening up the data

With such a model in place, it becomes possible for individuals to publish encrypted (snippets of) data from multiple random sources, such as health records, test results, payment verifications, etc.

Data visibility, trust and integrity are controllable, according to rules defined for each application (eg. one to one, one to few, one to many, many to one, etc).

Distributed organizations, can also collaborate data in a stuttered timeline whilst maintaining integrity and trust of the data, providing full visibility to those with approvals and adding ad-hoc structured access as needed without compromising the integrity or security of the data.

## DataOnBlock Conceptual Model



## Dual Encryption

Using a dual encryption scheme, permissions to access data on the blockchain can be granted on a per-user basis and via the use of smart contracts, permissions can be further segmented within set durations of times and dates (eg. with an expiry or only-valid-during period).

## Trust Facilitation

Facilitation of trust is not limited to a single source. Users/Applications/Data can verify themselves in multiple ways, each method carrying certain points of *trustworthiness* with recommendations for levels of trust based on the use-case (different types of contracts) or data types.

Examples:

Email Address

SocialNetworks (Facebook/Google/Whatapp/Line)

Telephone Numbers (SMS/PhoneCall)

PhysicalAddress

SSL Certificates

Personal Certificates

CreditCards

Passports

LocalID Docs

The trust level, and whether to disclose "trust score" or actual documents is entirely up to the user on a per application/contract basis and permissions can be revoked at the users discretion.

## Interoperability

Whilst smart contracts are promising, there is still a lack of integration between contracts/data on the blockchain, and external applications. The DataOnBlock platform aims to offer a solution with a smart contract interface, acting as a gateway/api between the blockchain and external applications and data sources.

A simplified framework that allows developers to quickly access data, along with a trust mechanism to authenticate the source.

## Why this matters?

Smart contracts represent a huge leap forward in automation of resource allocation and distribution based on "events" and with new regulation enabling movement of real assets to the blockchain, we will soon see automated trading contracts showing up to control these assets.

Example:

A smart contract could be used to buy or sell options for coffee beans based on the weather forecast in Brazil. The contract makes use of external data points as it's triggers for buying / selling.

If the source data, were to be manipulated, we could automatically trigger the contract, causing funds to move and purchases to be made, regardless of the "actual" weather conditions. Preventing such manipulation and ensuring integrity of the data source will be critical in such applications.

It is also foreseeable that we'll see insurance become available for such contracts and rates for contracts that rely on verified data sources would likely be far more favorable than those relying on standard 3rd party data.

For Data Sources:

A simplified way to publish data, in a way that is public, yet tamper proof.

For Developers:

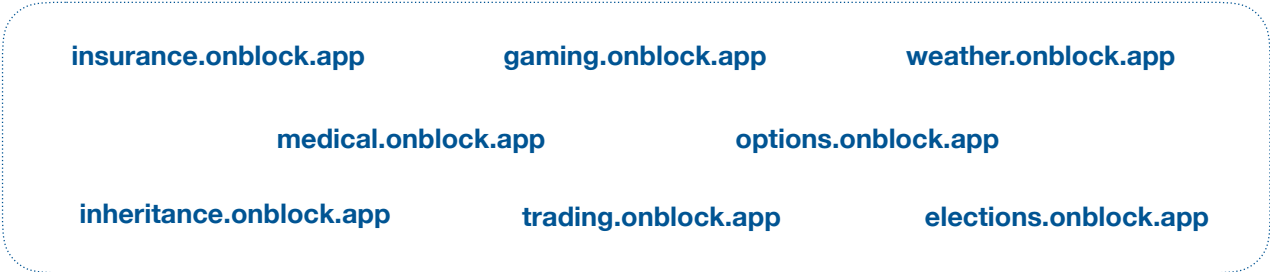
An authenticated, data source, readily available, easy to integrate.

For Users:

Increased quality, quantity and trust, of beneficial applications.

### (D)Apps & Marketplace

With the DataOnBlock platform in place, the vision comes together with our dapp(s) marketplace. Multiple apps/ dapps built on the DataOnBlock framework that create impactful benefits to users around the globe. Everything from business related apps such as trading contracts, insurance, inheritance and will creation, to gaming and entertainment.

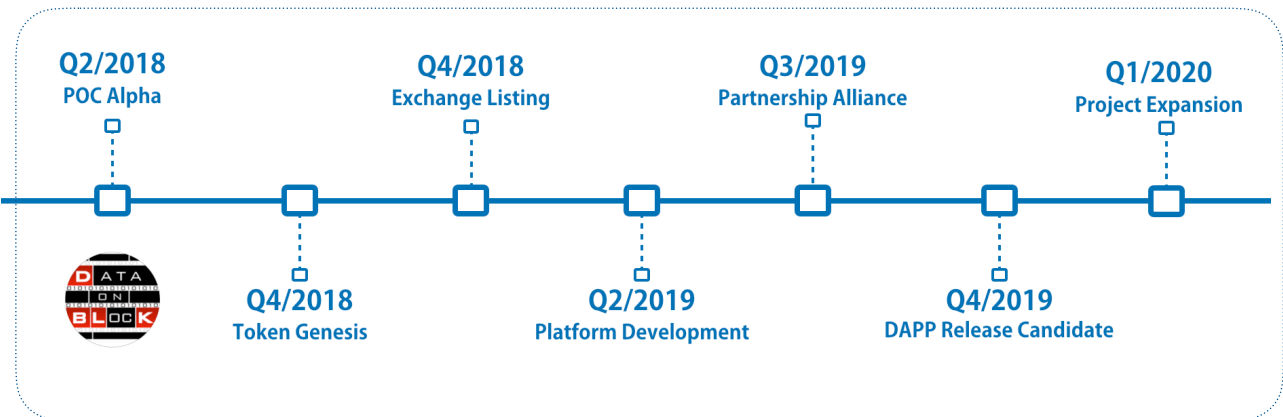


### DBLK Token

Computations, Data, Services and Interactions on the DataOnBlock platform will be transacted using DBLK (DataOnBlock Token). By using a unique token, we can extend the functionality and available interfaces via master contracts and facilitate transition for payments between fiat & DBLK, whilst maintaining a uniform pricing structure for computations on and off the blockchain.

As adoption and usage frequency of the DataOnBlock platform grows, the demand for DBLK tokens will naturally increase too. Available supply (tradable supply) continuously shrinks, and number of tokens being circulated within the platform continuously grows.

### DataOnBlock Roadmap



### DataOnBlock Token Allocation

