# 2016 The Blockchain Ecosystem

**Payment Use Cases** 

Retailing

Person 2 Person

case

Bitcoin PoS

PEY

Companies

Processing DC POS

🔀 BLOCKCHAIN XQDO

**(X)** ARMORY

Merchant

Payment

Market Proposition Customer Product Insight Development Engagement Launch

Interbank Clearina

Money Transfer Operators

Market

Makers\_

**Securities Markets** 

Nasdaq

Open Protocols for

Institutions

Blockchain

Distributed P2P

**Networks** 

Financial Inclusion

Remittance

**BitPesa** 

**ABRA** 

R<del>\BIT</del>

PayPal adyen

Bitcoin Based

Cryptocurrencies

Braintree stripe

Remittances

BitCoin ATM

LAMASSU

genesis**coin** 

BITACCESS

BITX **X**BTCC

vogogo

Mining Pools

F2Pool

- AntPool

- Slush'spool

eated as an alternative to central

ank controlled fiat currencies, Bitcoi

calability and other inherent flaws w

remains dominant but lack of

10 minutes

Currency: BTC - on and off-network

uance: Mining Reward. 21M Limi

Latency: 2.5 minutes

Currency: LTC - on and off-network

Dogecoin

Latency:

Bitproof.ic

Mining Reward. 84M Lim

Consensus: Proof of Work

stampery

1 minute

Currency: Doge - on & off-network Issuance: Mining Reward. Unlimited

Leaa

Validation: Proof of Work

Litecoin

Latency:

**Bitcoin Debit Cards** 

WageCan

**\***ANXPRO

Mining

bitpay

**X** Bitnet

coinbase

spondooliestech

**Protocol Components** 

The Currency

newtork & rewarding miners. Cryptographically

generated, protocol rules detremine issuance & destruction. May be tradeable "off the newtork"

(e.g. Bitcoin) or only exist on network (e.g. XRP)

The Ledger

Consensus

AKA the Blockchain. A Public record of all

transactions - stored across a distributed P2P

network of servers. Verified transactions are added in "blocks" and the history provides proof of value or

vents "double spend" or validation of fraudulent transactions:

**Proof of work:** miners compete to validate blocks by solving highly processor/RAM intensive cryptographic problems for reward

Distributed consensus: majority validation by trusted subnetworks

**Proof of stake:** achieves distributed consensus by network users proving their ownership of currency. Used by Peercoin & Bitshares

STORLIO

of peer nodes within the network. Used by Ripple & Stellar

. ♣ HASHRABBIT **RBTCS** 

GÖCOII

21 INC AncMiner Ritfury

FirstPartner

Resilience

## Introduction

The blockchain combines cryptography & distributed computing to deliver secure, direct peer to peer transactions without the need for a central party. At its heart is the Distributed Ledger This is a tamper proof, public, network-hosted, record of all consensus verifiedtransactions.

Initially realised via Bitcoin & similar "cryptocurrencies", focus & investment is now shifting to the potential of blockchain technology to revolutionise the infrastructure & processes of established Financial Institutions & other enterprises.

This Map summarises the key principles behind the blockchain & the emerging ecosystem addressing

## Blockchain numbers

blockchain companies to Oct 2015. \$462 million of this in 2015 alone.

Number of early stage Bitcoin & Venture Scanner<sup>2</sup>

Banks & Financial Institutions known to

accept Bitcoin<sup>4</sup>

\$4.9bn

Bitcoin accounts for around 90% of the capital value of all cryptocurrencies<sup>5</sup>

worldwide

Venturescanner.com reviewed Nov 2015

CoinDesk State of Bitcoin Report Q3 2015

Bitcoinity.org Coin ATM Radar checked Oct 2015

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## Like what you see?

Contact us for in-depth insight

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# The Cryptocurrency Ecosystem Sp

**Users** 

\*\*\*\*\*\*

Merchants

**BITFINEX** 

📵 LocalBitcoins.co

The Distributed Ledger

Anatomy of a

Transaction

2 Verification 🧭

alidate signatures

nodes or miners: network propogate group into "candidate blocks

verify through "consensus"

mkraken

BITSTAMP

BTC 0

payments, banking & other potential use cases.

\$921 million Cumulative VC investment in Bitcoin &

\$121 million Largest cumulative funding total - raised by Bitcoin computer developer 21 inc.

blockchain companies identified by

be testing, analysing or investing in the blockchain technologies<sup>3</sup>

11 m Number of registered Bitcoin wallets in Sept 2015 - up from 6.6m in Sept 2014 4

106,000 Number of merchants who

Bitcoin capitalisation Nov 2015.

value of Bitcoin trading in Sept

Bitcoin ATMs installed

Blockchain.info checked 16th Nov 201

into your target markets!

COINALYTICS **■** BLOCKCORP

SAMSUNG

loT

Other Use Cases

[]blockr

**Data & Analytics** 

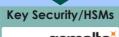
bitcoin charts

factom

MaidSafe<sup>1</sup>

Data

access to business data



**Sho**Card

e-Identity

individual identity



# Balancingthe Benefits

Ecosystem simplification Faster interbank clearing & settlement Lower transaction costs Transaparency & auditability

## Blockchain Benefits

Ease of software development/integration

# Vs.

Unproven technology Untested capacity/scalabilitty - Low transaction speed - Possible concensus prototcol flaws

Cryptocurrency price volatility

## 🧩 OpenBazaar Market Places



andreessen

**B**LOCKCHAIN

-DASH

"stamping" of physical & digital assets







HEDGY.

Enablina the Financial Services Blockchain

ecifically for existing financial

rocesses & directly suporting figt

ernational payments & inter

Validation: Distributed consensus

Currency: XRP on-network only

suance: At inception -100 BN units

atency: 3 seconds

art contract & distributed app focu

Ethereum

Latency: 12 seconds

/alidation: Distributed consensus

Currency: Lumens on-network only

uance: 100 BN then 1% issu

Crowd Funding

aising finance & distribut

ing equity

atency: 2-5 seconds

lidation: Proof of Work

Issuance: Mining Reward.

Currency: ETH on-network only

**\$ lighthouse** 

urrencies, lead use cases are

stitutions. Supplementing existing









■ Trading & Markets





citi





## Digital Asset Holdings വു Chain

Exchanged via the

ripple

Obitcoin



aciliate legally



Colored Coins & Open Assets







**Ripple:** facilitating multiple Financial Institutions focussing or payment solutions

## Protocol Commercialisation Consensys: building an

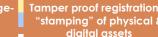
partnered with Microsoft for

# Peercoin WVIACOIN



# **₿**BISANTYUM









AME CLOUD VENTURES

# PANŦERA

## The following major central banks have undertaken assesments or and/or benefits but none vet has a definitive policy stance. - Bank of England - The Federal Reserve Monetary Authority of Singapore People's Bank of China Interbank Networks

Liquidity Provision National Clearing Complaince Policy



**Central Banks & Initiatives** 





TradeBlock

Blockstack.io

nabling Layers

vpes & services







