

**Blockchain introduction: exploring the opportunities**  
ECP deelnemersspecial: toezicht en wet- en regelgeving

# Blockchain basics

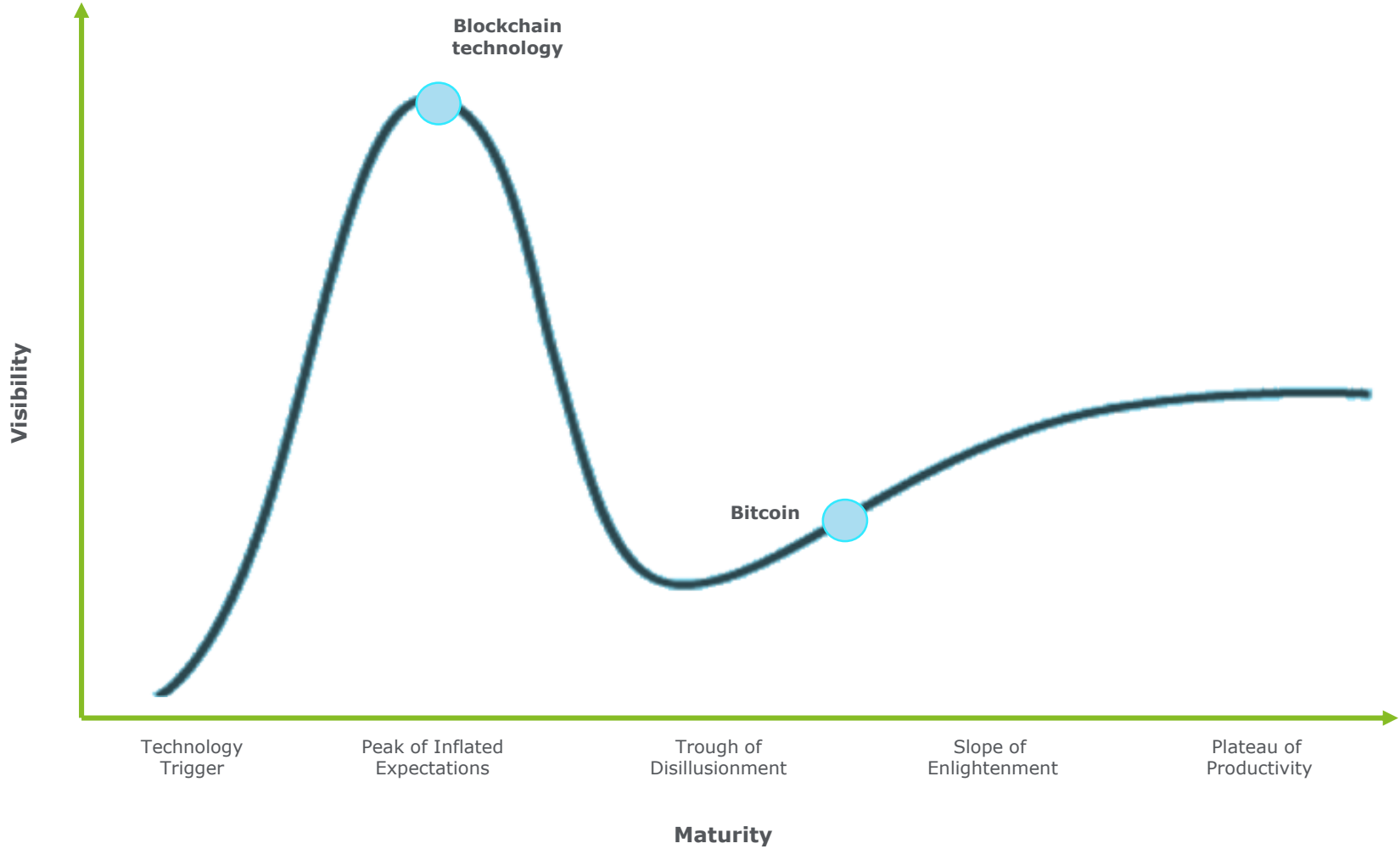
A woman with long blonde hair, wearing a teal blazer over a black top, is seated at a desk in a control room or data center. She is looking towards the camera with a slight smile. The desk is cluttered with several computer monitors, each displaying various data visualizations, including bar charts, line graphs, and tables. The room is dimly lit, with the primary light source being the screens themselves. The overall atmosphere is professional and focused on data analysis.

*“You should be taking this technology as seriously as you should have been taking the development of the Internet in the early 1990s.”*

*– Blythe Masters, Former Head of Global Commodities, JP Morgan Chase*

# Gartner hype cycle

Blockchain is hot, Bitcoin is not



# The ecosystem is growing rapidly



**\$2bn+**

in venture capital has been invested in more than 120 Blockchain start-ups over last 2-3 years



**800+**

There currently are more than 800 companies in the Blockchain ecosystem



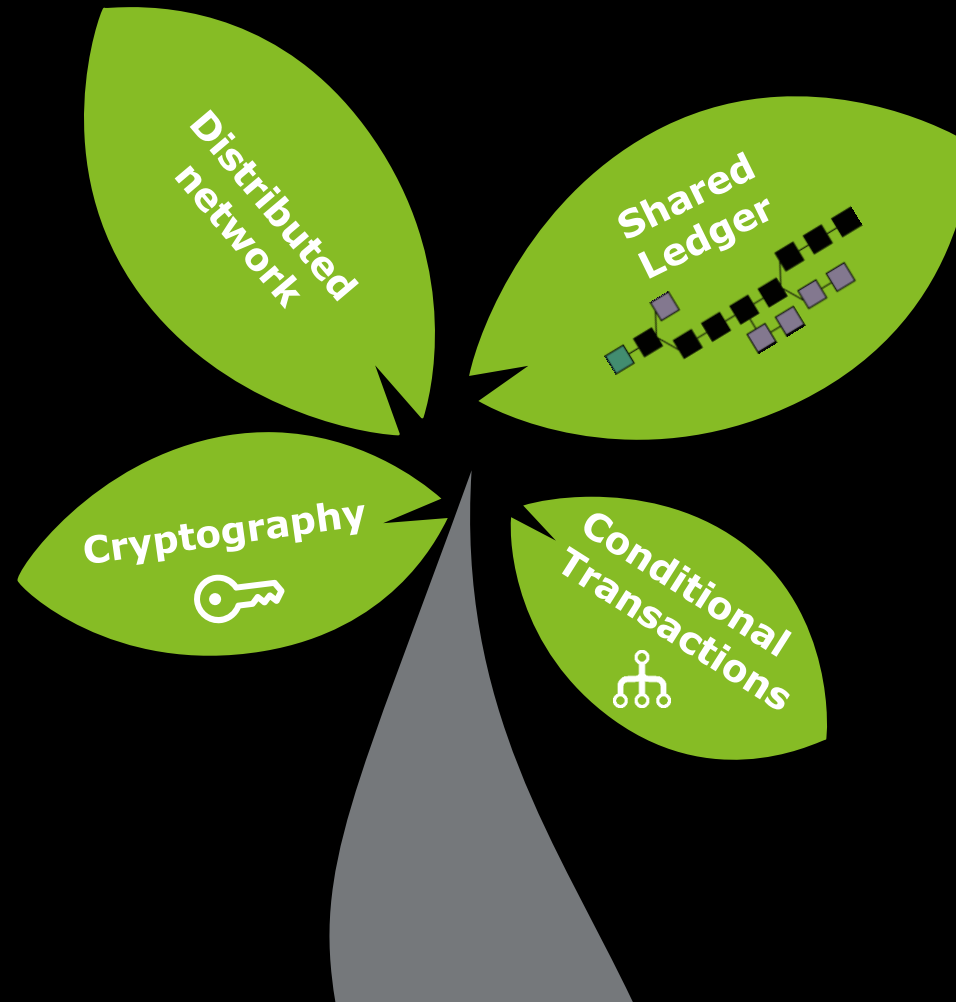
**10%+**

of Global GDP will be stored on Blockchain platforms by 2025, expects the World Economic Forum

Sources: IBM Blockchain, Eris Industries, Deloitte Tech Trends 2016, Deloitte University Press

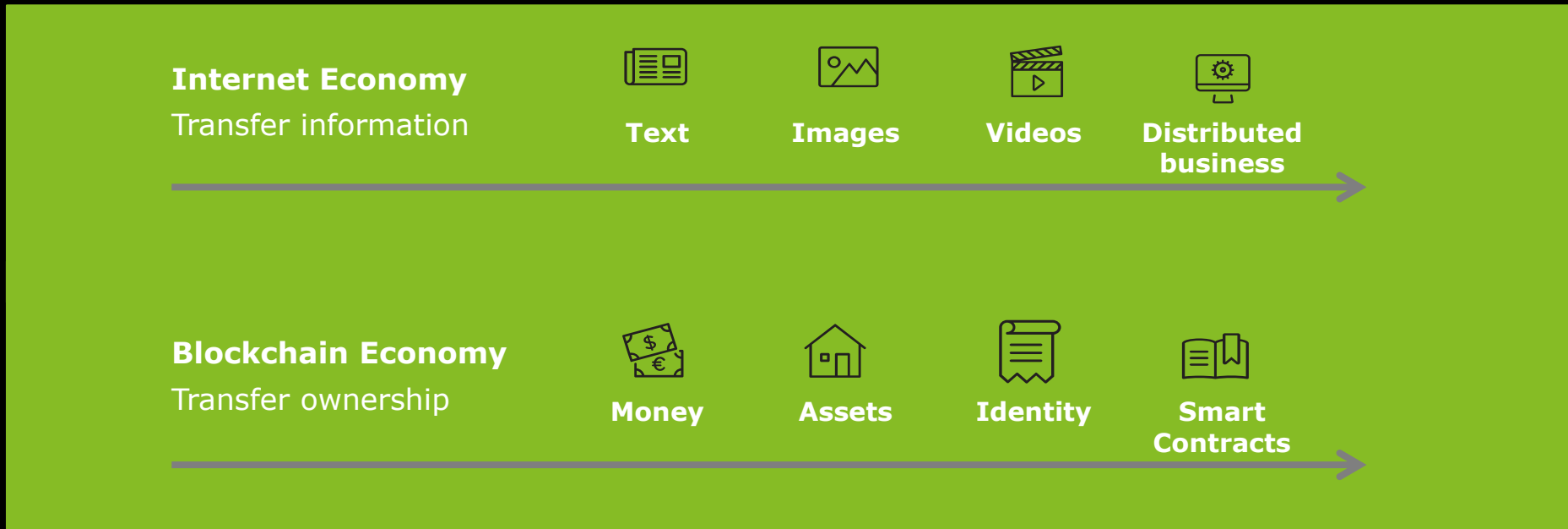
# What is a Blockchain?

Innovation which will have a fundamental and far reaching impact on all types of transactions, value storage and transfers

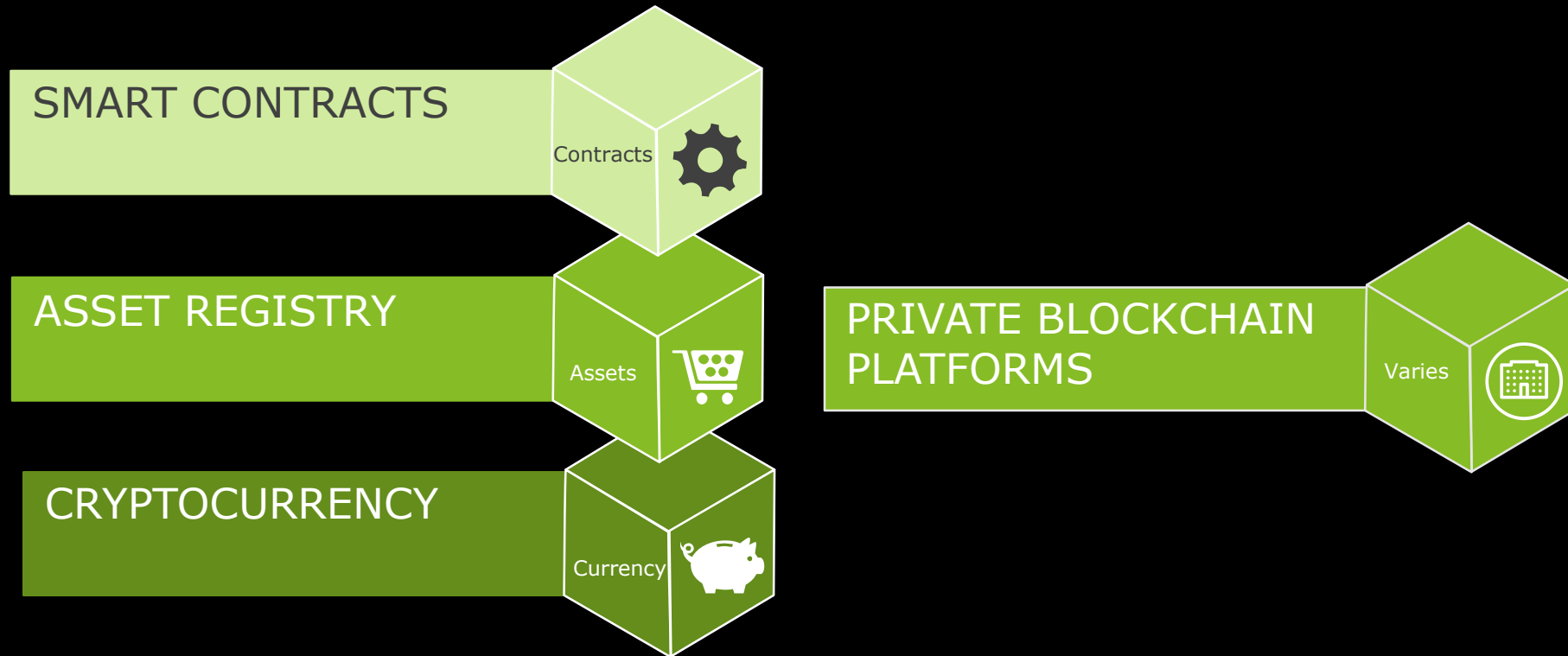


# Blockchain and the Internet innovation analogy

Facilitating exchange of value real-time, just like the Internet facilitates exchange of information by decentralizing ownership and removing the middleman



# Multiple blockchain platforms for different applications





## How can we predict the impact of blockchain?

*“We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.”*

*– Bill Gates*



# Blockchain challenges

What do you need to mitigate in a blockchain solution?

## Challenges of Blockchain technology

Rules & Regulation

Scalability

User experience

Cybercrime

Confidentiality

Business case



## Blockchainpilots Nederlandse overheid

Marloes Pomp

- 25+ pilots
- Ministeries
- Uitvoeringsorganisaties

## Dutch Blockchain Coalition

Ad Kroft

- Dutch Digital Delta
- Publiek-privaat
- Overheden
- Banken
- Bedrijven
- Kennisinstellingen

Focus: Identity

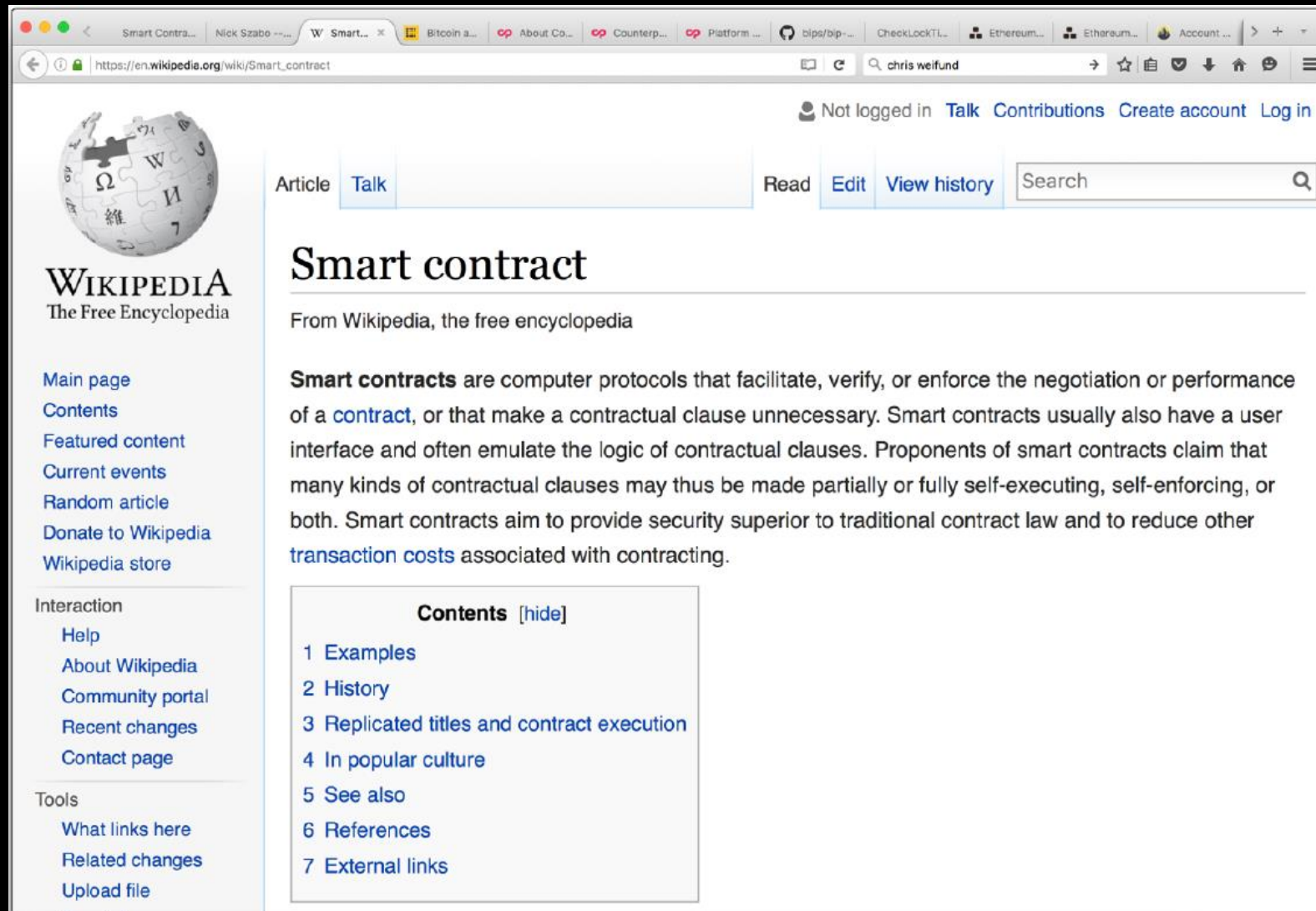


# **RESULTATEN Blockchainpilots juni - november 2016**

**Slotconferentie 29 november 2016**

# Blockchain challenges

## Definitions and standards



The screenshot shows a web browser displaying the Wikipedia article for "Smart contract". The browser's address bar shows the URL "https://en.wikipedia.org/wiki/Smart\_contract". The page features the Wikipedia logo on the left, a navigation menu with options like "Main page", "Contents", and "Featured content", and a search bar at the top right. The article title "Smart contract" is prominently displayed, followed by a sub-header "From Wikipedia, the free encyclopedia". The main text defines smart contracts as computer protocols that facilitate, verify, or enforce the negotiation or performance of a contract. A table of contents is visible below the text, listing sections such as "Examples", "History", "Replicated titles and contract execution", "In popular culture", "See also", "References", and "External links".

Smart contract

From Wikipedia, the free encyclopedia

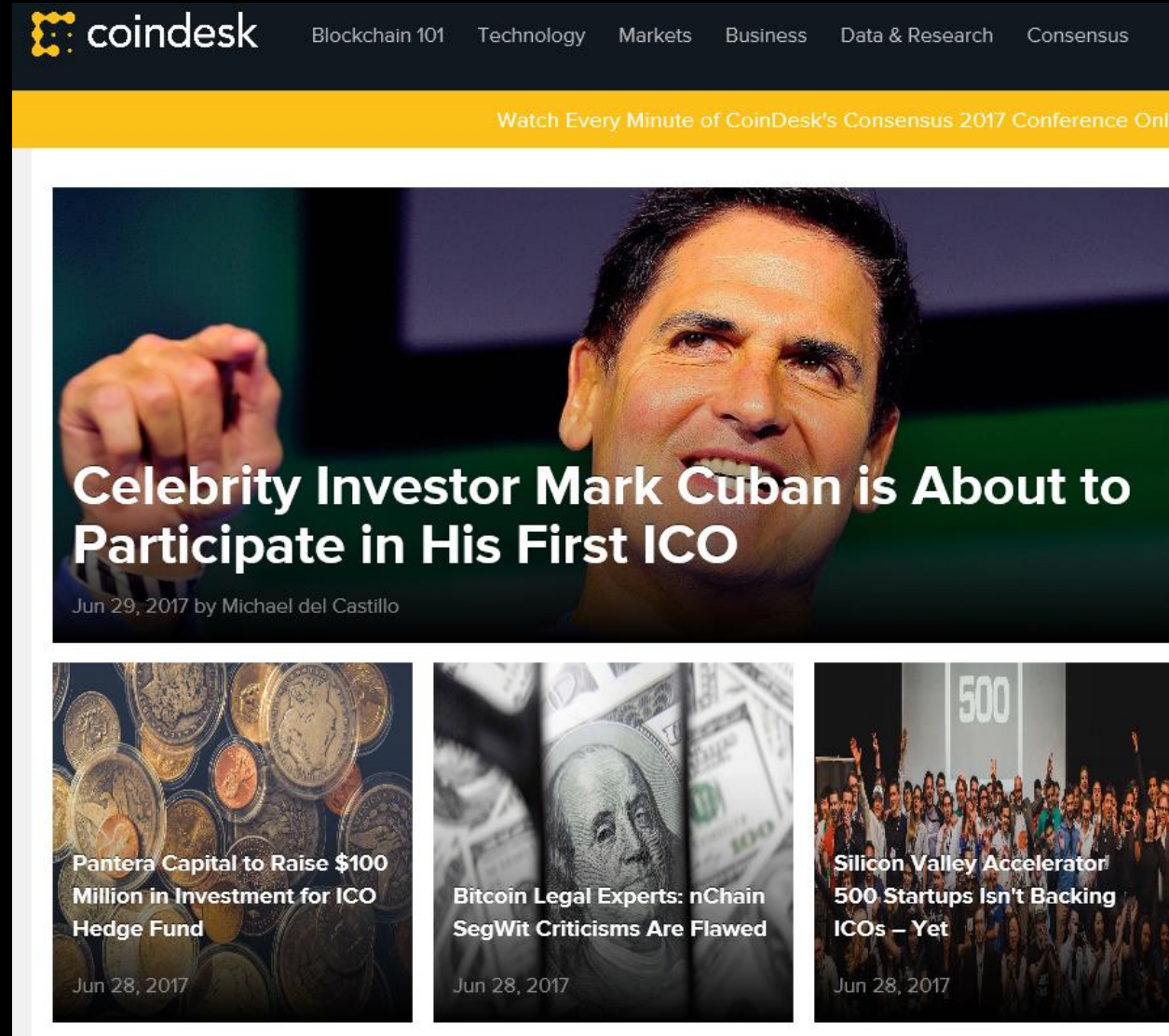
**Smart contracts** are computer protocols that facilitate, verify, or enforce the negotiation or performance of a [contract](#), or that make a contractual clause unnecessary. Smart contracts usually also have a user interface and often emulate the logic of contractual clauses. Proponents of smart contracts claim that many kinds of contractual clauses may thus be made partially or fully self-executing, self-enforcing, or both. Smart contracts aim to provide security superior to traditional contract law and to reduce other [transaction costs](#) associated with contracting.

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- 2 History
- 3 Replicated titles and contract execution
- 4 In popular culture
- 5 See also
- 6 References
- 7 External links

# Blockchain challenges – rules & regulations

## Investments & ICO's



The image is a screenshot of the CoinDesk website. At the top, the CoinDesk logo is on the left, and navigation links for "Blockchain 101", "Technology", "Markets", "Business", "Data & Research", and "Consensus" are on the right. A yellow banner below the navigation reads "Watch Every Minute of CoinDesk's Consensus 2017 Conference Online". The main content area features a large article with a photo of Mark Cuban pointing. The article title is "Celebrity Investor Mark Cuban is About to Participate in His First ICO" and it is dated "Jun 29, 2017 by Michael del Castillo". Below this are three smaller article thumbnails: "Pantera Capital to Raise \$100 Million in Investment for ICO Hedge Fund" (dated Jun 28, 2017), "Bitcoin Legal Experts: nChain SegWit Criticisms Are Flawed" (dated Jun 28, 2017), and "Silicon Valley Accelerator 500 Startups Isn't Backing ICOs – Yet" (dated Jun 28, 2017).

**coindesk** Blockchain 101 Technology Markets Business Data & Research Consensus

Watch Every Minute of CoinDesk's Consensus 2017 Conference Online

**Celebrity Investor Mark Cuban is About to Participate in His First ICO**  
Jun 29, 2017 by Michael del Castillo

**Pantera Capital to Raise \$100 Million in Investment for ICO Hedge Fund**  
Jun 28, 2017

**Bitcoin Legal Experts: nChain SegWit Criticisms Are Flawed**  
Jun 28, 2017

**Silicon Valley Accelerator 500 Startups Isn't Backing ICOs – Yet**  
Jun 28, 2017

# Regulated industries vs. distributed insurance apps

The screenshot shows a web browser displaying a list of 10 decentralized applications (dapps) related to insurance. The browser's address bar shows 'dapps.ethercasts.com'. The page header indicates '10 dapps found' and 'Sort: Updated'. The dapps are presented in a grid of colored cards, each with a title, creator, description, status, and date.

Title	Creator	Description	Status	Date
Flight Delay Insurance	Etherisc GmbH	Get instant payout in case your flight is late.	Working Prototype	2017-02-20
Etherisc Social Insur...	Etherisc GmbH	Social insurance based on group p2p assessment	Working Prototype	2017-02-20
Crop Insurance	Etherisc GmbH	Get instant payout in case bad weather damages your crop harvest	Working Prototype	2017-02-20
The EDO	keech	decentralized autonomy P2P insurance platform	Stealth Mode	2016-12-21
ReGa	Sergei Sevriugin	Ethereum p2p insurance platform	Live	2016-10-28
CT Risk Placing	ChainThat	Commercial & Speciality Re(Insurance) placing platform	Working Prototype	2016-06-11
Wekeep	Adrian	Insurance - Keep money together for risk sharing	Work in Progress	2016-04-18
insurETH	Thomas Bertani, Kristina Butkute, Francesco Canessa	P2P flight insurance	Work in Progress	2016-01-21
Dynamis	Joshua Davis	Insurance Dapp	Work In Progress	2015-09-24
Allied Peers	Bitsilk / Elias Haase	P2P Insurance	Unknown	2015-04-22

Service by [EtherCasts](#)      UI by [Hitchcott](#)      Fork me on [GitHub](#)

## Consortiums – example: B3i

### Re-insurers launch Blockchain insurance industry initiative

#### Goals:

- Increase consistency
- Establish common standards
- Assess how blockchain technology can be a viable tool
- Using private blockchains to mitigate risks

## Insurers and reinsurers launch Blockchain initiative B3i



Global, October 19, 2016

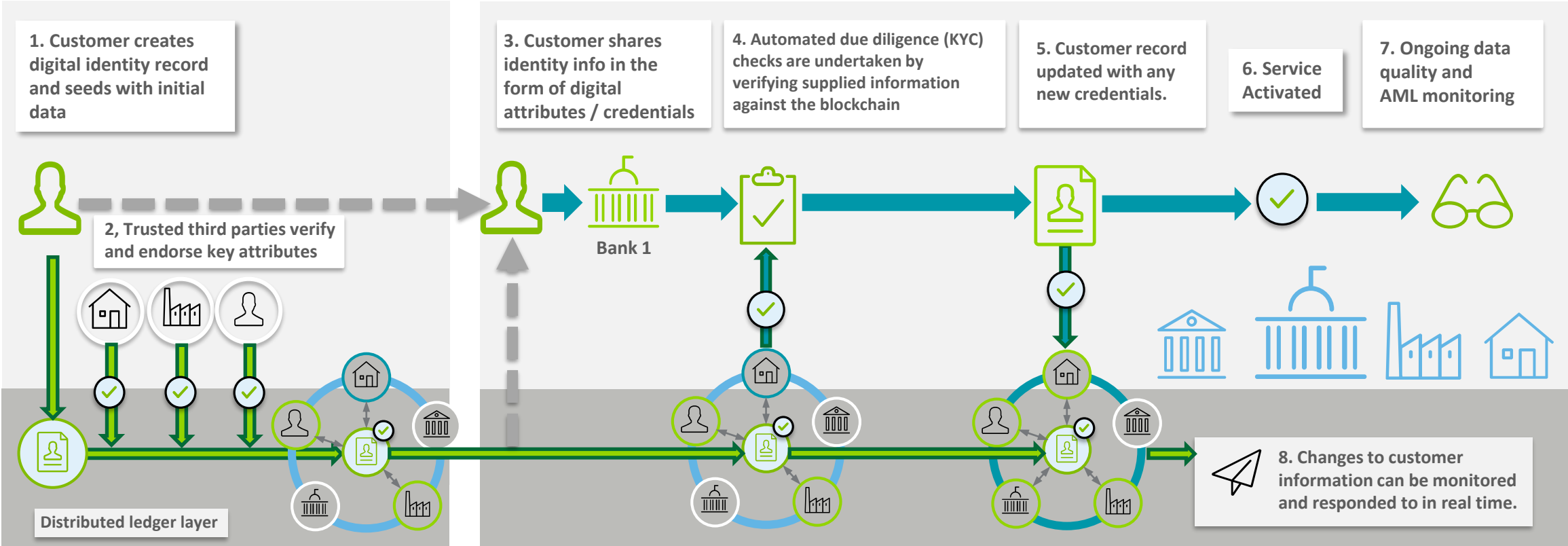
Aegon, Allianz, Munich Re, Swiss Re and Zurich have launched the Blockchain Insurance Industry Initiative B3i.

The initiative aims to explore the potential of distributed ledger technologies to better serve clients through faster, more convenient and secure services. If Blockchain technology proves viable, it could well streamline paper work and reconciliations for (re-) insurance contracts and accelerate information and money flows, while greatly improving auditability.

“Blockchain offers huge potential for enabling digital contracts and transactions in a secure, transparent and auditable way.”

# Managing risks: Know Your Customer process through smart identity

Shared access to customer record simplifies customer experience and enables more automation



A photograph of a brown pegboard densely packed with various keys. The keys are organized into rows and columns, with many having small, handwritten labels attached to them. The labels include names like 'TOYOTA', 'DEXTER', 'CORP', and 'AGLE'. The keys themselves are of various types, including standard metal keys, keys with black plastic heads, and some with gold-colored heads. The background is a dark brown pegboard with a grid of white dots.

# Secure key management



## Blockchain is here to stay

- But what happens when everything becomes code...?
- Who will be our clients when organizations become decentralized?



# Meet our Deloitte blockchain team



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