

Blockchain technology – why does it matter?

**An introduction to the potential for blockchain to
change or improve the world**

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Description

Blockchain offers a new radical computing paradigm that promises to deliver new decentralized operating and market structure models that challenge conventional processes across industry and society.

Blockchain technology is gaining increased attention from enterprises, vendors and mainstream media as the "next big thing." To many observers, it appears that the era of blockchain is inevitable, and is a global-scale, technology-driven, business transformation that will eventually have an impact equivalent to that of the World Wide Web, or of the internet itself.

This presentation offers a brief introduction to the disruptive potential of blockchain. It shows results of Gartner research into current application and offers recommendations for end-user organizations.

**What is the potential
of Blockchain?**

Where do we stand?

What to do?

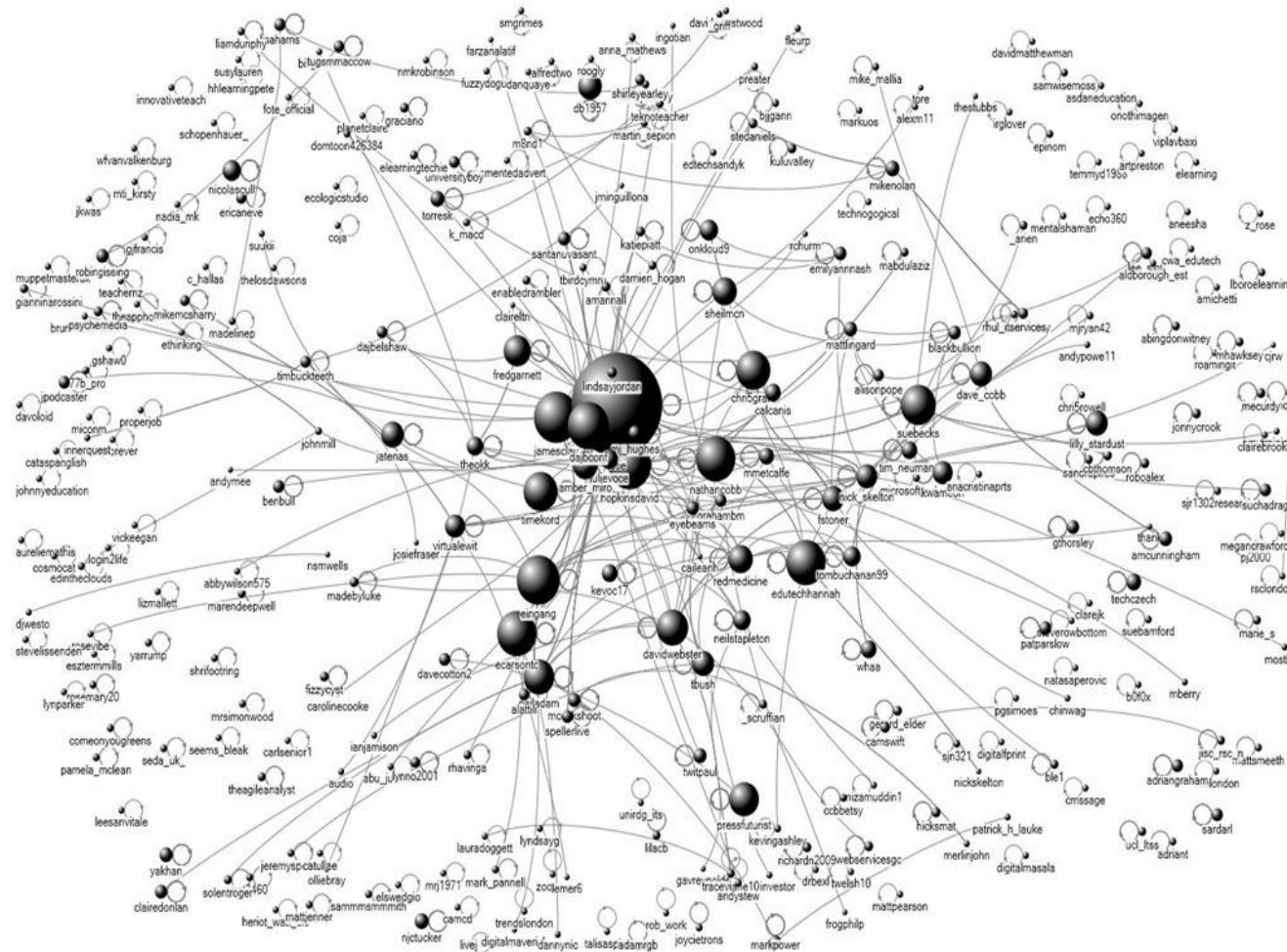
The definition of 'blockchain'

A blockchain is a distributed, shared, encrypted, chronological, irreversible and incorruptible database with a consensus mechanism (permissioned/permissionless), that adds value by enabling direct interactions between users

- Mechanism for **adding trust** in an untrusted environment
- An **irrevocable record** of significant data and events, such as monetary transactions, property records, or other valued assets
- Not just a passive data record, but can optionally add **dynamically programmed** behavior to events
- Create and exchange **multi-various assets** and forms of value



Three generations of global-scale transformation



Created with NodeXL (<http://nodexl.codeplex.com>)






- **The Internet of Data**
 - Any node on global-scale network can send a packet of data to any other node
- **The Internet of Content**
 - Any node can send a chunk of content (a web page)
- **Internet of "Money"**
 - Any node can send value

Blockchain is envisioned by some as a means to create a new and better world (just like the internet)

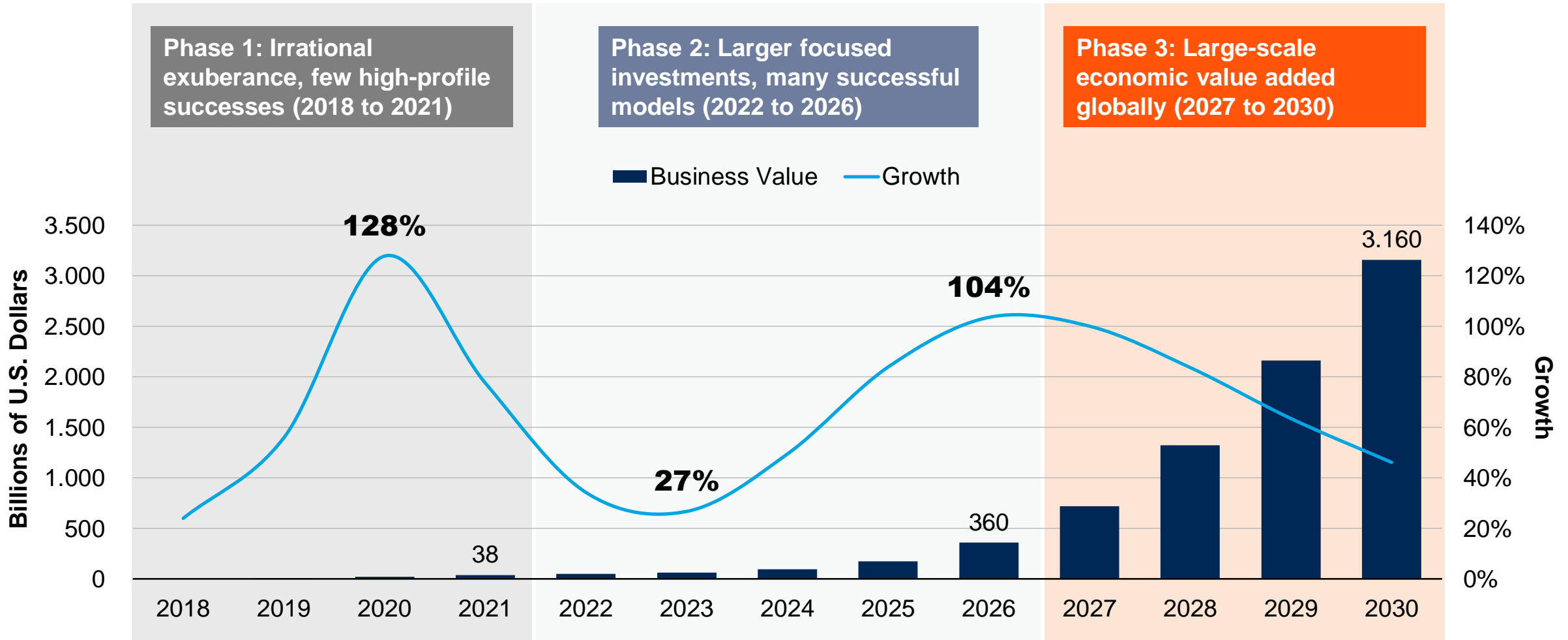
Elinor Ostrom ... proposed that a Commons can create value if a set of rules are consistently applied and respected by all of its members.

Mike Maples, Jr. "Crypto Commons" <https://blog.usejournal.com/crypto-commons-da602fb98138>

Research Position: The World Wide Ledger emerges to support a programmable economy and society

	D-Marketing	D-Business	Adaptive	Autonomous	Programmable
Focus	Exploit "nexus" to drive greater efficiency	Extend potential customers from people to things	Smart things become a major "customer"	Smart, autonomous things become the primary "customer"	Smart autonomous things enable new forms of value and interaction
Outcomes	Optimize interactions	Build new business models	Maximize retention of and relationships with things	Maximize retention of and relationships with things	Enable new economic systems
Entities	 People Business	 People Business Things	 People Business Things	 People Business Things	 People Business Things
Disruptions	Deeper customer relationships, analytics	Creation of new value and new nonhuman customers	Smart things act as proxies for people or businesses	Smart things act as proxies for people or businesses	Smart things act for themselves
Technologies	BI Big data Social	Sensors 3D printing Smart machines	Goal setting Smarter machines Robotics Automation	Goal seeking Self-optimizing algorithms Decentralized Autonomous Organizations	World Wide Ledger, Blockchain, AI, IOT, SSID

Blockchain will create \$3.1 trillion in business value by 2030, but ...



Where do we stand?

Current blockchain initiatives tend towards optimization



Blockchain Disruptor

New businesses that rely on a blockchain foundation. Business model may not be new.

- Synereo — Content rights & social platform
- OpenBazaar — b2c marketplace
- Gnosis — prediction market platform



Digital Asset Market

New markets based on digital assets created from non-digital ones (both physical and virtual).

- Royal Mint, CME — digital gold
- NYIAX — advertising contracts
- China carbon carbon credit



Efficiency Play

Efficiency improvements in transactions and interactions.

- DTCC — derivatives clearing and settlement
- Maersk — container shipment and trade
- IBM — supply chain



Record Keeper

Records management by one entity, for self or for a community.

- Estonia — Proxy voting
- Georgia — Land title
- Dun & Bradstreet — DUNS Number

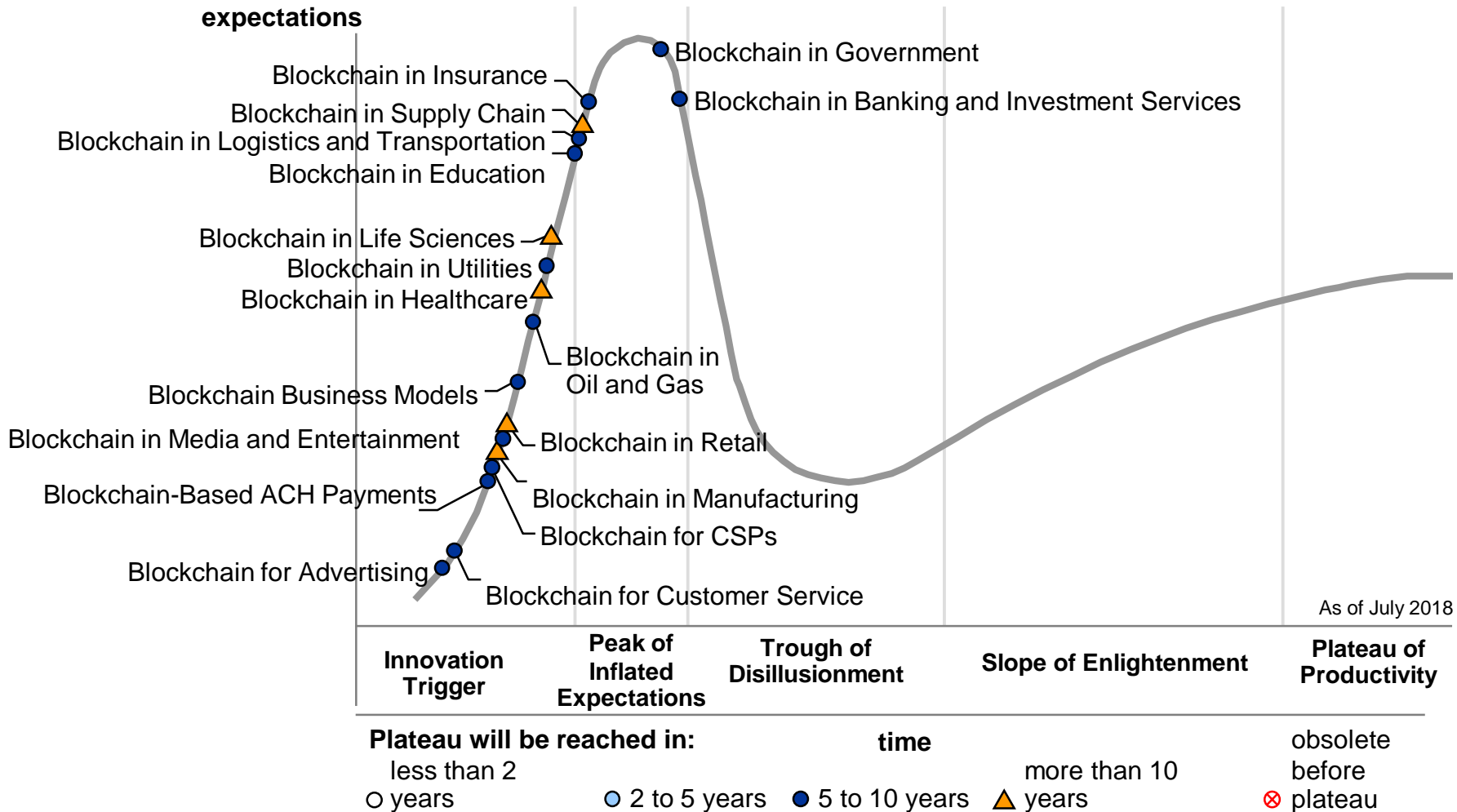
For all the hype, blockchain barely registers in list of game changer technologies

2019 Gartner CIO Survey

Q: Which technology area do you expect will be a game changer for your organization?	Top Performers (n = 230)	Typical Performers (n = 2,329)	Trailing Performers (n = 276)
Artificial intelligence/machine learning	40%	25%	24%
Data analytics	23%	25%	21%
Cloud (excluding XaaS)	12%	10%	14%
Digital transformation	10%	9%	7%
Mobile (including 5G)	7%	6%	5%
RPA	6%	2%	1%
Internet of Things	6%	10%	11%
Blockchain	5%	4%	5%
Automation	3%	5%	5%

8 other technology areas registered less than 2%

Is reality slowly (or suddenly) setting in?



From "Hype Cycle for Blockchain Business, 2018." 27 July 2018 (G00357811)



What to do?

Recommendations for end-user organizations

Educate, experiment and extend to the broader ecosystem



Set realistic expectations — the technology, legal, regulatory, and cooperative platforms and frameworks are all nascent



Experiment but don't build the case on production-ready blockchains



Understand **decentralized nature of technology** — undertake proofs-of-concept to absorb the concept of radical decentralization



Think strategically and implement tactically — select a limited narrow-scope use case for real deployment on a chosen platform



Prepare to migrate away from your deployed system — because every platform technology will be obsolete in 18 to 24 months

Recommended Gartner Research

- ▶ [Market Guide for Blockchain Platforms](#)
Adrian Leow, Rajesh Kandaswamy and Others (G00354340)
- ▶ [Blockchain Status 2018: Market Adoption Reality](#)
David Furlonger and Rajesh Kandaswamy (G00355300)
- ▶ [Blockchain-Based Transformation: A Gartner Trend Insight Report](#)
Rajesh Kandaswamy and David Furlonger (G00352362)
- ▶ [Blockchain Trials Across Industries Show a Market in Transition](#)
Stephanie Stoudt-Hansen and Others (G00352760)
- ▶ [Hype Cycle for Blockchain Technologies, 2018](#)
David Furlonger and Rajesh Kandaswamy (G00340388)

For information, please contact your Gartner representative.