Blockchain

What is the strategic business impact and value

2021

modex.tech
contact@modex.tech

George DARIE

Head of Presales
george.darie@modex.tech

General market challenges

Data is any organization's most valuable asset, yet databases are not properly secured, costing companies of all sizes millions of dollars across the globe

$2T

Cybercrime costs for businesses in 2019

2019, Juniper Research

$4M

Average company cost per one data breach

2019, Deloitte

Cybersecurity threats & vulnerabilities

Existing enterprise data structures usually have a central point of vulnerability and an attack can compromise the entire system.

Legal & regulatory issues

Companies must prevent unauthorized access to sensitive data and create data management policies that comply with legislation such as GDPR or HIPAA.

High cost of efficient data protection

Companies need to spend large amounts of money for data integrity and security

Legacy enterprise data structures are centralized and vulnerable by design

Patchwork of security and governance solutions adds even more complexity and fragmentation to data structures

- Access control and auditing solutions
- Data encryption solutions
- Firewall solutions
- Data loss prevention
- Backup and and disaster recovery

Internal database admins and external central entry points across systems are able to tamper data and remain undetected

Outdated database fractured across multiple systems & providers amplifying breach risks

Difficult to maintain a single version of truth across different databases

Data governance and integrity are a complex challenge across systems of various nature

Enterprise data management challenges

Costly management solutions

Most solutions currently available on the market are custom-made and expensive to implement, with experts charging considerable fees for their services due to a shortage of talent.

Data security & privacy policies

Legacy enterprise data structures usually have a central point of vulnerability and an attack can compromise the entire system.

Transitioning from legacy structures is cumbersome

Transitioning to a blockchain infrastructure often entails the construction of a new framework from the ground up, which can impose significant costs for the company.

Legal & regulatory issues

Companies must prevent unauthorized access to sensitive data and create data management policies that comply with legislation such as GDPR or HIPAA.

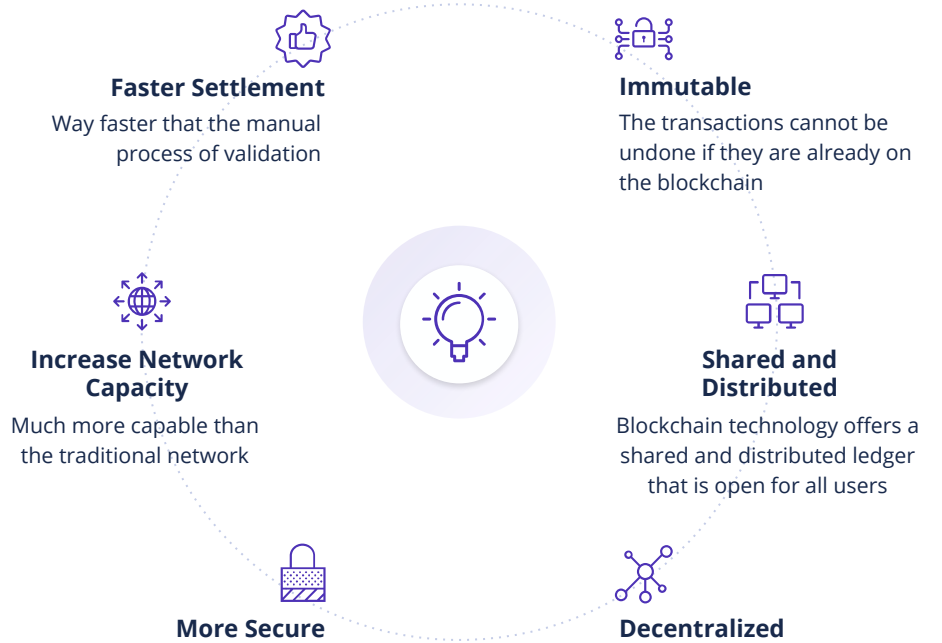
ROI uncertainty for new technologies

Solutions based on innovative technologies sometimes fail to provide companies with a clear ROI and some implementations can prove difficult to scale after the initial phase.

Interoperability challenges

Current tech stacks are made up of a multitude of technologies, and connecting them all can involve significant investment.

What is Blockchain?



Faster Settlement
Way faster that the manual process of validation

Immutable
The transactions cannot be undone if they are already on the blockchain

Increase Network Capacity
Much more capable than the traditional network

Shared and Distributed
Blockchain technology offers a shared and distributed ledger that is open for all users

More Secure
Much safer than the traditional methods

Decentralized
Not dependent on server based technology and no one has authority over the system

Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network.

An asset can be tangible (a house, a car, cash, land) or intangible (intellectual property, patents, copyrights, branding).

Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting costs for all involved.

The Blockchain Generations

1st Generation

First-gen blockchains are designed to improve the financial systems in place by offering a decentralized monetary platform that puts the control back in the hands of the people.

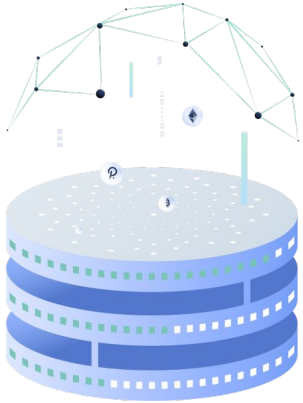
bitcoin

2nd Generation

Second-gen blockchains add a layer of "conditions" to transactions so that people can agree on terms in smart contracts rather than relying on intermediaries.

ethereum

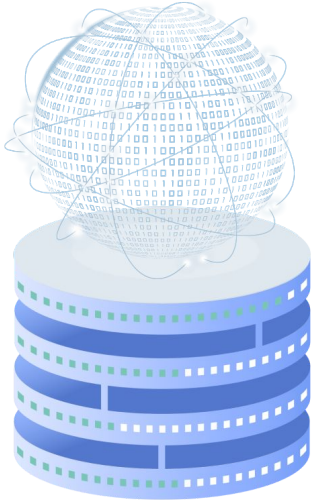
3rd Generation



Third-gen blockchains aim to resolve fundamental flaws including scalability and interoperability which means blockchain can sustain mass adoption and not suffer problems like slow transaction time and closed systems.

EOS™ CARDANO r3 HYPERLEDGER

4th Generation



The future of blockchain and its use-cases is tremendously exciting and we're only just seeing where it can go.

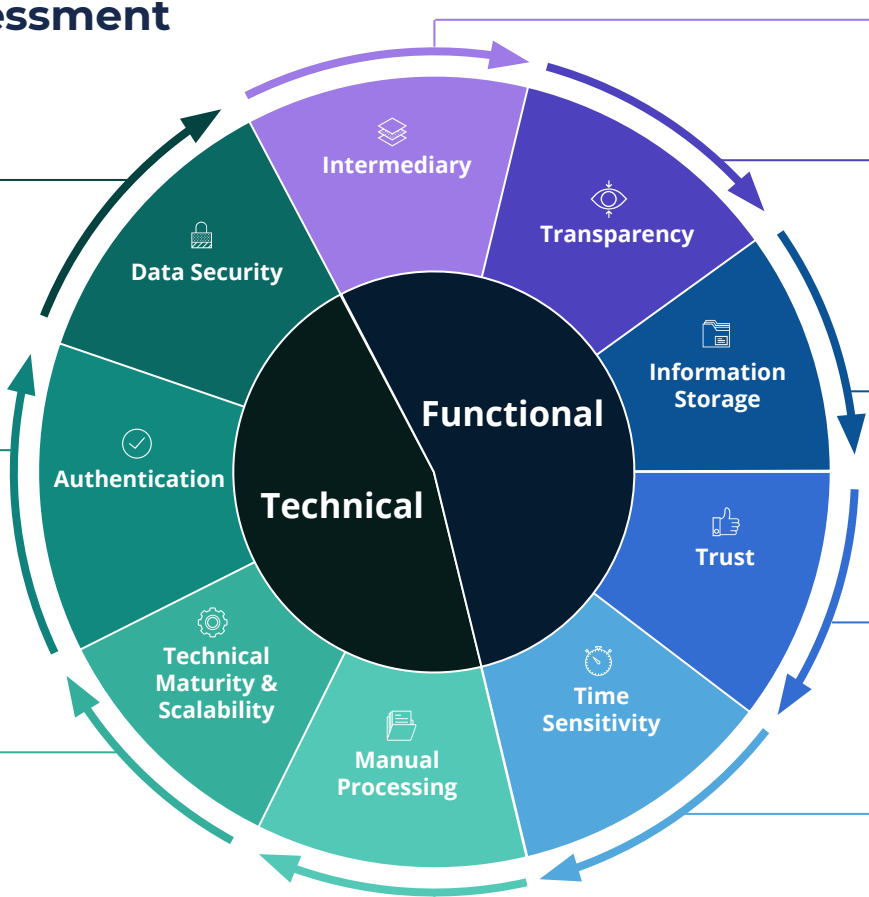
Modex BLOCKCHAIN DATABASE · CONSENSYS · ethereum 2.0 · Polkadot.

The nuts and bolts of blockchain

Five common blockchain myths create misconceptions about the advantages and limitations of the technology.

	Myth	Reality	
1	 Blockchain is bitcoin	Bitcoin is just one cryptocurrency application of blockchain	Blockchain technology can be used and configured for many other applications
2	 Blockchain is better than traditional database	Blockchain's advantages come with significant technical trade-offs then mean traditional databases often still perform better	Blockchain is particularly valuable in low-trust environments where participants can't trade directly or lack an intermediary
3	 Blockchain is immutable or tamper-proof	Blockchain data structure is append only, so data can't be removed	Blockchain could be tampered with if >50% of the network-computing power is controlled and all previous transactions are rewritten-which is largely impractical
4	 Blockchain is 100% secure	Blockchain uses immutable data structures, such as protected cryptography	Overall blockchain system security depends on the adjacent applications-which have been attacked and breached
5	 Blockchain is a "truth machine"	Blockchain can verify all transactions and data entirely contained on and native to blockchain (eg, Bitcoin)	Blockchain cannot assess whether an external input is accurate or "truthful"- this applies to all off-chain assets and data digitally represented on blockchain

Blockchain Fit Assessment framework



Data privacy
Data sharing
API or centralized

Paper-based authentication
Document validation

Workflow management
Scalability
Landscape maturity
Ease of integration

High Reconciliation cost
Manual reporting
Manual operations

High intermediary fees
High Latency
Lack of trust

Multiple participants involved
Transparency to all

Multiple storage required
Data consistency

Trust among participants
Multiple writers to transactions
Risk of fraudulent transactions

Real-time or synchronous transactions

Three core insights about the strategic value of blockchain

01

Blockchain does not have to be a disintermediator to generate value, a fact that encourages permissioned commercial applications.

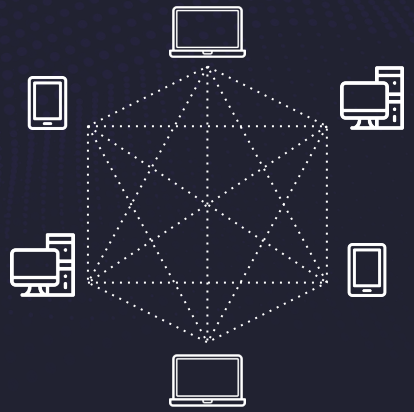
02

Blockchain is still three to five years away from feasibility at scale, primarily because of the difficulty of resolving the coopetition paradox*

03

Blockchain's short-term value will be predominantly in reducing cost before creating transformative business models

Public vs. Private blockchain network



Public Blockchain:

Permissionless

An open network system where anyone is allowed to join and participate in the consensus
All the devices can freely access without any kind of permission.
Full decentralized, secure and immutable ledger
Transaction are anonymous but transparent to anyone

ethereum bitcoin

Private Blockchain:

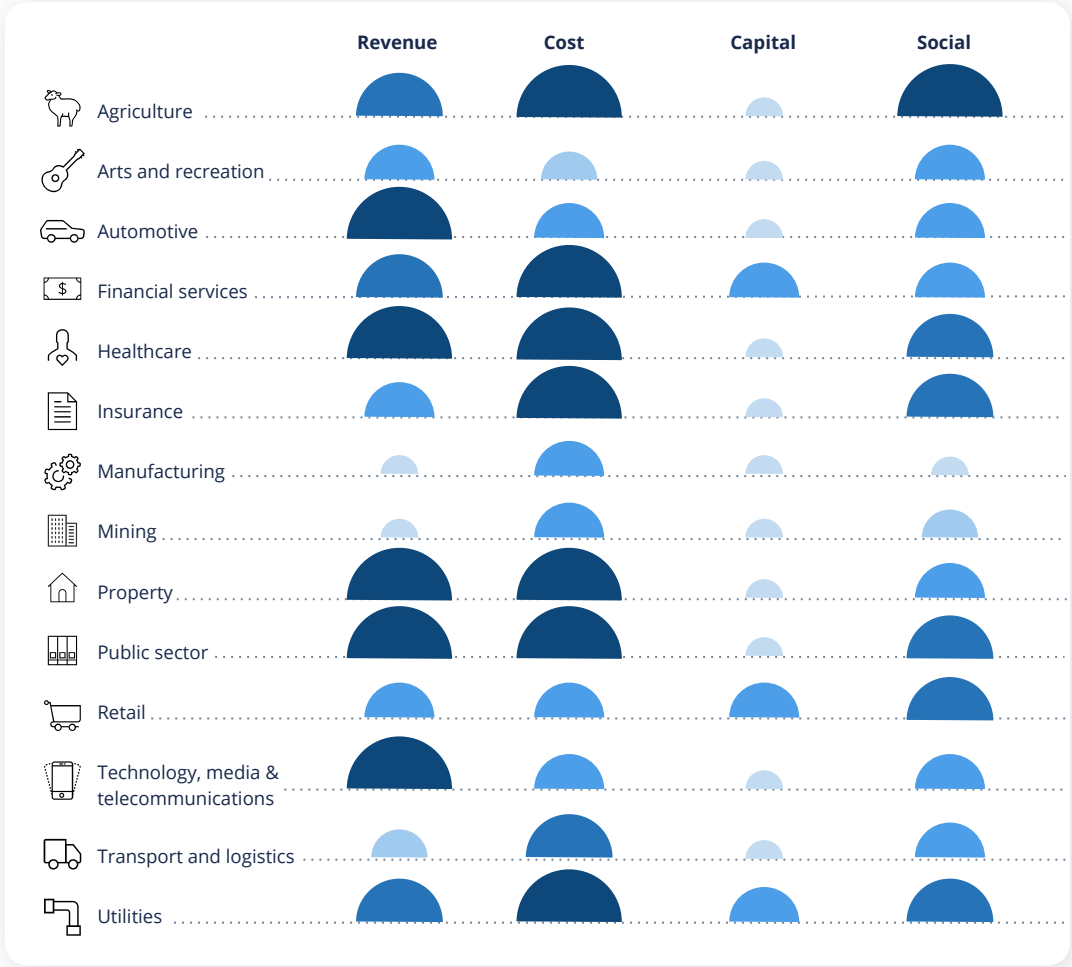
Permissioned

A single organization will have the authority over the network
Faster output, power efficient and offers privacy
Simplified data handling process, but not open to everyone

Quorum™ Tendermint

Impact of blockchain by industry

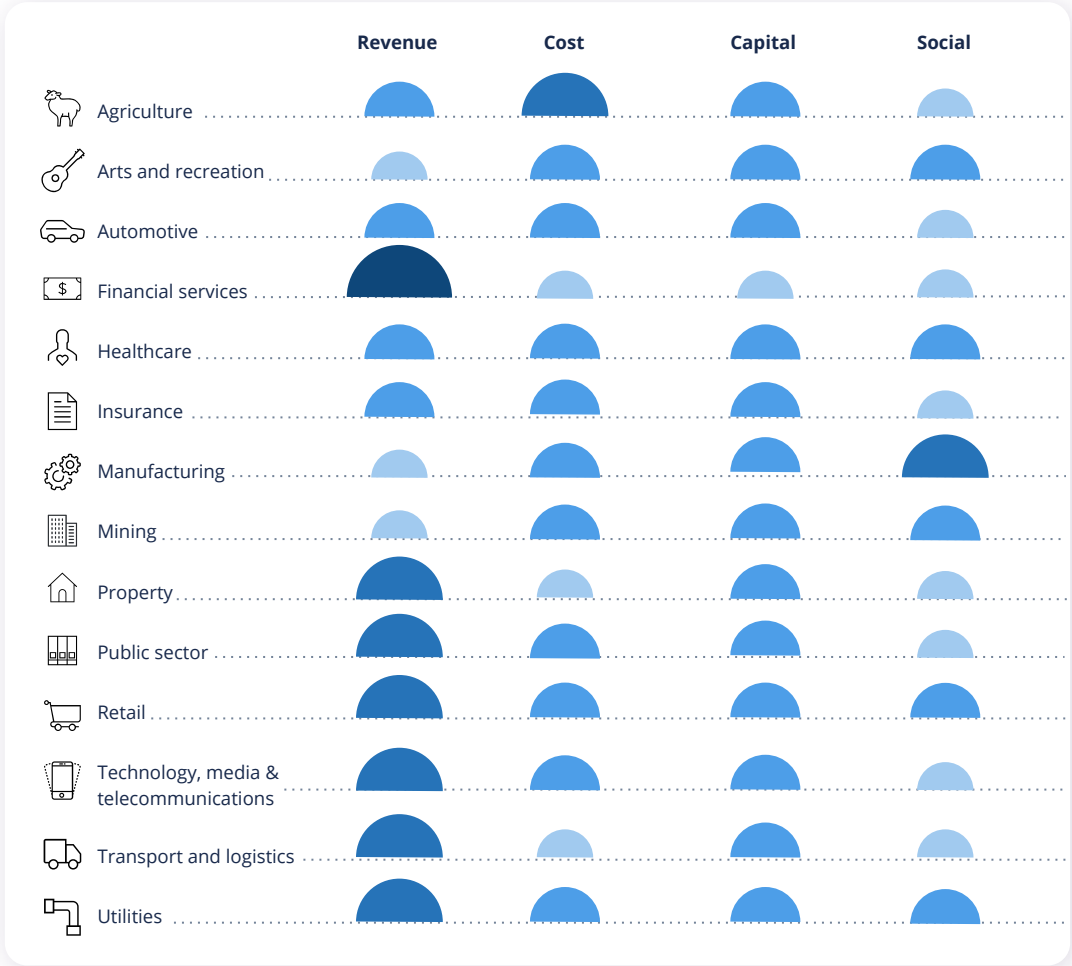
Blockchain might have the disruptive potential to be the basis of new operating models, but its initial impact is to drive operational efficiencies.



Feasibility of blockchain by industry

The strategic value of blockchain will only be realized if commercially viable solutions can be deployed at scale.

- Common standards are essential
- Technology must advance
- Assets must be able to be digitized
- The coopetition paradox must be resolved



What strategic approach should companies take?

Where to compete:

Focus on specific, promising use cases

How to compete:

Optimize blockchain strategy based on market position

Key takeaways

Companies should take the following structured approach in their blockchain strategies

Identify value by pragmatically and skeptically assessing impact and feasibility at a granular level and focusing on addressing true pain points with specific use cases within select industries.

Capture value by tailoring strategic approaches to blockchain to their market position, with consideration of measures such as ability to shape the ecosystem, establish standards, and address regulatory barriers.

Thank You!

Contact us

Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, we should talk.

Modex® Modex BLOCKCHAIN DATABASE

M3 HOLDINGS.

London | Bucharest | Silicon Valley | Washington DC
www.modex.tech

Follow us on Social Media

modex.tech.team
modex.technologies
modex_tech
modex_tech
company/modex-platform
modex

Modex