Microsoft zSoftTech SOLUTIONS

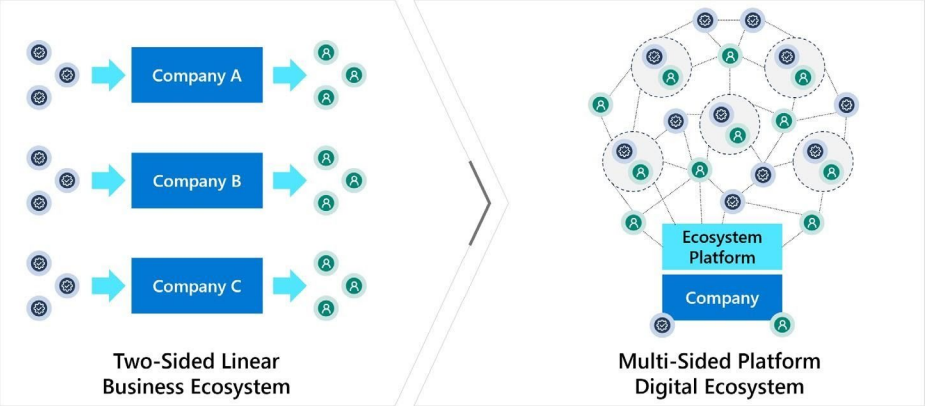
What are Blockchain-Enabled Digital Ecosystems

Why they are Vital to Your Digital Transformation

Contents

Introduction

From the first days of commerce, businesses have created, operated, and participated within ecosystems to exchange value. However, this value was often linear and analog. In today's digital world, new requirements to operate within those business ecosystems is needed. Digital ecosystems are different because they embrace the complexity of endless connections to be self-organizing, dynamic, and adaptive to exceed the sum of their connections.

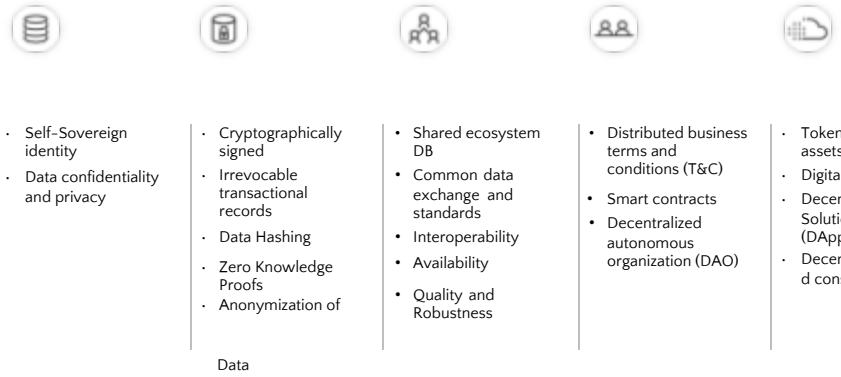


Examples of digital ecosystems include platforms like Uber or Airbnb that show the reinvention of existing business models into a multi-sided platform business. This model is so pervasive it's reflected by the top 10 companies world-wide based on market capitalization.

Shifting to this rapidly growing digital space is becoming a key requirement to continue to deliver value with existing and new business models. Implementing a digital ecosystem with digital technologies like blockchain, artificial intelligence, IoT, and 5G fundamentally enables the redefinition of customers, value, and creating new ways to exchange that value.

Blockchain is being used by leading organizations to aid in the adoption of digital ecosystems. Blockchain provides compelling capabilities that enable the interaction between people and things that may render existing models either as ineffective or obsolete.

Blockchain-Enabled Digital Ecosystems Defined
A blockchain-enabled digital ecosystem is a value network that harnesses the unique capabilities of blockchain such as: data self-sovereignty, tamper resistant data, peer to peer data collaboration, and distributed governance.



A blockchain-enabled digital ecosystem has all the same complexities and facets of any other digital ecosystem; however, it has several distinct advantages. These include:

- **Self-Sovereign Data**. Providing participants with data confidentiality and privacy over their data. This is also used for specific access control through blockchain-enabled decentralized or self-sovereign identify.
- **Tamper-Resistant Data**. As more digitization occurs it is vital secure data in shared ecosystems where there may be many different actors and devices interacting with data there is an increased need for cryptographically signed and irrevocable transactional records. Anonymization of data is another key factor here as well.
- **Peer to Peer Data Collaboration**. Blockchain was built as a shared ecosystem database instead of a relational database. While database can be architected to be shared across companies it requires custom development and other technologies to do so. Blockchain on the other hand fosters interoperability, standardization of data, quality, and overall availability.
- **Distributed Governance**. The downstream benefits of using a blockchain approach is that the business terms and conditions is distributed or shared among the participants through smart contracts. In some cases, some or all the governance can be implemented technically as a decentralized autonomous organization (DAO).
- **Enabling Digitalization of Business**. Lastly, blockchain can be an enabler to the shift to a digital business by enabling additional technical capabilities such as: tokenization of assets, digital twins, decentralized applications, and decentralized consensus mechanisms.

Digital Ecosystem Framework

Ecosystem Operations

Digitalization of Business

Self-Sovereign

Distributed Governance

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Tamper-Resistant Data

Peer to Peer

Recommendations

Building these blockchain enabled digital ecosystems is hard. Perhaps even harder than the technology, is bring together diverse stakeholders across many companies. Below are some practical recommendations to get started:

1. **Demystify blockchain for business and technical leaders**. Blockchain is in full hype mode and there are many misconceptions about what the technology can provide to businesses. Conduct an educational and envisioning workshop(s) with key leaders to show them the potential. Be prepared to articulate blockchain in business terms, where blockchain has driven clear business results.
2. **Toss the abstract buzz words.** Abandon words like "trust system" and "decentralization" that are both abstract and are completely removed from any sort of value statement that the organizations leaders care about. Instead talk about where blockchain can solve challenges or open new opportunities for your business.
3. **Look for new forms of value exchange**. Don't just focus on existing B2B relationships but balance that with identifying new business models. Remember, value isn't just monetary, it can include: compliance risk, reputation, information, and other nonmonetary exchanges. In some cases, these aspects can be equally or more valuable parts of a digital ecosystem.
4. **You don't have to have all the ideas**. Gain inspiration from other companies within or outside of your industry. This can be their transformation journey lessons or even adaption of specific use cases that are transferable to your industry.
5. **Create a compelling vision**. Blockchain ecosystems require a structure and roadmap that will support and anticipate current and future participant needs.
6. **Blockchain is only a component of the ecosystem**. The number and density of connections between people,

organizations and things is increasing almost exponentially and while blockchain provides a vital component of a digital ecosystem there are still other technologies that are vital.

7. **Blockchain-enabled digital ecosystems are largely inconstant**. Through independent research of over 70 digital ecosystems that used blockchain, they are fragmented and complex implementations of different types that make them confusing, misleading, and difficult to analyze.
8. **Be deliberate with a business model**. Blockchain-enabled digital ecosystems tend to have varied purpose, legal model, economics, and organization combined with most consortiums are in development. Three common models include:
    - **Founder-Led**. A single company defines, architects, builds, owns, and operates the solution. This is usually picked for either speed to market considerations, compliance needs, or competitive advantage considerations.
    - **Partnership-Driven**. An exclusive group of companies that shares decision making authority as a joint venture. Ecosystems in this model have mutual financial incentive for success.
    - **Industry-Driven**. Governed by elected representatives that is designed to be a non-bias ecosystem focused on a specific industry that capitalizes on the capability of many companies.
9. **Avoid low value and relevance quick hits**. Getting lulled into moving quickly while sacrificing relevance to your business is a big mistake. Building a digital ecosystem requires a clear understanding of how data evolves and what it integrates with across the end-to-end process.
10. **Get out of the lab**. Executives are quickly mentioning blockchain fatigue from all the POCs that show the legitimacy of the technology but not the relevance to their business. Have a plan to rapidly move from POC stage to controlled pilot in a represented production environment is essential.

Conclusion

Blockchain can be a powerful addition to your company's digital arsenal. However, like with any technology, a deliberate business strategy is required to understand how and when these technical capabilities can be applied to the delivery of your business.