Tech Mahindra

How to avoid 'I don't need **Blockchain'** holy trap

BLOG

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During myriad conversations with global CXOs, I realized that many of them are not fully confident about internalizing Blockchain. Through chain of articles, I am making an attempt to identify common misbeliefs and traps so that decision makers can disregard them completely, while considering Blockchain for their respective businesses.

Trap No. 1 :

Blockchain is all about crypto-currencies particularly Bitcoin or Ether. We cannot internalize crypto-currencies in our businesses!

This common belief is incorrect. Blockchain has several versions – Public – permissionless:- the most known examples are Bitcoin & Ethereum networks where everyone (nodes) have equal rights to transaction creation & validation, data access & producing new blocks.

Public – Permissioned: Works exactly like previous one, except that parties joining Blockchain network will need prior permission to join.

Private – Permissioned: Most relevant for enterprise applications with respect to privacy. Everyone(node) is pre-selected & validated. These are usually implemented in a consortium model & used for business collaborative requirements. There are no cryptocurrencies. Hence, mining is irrelevant here.

Trap No. 2 :

Blockchain (BC) is emerging tech, it's cool! Let us implement for tech sake!

Some companies approach Blockchain purely from fascination towards technology. This is a recipe for failure. Blockchain implementations should be led by business outcomes. Licensed software industry kind of conditioned people to focus purely on tech. As software / platform companies need to maintain healthy revenue streams, they have devised the business model of progressing from previous version to next one; very often in a forcible way through 'end of support'. As a result everyone gets fixated on more technical features.

Blockchain implementations both Public & Private are and will be successful when they are implemented to – 1. Provide completely new experience to end customers 2. Meet unfulfilled or under serviced needs 3. Accomplish complete or partial dis-intermediation 4. Reduce trust gap by digitizing trust and preserve provenance of an activity or material. These four attributes can address zillion problems that exist today in any form of interaction – B2B, B2C, P2P, Machine 2 Peer, Machine 2 Machine.

Also there is a tendency to dismiss Private Blockchain as a flat file or a database that is nothing but old tech. Public Blockchain also uses components like C++ (for Bitcoin, invented in 1985), Asymmetric encryption (invented in 1976), Proof of Work (invented in 1993) & SHA 256 (invented in 2001). Pertinent point is when these different technologies were assembled together it ended up solving the double counting problem in money applications through invention of Bitcoin in 2008. Computer scientists struggled to solve this problem from early 1980s.

Likewise, Private Blockchain should be used to solve tough business problems, only when other technologies fail or are sub-optimal. Else, Blockchain initiatives will fail and people get into the,' I don't need Blockchain, holy trap'.

Trap No. 3 :

To leverage Blockchain, industry wide consortium is required and it is a prerequisite. Someone else needs to start the chain and we will join it.

There is wide spread misconception that for Blockchain to be effective, everyone in the industry need to be a part of it. Enterprises think that since it's a consortium, someone else needs to take a lead, start the chain, establish code of practice for effective functioning; once these are accomplished, they can join the consortium. This is so incorrect.

Based on our experience of implementing Blockchain for several industries globally, enterprises can benefit significantly through private Blockchain by starting their own chain/s. The approach here is '**DIY : Do it Yourself**' rather than '**DIFM : Do it for Me**'.

This could be considered as a private chain or micro-chain. These are very effective to address trust gaps, which are only increasing rapidly, especially when there is an interplay between companies, suppliers, partners and customers to accomplish common objectives and goals. The value of such an own chain increases even further, when such interplay involves a combination of legacy and non legacy systems leading to rampant information silos. These own chains can deliver tremendous collaborative benefits and achieve positive network effects.

We have deployed these chains in various enterprises to solve several business problems like:

- Reducing purchase order failures even after they are run on EDI
- Improving expected time of arrival for customer orders that involves collaboration between various enterprise teams, order fulfillment partners, warehousing partners and others
- Tracking movement of high precision tools and sharing of such tools between OEM and its innumerable suppliers
- Managing forward & reverse logistics of non-serialized inventory involving several stakeholders
- Safeguarding personally identifiable information and its exchange in ecosystem involving several players and preventing incorrect & non-rightful monetizing of such information.

In essence, opportunity for enterprises to leverage own chains and drive transformation whether process or digital is now!

Trap No. 4 :

Any relational data base management system (RDBMS) or ERP can do the work of Blockchain. Then why do I need a Blockchain?

Many senior executives from Enterprises have mentioned to me that any RDBMS or ERP can accomplish what Blockchain does. Hence they don't need it especially when it comes to collaborating with their partners, suppliers, customers and other stakeholders. May be they can meet their requirements through Kafka!

Blockchain offers several benefits over RDBMS / ERP

- Blockchain is open source technology unlike RDBMS / ERP. Thereby there are no license costs involved with Blockchain unless Enterprises intend to use platform services from tech majors like IBM, Amazon, Oracle and others.
- DevOps on open source technology is lot more vibrant and easier compared to licensed ones
- RDBMS / ERP doesn't offer smart contracts
- Technically its easy to integrate Blockchain through Rest APIs with other databases compared to RDBMS where integration requires writing into core database layers
- Any state changes to the Blockchain network are automatically alerted to various stakeholders unlike RDBMS where a DBA can technically manipulate records and go undetected.

The fact that so many ERP majors & Tech majors working on integrating Blockchain into their core offerings whether ERP or Cloud provides a compelling argument that they Blockchain adds value to address needs that remain unaddressed or underserviced till date. The point here is not a blind business case to support Blockchain but a need to use the right tech tool. Else it may be like trying to accommodate a square peg into a round hole!!

Trap No. 5 :

Our current IT systems are sufficient, they will be able to meet our unaddressed requirements with modifications. Hence, we may not need Blockchain.

Lot of companies place a higher degree of confidence in their existing IT systems and are hopeful that they will be able to meet their unaddressed requirements. Many companies fail to acknowledge the fact that they are using technologies of past to safeguard their information and digital assets. For eg: PDF documents are no more immutable. Digital assets especially proprietary content cannot be secured and their IPR be protected by only watermark technology

Today even a high school student can modify a PDF document or rip off the watermark. Many mission critical activities like flight manifestoes in aviation industry are maintained and exchanged using normal workflows / mail systems, royalty calculations in Media & Entertainment industry are managed using excel documents. These technologies are not fail / fool proof any more; though they have been in the past. Moreover, as businesses continue to leverage collaborative benefits and network effects, it helps to architect decision making and completion of activities by taking consent of all stake holders simultaneously rather than informing some after completion of event. Consider supply chain finance, where banks before discounting an invoice should at the minimum need to validate if that invoice is original and not funded by another bank. This requires concerned corporates whose invoices are being discounted and other banks to be part of the same network and contribute to such financing decisions. This needs to be accomplished without sharing too much information and with complete trust. Blockchain with its immutability, smart contracts, consensus based decision making has the ability to accomplish this. With advent of Zero Knowledge Proofs a lot more trust can be established by sharing too little information.

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