

Blockchain technology for business



MIROSLAV MINOVIĆ, PhD
Associate Professor
Faculty of Organizational Sciences
University of Belgrade

Beyond bitcoin and cryptocurrencies, blockchain technology can be utilized for the implementation of business models based on integration of different businesses.

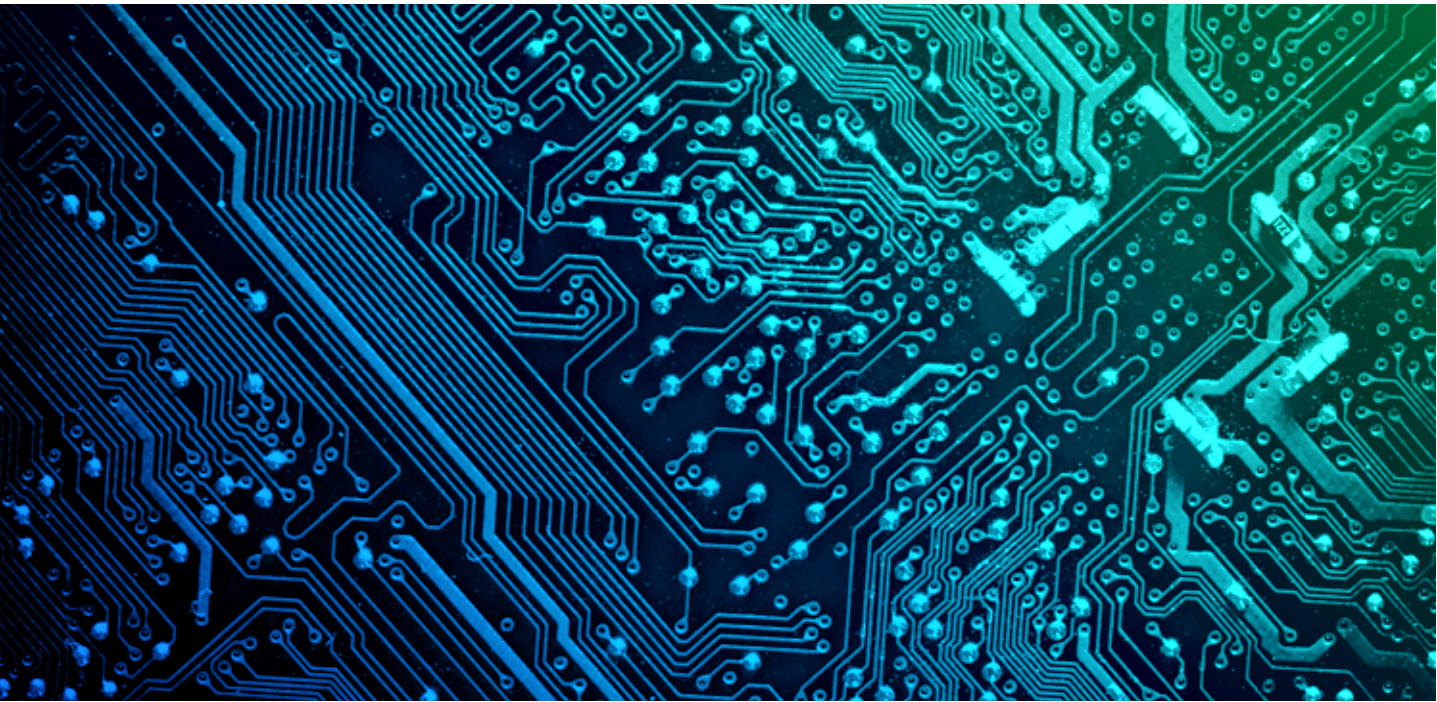
Blockchain offers a good basis for collaborative business systems mainly because it uses distributed ledger and network approach for establishing business models. A distributed ledger guarantees the integrity of data stored either in the ledger or off the ledger through

data signatures. A network enables all participants to have insight into the processes executed in the network of their domain. Additionally, the tempering of business logic is reduced to a minimum since all executions are done through signed smart contracts that ensure exactly the same execution each time. By compromising a single node or several nodes in the network, business logic would stay intact because policies would ensure that compromised input gets discarded from the network and does not end up as a valid transaction.



Blockchain is an ideal environment for securing and exchanging sensitive data because there is only one single version of the truth shared across the entire network of nodes. Some of other blockchain features are its overall security, efficiency, decentralized nature and its existing consensus surrounding the pieces of digital information and algorithm executions.

work participation is handed over. Public networks are usually low in performance, smart contracts are generally limited and overall architecture is complicated. A business model can hardly be established without formal procedures executed by formal institutions and businesses. Additionally, building a viable business model on public blockchain network is nonviable. It would be very hard to operate a business and be flexible to market needs,



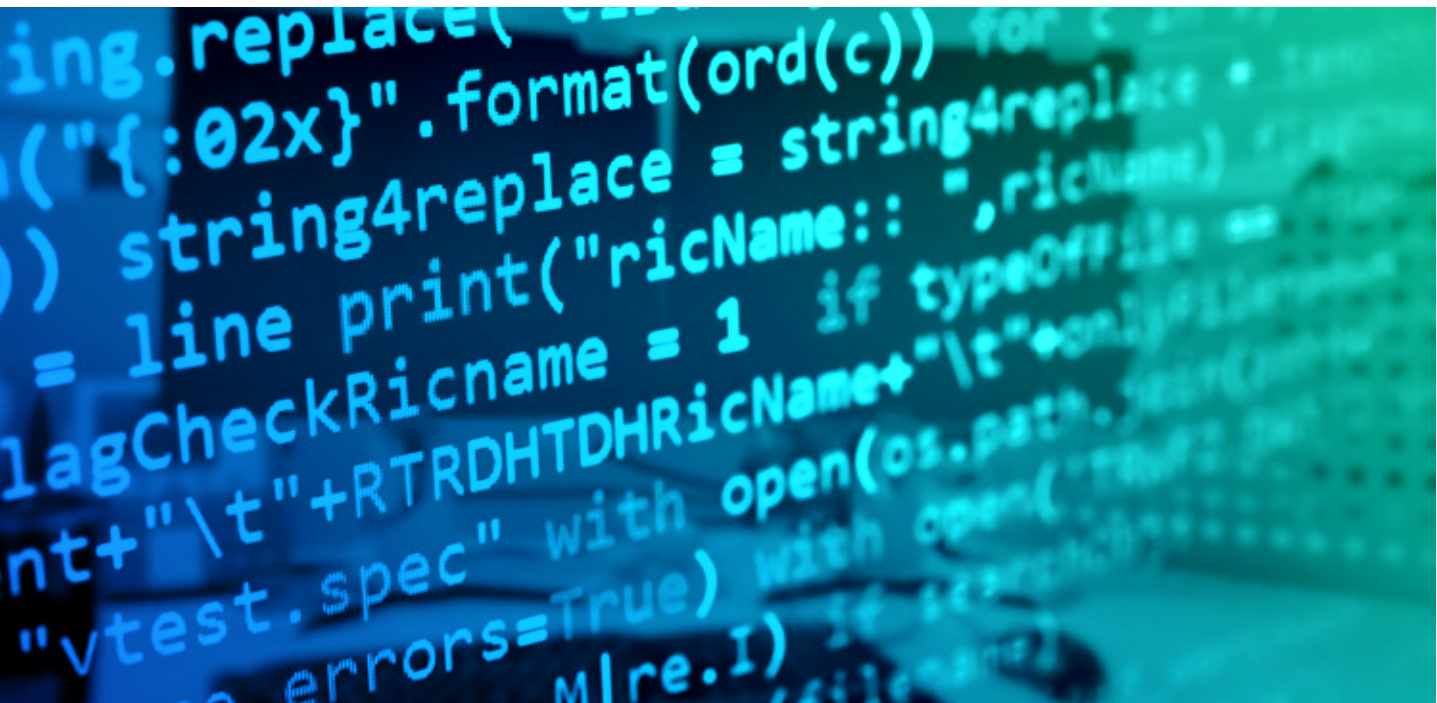
The reason why private, permissioned blockchain networks are more suitable for business use is that lacking the control of network participation would exclude serious businesses from being involved in the network. Public blockchain technology has many downsides to establishing a good quality business model. By using a public network, control over net-

to add new features and adapt solutions to actual market needs.

Smart contracts provide the business logic of blockchain-based business system. The fact that these smart contracts are predeveloped, signed and deployed, and that consensus is needed for them to be accepted into the network, increases the trust and trans- ▶

parency of network operations. If a participant executes a smart contract he can be sure that the same contract will be executed by his partners. This is very important since there is no need to constantly synchronize with your partners, to exchange data through other channels and eventually spend a lot of time ensuring that there is no misconduct from other parties.

technology advance, we still have no digital credentials that can be used online to prove our identity in the same way we do in the offline world. Blinking (blinking.id) provides us with something we have never really had before – with trustworthy digital identities. Blinking was an answer to the issues that founders faced in their previous work regarding biometric and authentication systems.



A case of good use is a project implemented among a few Serbian banks with the aim of improving KYC procedures. The project was aimed at creating a platform for secure data exchange (with user consent) in order to allow fully digital onboarding experience. The major issue for these kinds of systems is digital identity implementation, since this enables further digital transformation. Despite the

Centralized architecture in this domain was of traditional nature; this led to many issues regarding data privacy, proper data management, data access and overall system safety. Introduction of blockchain technology offered some solutions to the existing problems, i.e. trust among the participants, shared resources, easy cooperation and proper data management and protection.



The main idea was to build a system that will enable its users to authorize themselves and access the third party systems through a network, with their identity being simultaneously verified by several participating entities. As the project grew and gained more insight into market needs, we reached a solution that offers full digital identity management and services, such as establishing KYC model and the exchange of KYC acquired data among the participants.

The network was fully distributed. Each bank and the Blinking company had their own hardware infrastructure on site that was connected into a network. An isolated network was created and Fabric peers were deployed and orchestrated using Kubernetes multiple cluster technology. Each organization had independence in managing its cluster while orchestration and policy were employed from one point. Technical compliance was a major

issue and the development approach was data-driven. This led to the creation of the system that has fulfilled GDPR compliance.

To conclude, blockchain technologies have a huge potential to change the way businesses establish mutual trust, with consumers in the center of any business process. This will enable the next phase of digital transformation: the phase in which businesses will rather build an ecosystem of services offered to clients than try to protect their clients from competition. Such business model will be beneficial for both sides: on the one hand, the clients will have much a better market offer and will be able to choose the most suitable services; on the other hand, business will increase the number of clients—at least the ones that recognize the opportunity and improve their services according to the new business model. ■