



POINT OF VIEW | HOSPITALITY

Blockchain: A Welcome Change for the Hospitality Industry

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Blockchain 101: What is it?



Blockchain enables the distribution of digital records within a trusted peer network via a shared, distributed database. Peers can update records instantly, but no alterations are possible, ensuring that a verifiable transaction history is created and preserved.

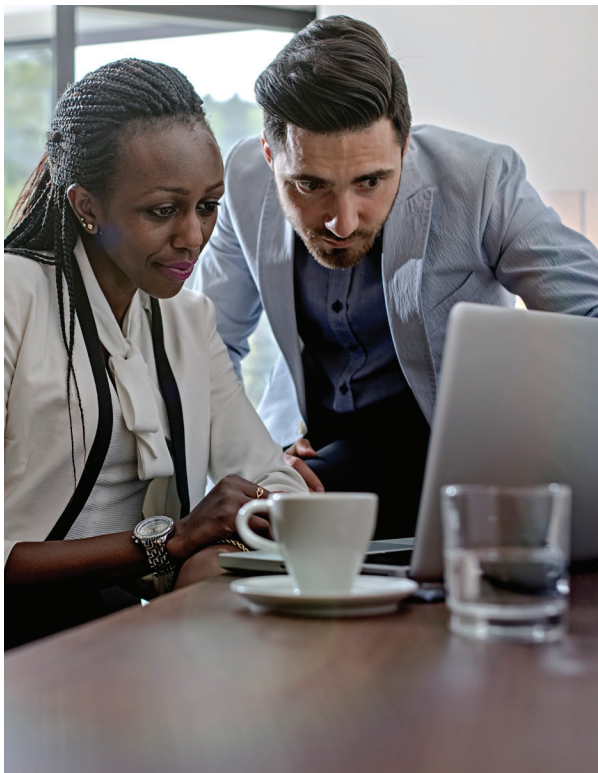
A blockchain is a type of distributed ledger technology (DLT) that stores a continuously growing list of records called blocks. Many DLTs are not technically blockchains but offer the same advantages. For the purpose of this paper, the term blockchain will be used generically to include many DLTs. A blockchain keeps all parties in the loop by replicating the database among participants to enable instant, universal updates by any party while also preventing the alteration of earlier entries. In environments where the volume of data is increasing exponentially, the inherent features of blockchain — peer-to-peer transactions, integrity via consensus, a distributed ledger and cryptographic transactions — can help your organization streamline processes and create new business models with greater value.

Blockchain is revolutionizing the way we share records and transact business across the globe. Because users can send and receive records securely and transparently, this decentralized, digital ledger technology enables quick, inexpensive transaction verification and auditing to dramatically improve the efficiency of business processes across complex enterprises.

The benefits of blockchain

Regardless of industry sector, an enterprise can benefit from blockchain technology if its business processes:

- Include multiple participants
- Manage contractual relationships between participants
- Involve transactions that are dependent upon each participant
- Require distributed and secured access
- Need all participants to update and share data
- Must verify all transactions
- Demand disintermediation of trust
- Require greater accountability and transparency



Blockchain is transforming multiple industries

Leaders in many industries have been quick to see the potential of blockchain technology. For example, in the financial services industry, insurance companies have found that they can reduce costs and increase transparency with blockchain's smart contracts, and banks use it for international payment clearing. Governments are using blockchain for voting, voter registration and tax records. Big box retailers are leveraging it for supply chain management, and the transportation and shipping industry uses blockchain to enhance efficiencies in the management of freight, fleets and logistics. Blockchain enables electronic medical records management in the healthcare industry, and it allows student records to be shared between academic institutions and employers. Even real estate records can be securely stored and shared.

New applications for blockchain technology across industries are emerging every day, and its potential for transforming the hospitality industry is intriguing.

Nine blockchain hospitality industry use cases

1. **Store and share rich content updates:** Since hotel properties seem to be in a constant state of flux — rebuilding, redecorating, rebranding and/or expanding — it can be a challenge for hotels to keep rich content, such as photos, copy and videos up to date. Blockchain would enable all hotels to register and store their rich content in one place. It could also direct distributors, online travel agencies (OTAs) and other members to updated content without disparate connections.
2. **Manage payments for hotel, transportation and tour bookings:** Most payments are made via credit card, both domestically and abroad. Using blockchain would allow hotels to facilitate fast, secure, international payment processing, with real-time verifications. Using blockchain in this way would also help limit the need for traditional clearing house overhead.
3. **Simplify availability, rate and inventory (ARI) updates:** Travel distribution is inherently complex. Channel managers, global distribution systems and others add more complexity, as do OTAs and traditional travel agencies and tour companies. This complexity has historically been managed with the aid of third parties, but blockchain's public

database would allow suppliers to update some rate and availability information without outside intervention. Data would be up to date, accuracy would be improved, and hotels would enjoy reduced reliance on middlemen.

4. **Ensure compliance with tax regulations:** Taxes can be assessed municipally, regionally, at the county or national level, and even between/ among nations. In addition to helping identify the tax information for participants in the distribution network, blockchain would enable hospitality and travel enterprises to accurately track taxes according to each taxing entity's requirements as posted in the public network. Smart contracts could enable automatic payment, as well as an audit trail to ensure compliance.
5. **Manage loyalty program transactions:** Blockchain could efficiently manage loyalty program transactions, as well as connect hospitality industry business partners, so processing and reconciling transactions could happen in real time. That would increase the number of ways points can be used by managing all loyalty account details and provide a complete audit trail as it happens. Points transfer and redemption would be simplified, and smart contracts could also combine offers across airlines, hotels, car rental agencies, restaurants and all other partners.
6. **Leverage open APIs to accelerate speed to market of new services:** Blockchain incorporates open-source application programming interfaces. As more hotels embrace blockchain, those open application programming interfaces (APIs) would likely come into wide use, and would serve to facilitate interoperability. This could help reduce the need for multiple, individual contracts with many companies that own separate databases containing

information regarding availability, rates and more — enabling innovative new services to reach the market faster than ever before.

7. **Reduce reliance on heavy-weight intermediaries:** Blockchain means hotels would no longer need to rely on powerful intermediaries for assistance in completing transactions. Consumers could book through more light-weight apps. Open source APIs would enable hoteliers and others to offer competitive rates to consumers directly.
8. **Protect data privacy and prevent identity theft:** Blockchain technology enables personal information like addresses and Social Security numbers, as well as documents, such as driver's licenses, passports and birth certificates, to be stored in a network that protects data privacy and prevents identity theft. For companies in the travel industry, such as hotel and airlines, this allows them to acknowledge and know their customer, while still protecting their customers' personally identifiable information.
9. **Interoperate with governments to help secure borders:** Storing consumers' data also helps business operators keep governments apprised of consumers' travel activities. Blockchain enables the electronic storage of passports and visas, so it could replace paper documents at points of entry and exit. Other types of information, such as biometrics and travel reservations, could also be added, relieving hotels of laborious reporting procedures to police or immigration departments as authorities could be added to the blockchain network. Blockchain is also a core enabling technology in the World Economic Forum's Known Traveller Digital Identity initiative, which aims to give individuals control over the use of their personal data.





There's no time like the present

Generally speaking, early adopters of a new technology have the advantage of mastering it sooner and gaining intelligence that helps them successfully evaluate next steps as the technology matures. They also obtain valuable insights into risks and threats that may need to be addressed. "Eliminating the middleman" ultimately simplifies — and shrinks — the supply chain, which reduces costs and accelerates the speed of each transaction. So if your competitors are already up-to-speed conducting business in the new environment and you are not, they will offer better quality at a lower cost.

New technology also always forces change, and the pace of change enabled by blockchain — internally, across departments, and externally, as emerging technologies encounter it in the marketplace — will only accelerate. Developing expertise with blockchain early will position you to gain greater understanding as the technology evolves, and you'll have a better handle on where to concentrate your effort and investment in the future.

Simple steps for getting started

First, it's necessary to evaluate the challenges your organization faces and investigate the type of blockchain solutions that could resolve them. This will put you in a better position to choose the right tools.

Once you've identified your enterprise's specific challenges, your next task is to determine whether you can address them with existing technology or if a blockchain solution would add significant value.

If you can clearly see that your enterprise would benefit from blockchain technology, your next step is to choose the right blockchain partner. Your partner will help you choose the best platform and guide you in designing, developing, testing and deploying it.

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