

Blockchain for travel made simple

By  Natalia Rosa

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Can you imagine whipping out your mobile phone instead of your passport when you travel for business or leisure?



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If blockchain has its way, that could become a reality. Simplifying passenger identification is one of the four uses-cases identified by global travel technology provider, Amadeus, where blockchain technology could be used to streamline current (and sometimes onerous) travel processes and improve the traveller experience.

Currently, the traveller identification process is repeated several times across the traveller journey – from booking to check-in, to gate control, to baggage drop, etc. According to Sara Pavan, Amadeus' head of the Innovation Partnership Programme, it relies on different identification solutions that are inefficient.

By combining blockchain with other technology solutions such as mobile and biometrics, we can enable the traveller to store their identification information, including their passport photograph, through a digital token that is accessible through their own mobile device. When the traveller arrives at a checkpoint, all they need to do is show the QR code on their mobile, which is digitally linked to the traveller's information stored on the blockchain. Agents and authorities can then use the same technology to scan the QR code and collect the information that they need to verify the passenger's identity.

What about protecting my information?

If you're concerned about privacy, blockchain information is passed in a safe, digitally encrypted way. While you can never remove your personal information, you can update it. Your information can also only be accessed by 'actors' who have been given access through a private or public key, similar to a password.

“It would also be very difficult for someone to corrupt that information because the nature of blockchain is such that you would need to convince the different nodes of the network that the information is valid before they would endorse or validate that information. It’s not as simple as manipulating one server.”

Once all the verification checks are validated, the traveller gets the green light and can move to the next ID checkpoint. Sounds seamless, doesn’t it?

Imagine then, the application for baggage tracking, insurance claim automation, hotel check-in automation, or developing more user-friendly loyalty schemes and cross-border payments – all of which would benefit from the streamlined processes that blockchain could introduce, according to Amadeus.

“ ...if its power lies in interconnectivity and automation, it could be the step-change the travel industry needs to emerge as a powerful player in the fourth industrial revolution. ”

What is blockchain?

For those of us who have been grappling with the blockchain concept and how it applies to travel, Pavan offered a very simple explanation during a recent webinar run by the African Business Travel Association (ABTA) and FCM Travel Solutions. You can listen to the [webcast here](#) or access the [Amadeus Whitepaper here](#).

Pavan likens blockchain to writing a document. Yes, it’s actually that simple.

Imagine you’re writing a proposal that you need your boss to review and edit. You’ve written it in Word and sent it via email for her to edit. She has to wait for you to send it to her before she can review and edit it, and you have to wait for her to send it to you before you can change it or see what she wants changed. You cannot both access it at the same time.

That’s how databases work today. Two or more people cannot work on the same record at the same time. The record is ‘locked’ while the other person is working on it. The records are also not simultaneously synchronised.

Of course, in the world of documents that’s changed with Google Docs, because now we both have access to the same document at the same time – one version is always visible to both of us. And blockchain provides this same functionality for a record or a ledger. Two or more players now have access to the same record or ledger at the same time.

Blockchain is a decentralised database that is shared, replicated and synchronised across a network of different users spread across multiple sites, institutions and geographies.

How does it work?

- Through blockchain, information is controlled and validated by all participants of a network – not one single server.
- Blockchain uses cryptography to secure a transaction. The information can only be unlocked if you have a private or public key.
- All parties have to confirm whether the transaction is valid and only once it is approved by all parties in the network, is it effected.

- Most of a blockchain's applications run on smart contracts – self-executed contracts where actions are triggered based on a predesigned set of rules.

Travel a good candidate for blockchain technology

According to Pavan, travel is a good candidate for blockchain technology. “In travel, transactions and data are continuously shared among multiple actors and touchpoints where each actor would require, collect, store and share traveller and operational information, which could be simplified by blockchain technology.”

Although the technology is very promising, the travel industry is still at a very early stage in its adoption of blockchain. Pavan estimates that it will take between five and seven years to reach adoption because of the many barriers that are blocking its adoption.

FCM Travel Solutions Head of MEA Sales, Lloyd Barkhuizen, says the industry, however, is seeing some initial experimentation. “Singapore Airlines recently launched the world's first blockchain-powered loyalty programme which is a digital wallet app that allows members to use ‘digital KrisFlyer miles’ for point-of-sale transactions at participating retail merchants, but there are others who are dabbling like Airbnb and Lufthansa.”

FCM has also recently released a whitepaper on blockchain and its impact on the travel industry, which can also be [downloaded here](#).

A truly exciting technology, blockchain appears to be the word *du jour* in travel circles, with very little concrete understanding of what it actually is, where its potential lies and when we'll be ready to roll it out practically. But if its power lies in interconnectivity and automation, it could be the step-change the travel industry needs to emerge as a powerful player in the fourth industrial revolution.

ABOUT NATALIA ROSA

Natalia Rosa is the MD of Big Ambitions, a specialist travel and tourism communications and marketing organisation which helps tourism and travel organisations connect with their members and customers.

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