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# Q&A: Rolling the dice on rice



**The first blockchain-based platform for the US$450bn rice industry launches this year, promising to offer safety and security to those who are involved in the trading of the grain. GTR speaks to the CEO of Rice Exchange, *Stephen Edkins*, to learn more about why the commodity needs its own digital platform.**

Rice is a staple food for half of the world's population and more than 750 million tonnes of the grain is grown and shipped all around the globe every year. But the global rice market is plagued by inefficiencies; it's paper-intensive, there is a lack of price transparency on trades and wastage is through the roof. In Japan, China and South Korea, rice makes up over half of wasted cereals, and in South and Southeast Asia 72% of lost or discarded cereals are rice.

Rice Exchange plans to make it easier for countries to manage rice procurement and quickly increase purchases in times of poor harvest or natural disasters. When more than 250,000

tonnes of paddy rice was destroyed after a typhoon struck the Philippines in September 2018, and the shortfall had to be imported through the current system, whereby more rice was lost, Edkins knew that things had to change.

**GTR: Tell us about Rice Exchange. What were the main drivers for a blockchain startup focused on rice?**

**Edkins:** I've worked in financial markets most of my life, with a focus on emerging regions such as South America, Asia and more recently Africa, and it was a result of an investment that I have in the African rice industry that I got to know more about the way that rice itself is traded. I then met my now co-founder, Frank Gouverne who has worked as both a rice broker and rice trader for the last 35 years.

We realised that there is a lot of friction associated with the trading of rice, far greater than many other commodities. It is fragmented, we estimate the five largest players have less than 15% share of the market, pricing varies widely, wastage is high, and it is paper-heavy, which means the potential efficiency gains from using a digital platform for rice could be vast.We then began to design Rice Exchange to digitally trade the grain. It is a platform whereby we dramatically reduce the likelihood of having problems when moving rice around.

For example, Rice Exchange is developing a traceability function that uses sensor technology to monitor real-time humidity levels of bulk quantities of rice in storage and in transit. This will reduce wastage from rice stored or transported in poor conditions. Our traceability function will cut losses by more than half, reducing insurance premiums.

We also aim to reduce the costs associated for the whole ecosystem, including buyers, sellers, insurers, shipping and logistics companies, inspection companies, and last but not least, banks. The platform we have built links those parties together and that's how we achieve both supply chain transparency and efficiency improvements. These improvements have been highlighted through two key tests we have done, a minimal viable product (MVP) and a pilot. The pilot started in June 2019 and we are using the pilot platform for demonstration and training purposes. We had a Rice Exchange representative acting as a facilitator on every trade, of which there were hundreds and from regions including South Asia, South America, the Middle East, Africa, Europe and the US.

We now have the data and feedback we need for the final sprint towards the full launch this year.

**GTR: How does the technology work?**

**Edkins:** The platform is built with global IT services company Fujitsu using the Hyperledger Fabric blockchain. Every action on our platform creates a hash on the blockchain, recording what happens, when it happens, the identity of the parties that provided the information, etc. We are also trialing the **Swift gpi protocol for payments.** We have a number of counterparties signed up to the platform for when it goes live, with 400 buyers and sellers from 60 countries having expressed interest. We also have two shipping lines, four

inspection companies, one insurance broker who is currently dealing with half a dozen underwriters, and we are speaking to many banks.

We are also boosting access to finance for platform users as we are providing a standardised and digitised set of incorruptible documents, making it easier for financiers to process and analyse trade data. Users will develop a trading history when they trade on Rice Exchange, which (on a permission basis) they can then share with those who provide finance.

**GTR: There are a few blockchain-powered platforms for commodities. Is it important to have tailored platforms for specific commodities?**

**Edkins:** It's important that the front-end of the platform be designed specifically for the commodity that is being traded. In terms of building up a marketplace and an ecosystem, it helps to focus from a branding and understanding perspective. In our experiences, we've managed to gain a very high profile in the rice industry by being solely focused on the commodity.

Platforms should be designed by someone who knows the market well, as there are certain characteristics or criteria required when completing commodity trades that are very specific to that commodity. For example, the finish of the rice, is it is polished or double polished? Is it 5% or 25% broken? It's a much more heterogeneous commodity than most others.

**GTR: What are your ambitions for Rice Exchange?**

**Edkins:** We want to provide a safe trading environment for the majority of the world's rice traders and those involved in rice trades. If you include all the banks who will be involved, we envisage there being hundreds or even thousands using the platform.