



Fertilizer Exchange

Bringing fertilizer trading into the 21st century



Fertilizer is an essential part of modern farming, however, trading it until recently lacked transparency. Fertilizer Exchange took the Fujitsu Hyperledger Distributed Ledger Technology (DLT) solution it had developed previously for rice trading and repurposed it for fertilizer. The result is an affordable, scalable, and secure platform where buyers, sellers and service providers can conduct trades efficiently with the assurance of seamless integration and verifiable data.

Challenge

Fertilizer Exchange wanted to develop a blockchain-enabled trading platform for the fertilizer industry. It needed a secure, reliable, and trusted DLT partner and turned to Fujitsu.

Solution

- Fujitsu Enterprise Blockchain solutions and Distributed Ledger Technology (DLT)
- Hyperledger Fabric
- Advisory services, implementation, and operational services.

Outcomes

- The platform can scale with minimal investment
- Repurposing existing solution components and Fujitsu expertise reduces costs
- Trades and contracts are secure, immutable, and transparent
- Fujitsu's reliability ensures maximum uptime.

"Fujitsu has proven itself to be experienced, robust, supportive and open-minded, making it the perfect global partner."

Phil Sunderland, General Manager, Fertilizer Exchange

Industry:
Agriculture

People:
15

Location:
Singapore

Website:
fertx.io

About the customer

Fertilizer Exchange is the first neutral and independent digital global platform, specifically designed to trade one of the world's largest agricultural commodities, fertilizer. Trading fertilizer on the exchange removes unnecessary transaction costs, allowing for better service pricing and benefits for all parties - producers, sellers, buyers and services providers. The trading platform uses blockchain technology, reducing time, costs, and risk.



\$200bn
annual global fertilizer
market value (2019)

Transforming fertilizer trading

Food security is one of the most pressing issues and growing crops efficiently requires fertilizer which can increase crop yield and enable farmers to grow more food in limited land.

However, the global market for fertilizer has remained trapped in an 18th century business model, making it inefficient, risky, and unresponsive. Paper bills and analog communications have been the usual way of business but the COVID-19 pandemic drove a major shift online – Fertilizer Exchange saw this as an opportunity to revamp how fertilizer is traded.

"We had already launched Rice Exchange – a digital, blockchain-enabled trading platform for rice and were seeing US\$15m per month in transactions; fertilizer is a much bigger market that suffered from the same issues," explains Stephen Edkins, CEO, of DCX (holding), Rice Exchange and Fertilizer Exchange. "That convinced us that we could redesign the platform specifically for the fertilizer trade and have a similar impact."

Ensuring security through blockchain technology

Fertilizer Exchange started from the core Rice Exchange platform, which is built on Hyperledger Fabric by the Rice Exchange and Fujitsu team in co-creation. Fertilizer Exchange enables buyers, sellers, and service providers to conduct trades efficiently, and arrange insurance, shipping, inspection, and settlement with the assurance of seamless integration and verifiable data.

The platform, hosted on Microsoft Azure enhanced with services from Fujitsu, enables full visibility of the same secure information, reducing fraud and making transactions faster. By simply logging on, registering, and onboarding, traders can search for agents buying or selling fertilizer, as well as shipping and insurance companies. The whole ecosystem globally is represented in one place via the applications running on top of the blockchain.

"Traditionally, traders would only deal with the same five local agents; now, with our Fertilizer Exchange platform, sellers are opening up their purchasing liquidity to the whole world," adds Phil Sunderland, General Manager, Fertilizer Exchange. "We have only just begun onboarding companies and have already signed up 150 across the fertilizer supply chain."

Scalable, affordable, reliable

The Fujitsu Enterprise Blockchain solutions are providing scalable, secure, reliable, and affordable platforms to enable Fertilizer Exchange to grow. It is a single point of contact for any business to trade – and ship – fertilizer with confidence.

"The principal advantage of the platform created with Hyperledger Fabric is that it doesn't cost a lot to scale up – it is a very efficient solution with maximum uptime," continues Sunderland. "We can grow to meet a huge market – the current volume traded is 200m tons per year, even just 1% of that would be worth US\$800m per year."

Having revolutionized rice and fertilizer trading, the team are keen to use Fujitsu's DLT solution to tackle other sectors. "Wood pulp, sugar, wheat – there are many commodities trapped in outdated trading models; with Fujitsu's help, we can transform them all," concludes Sunderland. "Fujitsu has proven itself to be experienced, robust, supportive, and open-minded making it the perfect global partner for projects of this nature."

Fujitsu

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