

Is blockchain the future of humanitarian aid? The World Food Programme hopes so

In some of the world's largest refugee camps, displaced people are buying food and other necessities using advanced technology.

Since 2017, the World Food Programme (WFP) has been working with other humanitarian organisations – including UNICEF and UN Women – to bring cash-based assistance to refugees through blockchain technology.

The *Building Blocks Programme*, which now operates in Jordan, Bangladesh and Lebanon, aims to make the distribution of food and other necessities to people who need them fair and fast, giving them more independence to choose the items they need.

Houman Haddad, head of emerging technologies at The World Food Programme, tells *Maddyness* that he hopes the technology will bring more collaboration to the humanitarian sector, meaning cash for necessities will stretch further.

“We’re hoping to meet the biggest challenge of collaboration in our sphere,” he said. “When we collaborate, we get a common visibility of the people we serve.”

The WFP has been using cash-based transfers since 2009, meaning that instead of delivering food packages, refugees are given cash value in the form

of a food token or electronic voucher to make their own purchases. Now the largest humanitarian organisation in the world, the WFP is set to surpass \$2.2B in cash-based transfers this year alone.

But when multiple humanitarian organisations serving refugees use their own system of delivering cash for food and essentials, some get more or less depending on overlap or gaps in distribution.

“We ended up with multiple organisations with different mandates offering something rather similar to the same people,” said Haddad, who has worked at WFP since 2010. “At the higher level, you know what everyone’s doing but at a detailed level, you don’t.”

“By the mere fact of not knowing, some end up getting a lot and some less, but not necessarily because it matches their need.”

Haddad said this “systemic over or under-targeting” was made worse by the fact that most aid programmes require refugees to enrol in them, meaning more educated young people have an advantage over older or illiterate people, for example.

How does the technology work?

Blockchains are decentralised systems, meaning transactions can be processed without the need for third party banks or financial institutions.

In the context of humanitarian aid, blockchain-based assistance allows for fair distribution because all organisations can operate the same system equally, transferring cash value for different items through the system to one beneficiary account. This means refugees are not managing multiple food vouchers, tokens or bank cards for each organisation they receive aid from.

Haddad compared the transaction process to sending tokens via email.

“Everyone has their own address on the blockchain,” he said. “We might send a food token; UNICEF might send one for soap. But they all come into the inbox of one address. The beneficiary can send that token to whatever vendor they visit, like a supermarket.”

Since refugees can spend up to 20% of the aid they receive collecting the cash loaded on different cards from different organisations at ATMs, the blockchain technology is designed to bring convenience and choice to those in need.

“I want people to be able to walk into a shop and, just like us, pick whatever they want without having to think about what comes from where. We do the heavy lifting for them,” said Haddad.

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Biometrics and the blockchain

Transactions carried out on the blockchain take around five to eight seconds. Refugees are identified either through a biometric – by scanning an iris or fingerprint – or through a QR code, which is matched up to UNHCR's database.

The use of biometrics, especially among vulnerable populations, has been criticised by some over the risks associated with storing their personal information. But where WFP uses this system of identification – for example in Jordan and Lebanon – the biometric information already gathered by UNHCR is used only to identify the person making the transaction, whose personal data is not stored by WFP.

“When you authorise a transaction, you put in a pin or a password. explained Haddad. “We needed the equivalent for a population who don't have electronic information. This is purely for identification of the beneficiary in an anonymous way.”

Haddad explained that when a fingerprint is scanned, “this goes directly to UNHCR and we get an anonymous alphanumeric code back that tells us who we're dealing with. We don't store biometrics on the blockchain, or anywhere. We don't see it, we don't store it and we don't want anything to do with it.”

In Kutupalong – the world's largest refugee camp in Cox's Bazar, Bangladesh – the touch-triggered system has since been scrapped to prevent the spread of Covid-19, with 500,000 refugees there now using a digital QR code to pay for food.

What's next?

Just as blockchain can be used to log the transactions of every user to ensure fair distribution, the idea that transaction histories can be stored on one system opens blockchain technologies up for use in different contexts.

Haddad said he hoped the programme would pave the way for the technology

to be applied – for example – in hooking displaced people up with secure digital identities. For displaced people, this would mean that often documents that are left behind – documents which are often needed to open bank accounts or secure employment, such as diplomas, health certificates and financial documents – could be traced on one decentralised platform.

He said: “Refugees are refugees for an average of 15 years and in this time, people get married, educated, vaccinated, or they get work permits. If a refugee is repatriated, all of this information stays behind.”

“My hope is that for all of the people we serve, we can not only hold a repository of assistance like food and cash, but potentially all of this other information, which can then follow them around. It means they would have true ownership over their own data.”

Though the programme isn’t there yet, digital identities would be a significant step forward in the financial inclusion of displaced people. By using blockchain to cut through the humanitarian community and encourage them to work together, these organisations could better help refugees both in the short and long term.

“That’s why it’s called building blocks,” said Haddad. “My hope is that once we put this infrastructure in place, we can develop more applications and share it. Within this whole thing, we have the person we serve right in the centre and work together to serve them better.”

Houman Haddad is the head of emerging technologies at *The World Food Programme*.