Blockchain offers a solution to post-Brexit border digitization to build supply chain trust

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Blockchain is a system in which a record of transactions made in bitcoin, or another cryptocurrency, are maintained across several computers that are linked in a peer-to-peer network. The blockchain based platform studied in this case is known as an RFIT platform; a pilot implementation blockchain system that links data together and ensures that this data is unalterable. This end-to-end visibility of unchangeable data helps to build trust between supply partners.

Professor of Digital Transformation at the University of Surrey and co-author of the study, Glenn Parry, said:

"Since the UK's withdrawal from the EU Customs Union, businesses have faced increased paperwork, border delays and higher costs. A digitally managed border system that identifies trusted shipments appears an obvious solution, but we needed to define what trust actually means and how a digital system can help.

"Supply chain participants have long recognized the importance of trust in business relationships. Trust is the primary reason companies cite when supply chain relationships break down, which is especially true at customs borders. Current supply chain friction at UK borders is replicated across the world. Delay is caused by a lack of trust in goods flows, and hence a need to inspect."

Surrey academics stressed that the introduction of this platform does not remove the need for trust and trust-building processes in established buyer-supplier relationships. It's crucial that blockchain platform providers continue to build a position of trust with all participants.

In the case of the import of wine from Australia to the UK, researchers found that the RFIT platform can employ a blockchain layer to make documentation unalterable. The platform facilitates the building of trust across the supply chain by providing a single source of validated data and increasing visibility. Reduced data asymmetry between border agencies and suppliers improves accuracy, timeliness, and integrity.

Through its 2025 UK Border Strategy, the UK Government is seeking to establish technology leadership in reducing friction in cross-border supply chains.

Visiting Fellow at Surrey and co-author of the study published in *Supply*

Chain Management: An International Journal, Mike Brookbanks, said:

"The broader findings from the case study are influencing the UK Government on how to address the current challenges with supply chains at UK customs borders. We hope our work will also influence the Government's current focus on trust ecosystems, as part of the single trade window (STW) initiative. We truly believe that the use of this innovative digital technology will form the Government's first step in developing a utility trade platform, encouraging broader digitization of our borders."

Provided by University of Surrey