



## GS1 recommends use of existing data standards in enterprise blockchain implementations

Early adopters should leverage GS1's proven, standardised data structures

The recent excitement around blockchain has renewed industry interest about the business value of data sharing, transparency, visibility and trust. Blockchains are shared databases (or indexes) of information about transactions and events. Storing traceability or event data about your supply chain or about your products, assets, services or “things” in a shared database is not a new concept. In fact, entire industries have been sharing such data with each other for years. Blockchain’s promise is to do this more efficiently with the network enabling cross-party trust relationships in new ways. Some even call it the Trust Protocol.

GS1’s portfolio includes a set of foundational standards that can be used to structure data that is to be stored in (or referenced by) blockchains. Industry leaders have an opportunity to avoid divergence of internal systems and data formats and to accelerate their adoption of blockchain technologies for enterprise by leveraging the **GS1 and ISO open standards EPCIS and CBV**, which are global multi-sector standards that enable the exchange of traceability data and serial-level (or item-level) track-and-trace.

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### Microsoft

“Leveraging existing GS1 standards to structure event information will enable blockchain-based supply chain implementations to be more interoperable and will simplify the capture and description of events that are written against smart contracts.”

Yorke E. Rhodes III  
Global Blockchain Business Strategist

Practical enterprise blockchain implementations are starting to leverage these standards. Dr. Bill Hardgrave of Auburn University explains, “We are looking at blockchain as a flexible and secure solution, and we believe that we can work together to adapt GS1’s EPCIS data standards to leverage blockchain as a medium and accelerate our work.” Indeed, enterprise implementations can be built around blockchain-based indexes of information that refer to data in more traditional off-chain data stores. Such an approach can enable your business to instantly rely on a common single version of the truth about supply chain and logistics events, while creating migration paths to a future that increases trust between parties and significantly reduces data duplication and reconciliation.

Perhaps the most exciting part of blockchain is the idea that there is a way to share data across corporate boundaries with a high degree of rigour and confidence of its veracity. For many, that’s a game-changing notion...and it’s an idea that needs to be explored with urgency.

Companies like [Mojix](#), an IoT and connected-business solutions company, are already building an IoT-Blockchain connector that is based on the GS1 [EPCIS](#) standard. Whether supply chain visibility data is stored on a blockchain or in traditional databases that are referenced by blockchain-based indexes, leveraging standardised identification and data structures will be critical to the ability of enterprises to share data efficiently and effectively, and will help to remove friction across traditional business processes.

As your teams embark on pilot or evaluation work in the realm of blockchains and IoT...and especially if you're looking to explore nontraditional applications in the field of transparency or traceability, be sure to have your technical teams or your solution providers reach out to GS1 to learn more about leveraging the power of globally standard data structures and identification and the GS1 [EPCIS](#) and [CBV](#) standards.

For additional information, please email us at [blockchain@gs1.org](mailto:blockchain@gs1.org).

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## IBM

“One of the key benefits to blockchain in the enterprise is the trust it delivers, which enables more efficient and complete sharing of the critical data that drives enterprise transactions. By removing the barriers that can be caused from disparate entry systems, that trust is solidified even further. That's why we are working with our clients and collaborating with other industry leaders to implement GS1 open standards into the work that we do.”

**Brigid McDermott**  
Vice President, Blockchain Business Development

### About GS1

GS1 is a neutral, not-for-profit, global organisation that develops and maintains the most widely used supply chain standards system in the world. GS1 standards improve the efficiency, safety, and visibility of supply chains across multiple sectors. With local Member Organisations in over 110 countries, GS1 engages with communities of trading partners, industry organisations, governments, and technology providers to understand and respond to their business needs through the adoption and implementation of global standards. GS1 is driven by over a million user companies, which execute more than six billion transactions daily in 150 countries using GS1 standards. More information at [www.gs1.org](http://www.gs1.org).

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