

No common data standards No blockchain



Marcel Sieira – Head of Customer Engagement, GS1 Australia



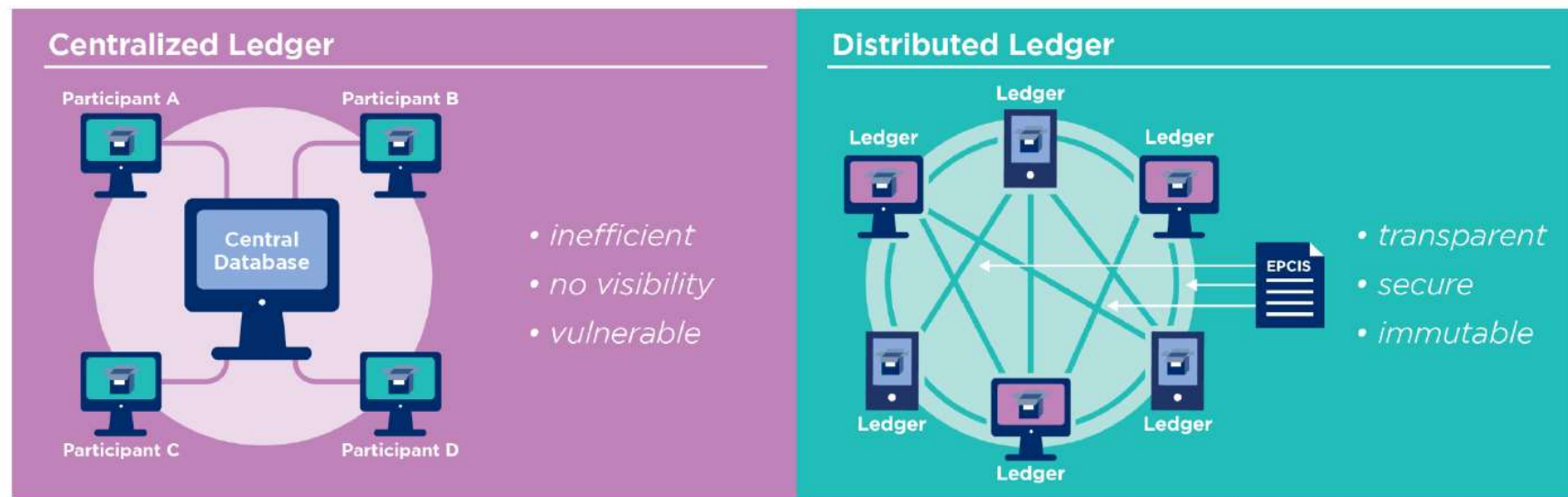
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What does blockchain look like?

A comparison between traditional, centralised ledgers and the decentralised blockchain structure



Why is blockchain exciting?

Much of the excitement about blockchain is actually excitement about the possibility of sharing data across company lines.



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What is an enterprise blockchain?

A blockchain is just a shared ledger...

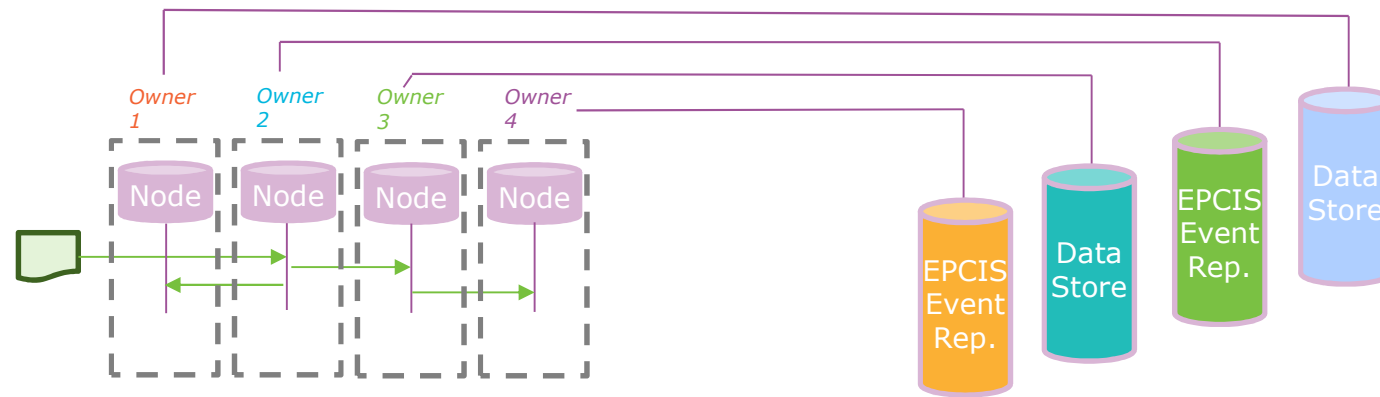
- It's a unique kind of ledger where:
 - You **can't change data**
 - You **can't delete data**
 - You **can't query for data** (at least in initial public blockchain implementations)
(This means that the data set could get BIG...**really BIG**)

When implemented to address business applications in the supply chain space, **an enterprise blockchain is generally an index that references off-chain data** (off-chain data can continue to be maintained in traditional data stores).

- These can be EPCIS repositories
- This might solve the problem of ledgers getting too large
- This also enables fast sharing of a common truth about events and contracts



Blockchains & data stores working together



Enterprise Blockchain ledger

- Access and permission control layers
- Pointers to off-chain data and hashes of off-chain data
- Some relevant pieces of data needed for validation and business processes and smart contracts
- Identifiers based on GS1 keys (party, location, things, etc) – likely obfuscated
- Data stored in accordance with GS1 standard data structures

Off-chain resources

- Access and permission control layers
- Event, transaction and master data stored in accordance with GS1 standard data structures (such as EPCIS Event Data Repositories)
- Identifiers based on GS1 keys (party, location, things, etc)
- Other data resources that may be needed (documents, images, files, etc)



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Data Model: What data are we sharing?

What data helps you solve your problem?



Where did
this come
from?

GTIN: Jazz Apple
Narre Warren Farm
Harvested 4-18-18
13:07
Montague's Pty Ltd

There's no need to reinvent the wheel

Work has been done to create a global language of identification and data sharing.

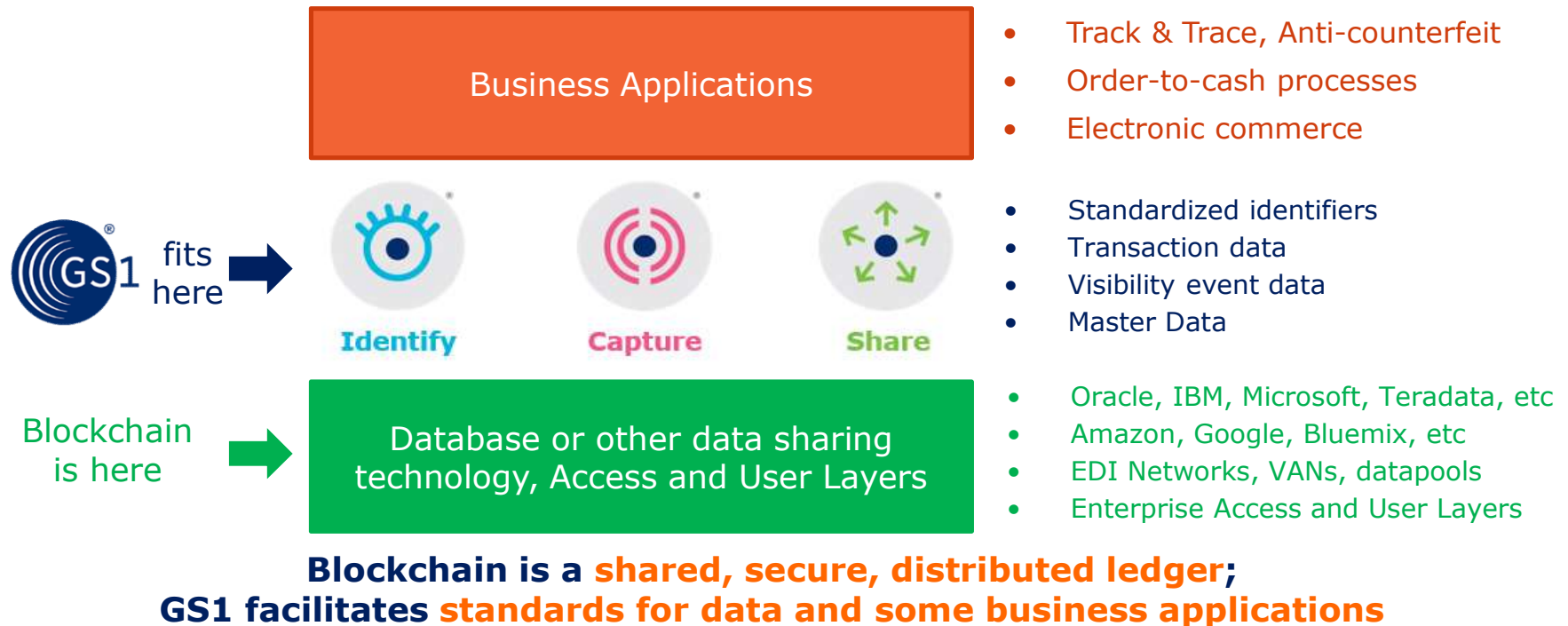
This work, and the rest of the GS1 system of standards, can be leveraged to accelerate startups and industry who wish to use blockchain technology to address business applications.



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Where does GS1 fit...



The global language of business

GS1 standards make it possible to identify, capture, and share information automatically and accurately about products, business locations, and more.



Identify



Capture



Share



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Standards are still the foundation



Company
Global GS1 Company Prefix GLN Global Location Number
Location
GLN Global Location Number
Product
GTIN® Global Trade Item Number® EPC®/SGTIN Serialized Global Trade Item Number
Logistics
SSCC Serial Shipping Container Code GSIN Global Shipment Identification Number
Assets
GIAI Global Individual Asset Identifier GRAI Global Returnable Asset Identifier



Product Master Data	What Goes Into It
GDSN® Global Data Synchronization Network™ The GDSN connects trading partners to the GS1 Global Registry® via GS1-certified data pools, enabling the immediate electronic sharing of standardized, up-to-date, accurate information.	<ul style="list-style-type: none"> • GTINs • Brand Owner Identification • Product Descriptions • Product Classification
Transactional Data	What Goes Into It
EDI Electronic Data Interchange EDI enables the computer-to-computer exchange of structured information between companies using a standardized format.	<ul style="list-style-type: none"> • GTIN® • SSC • GLN EDI Document Types <ul style="list-style-type: none"> • Purchase Order • Invoice • Advance Ship Notice • Payment
Physical Event Data	What Goes Into It
EPCIS Electronic Product Code Information Services EPCIS is the standard for sharing information about the movement and status of goods in the physical world.	<ul style="list-style-type: none"> • What • Where • When • Why <ul style="list-style-type: none"> GTIN GLN Date and Time Stamp Business Step and Product Disposition



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**112 local GS1 member organisations
Over 2 million companies globally
use GS1 standards
Neutral and not-for-profit**



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Pilots, Pilots, Pilots

Hitachi

Walmart

Au Car
Sys: kno

Aug 3, By

CBI
trac

Aug 3,

A live
trial.

IBM is tapping blockchain for a more transparent, authentic and trustworthy global food supply chain.

Disparate ledgers and lack of transparency in the supply chain put food at risk.

Blockchain can help digitally trace and authenticate food products from an ecosystem of suppliers to store shelves and ultimately to consumers.

Graphic source: IBM

IBM brings Walmart, Tyson Foods into blockchain fold

This summer, IBM announced a consortium with 10 major food suppliers to apply blockchain to the food supply chain to improve food safety and ingredient transparency.

Blockchain can help brands track sources of contamination far more quickly, reducing the impact of compromised foods.

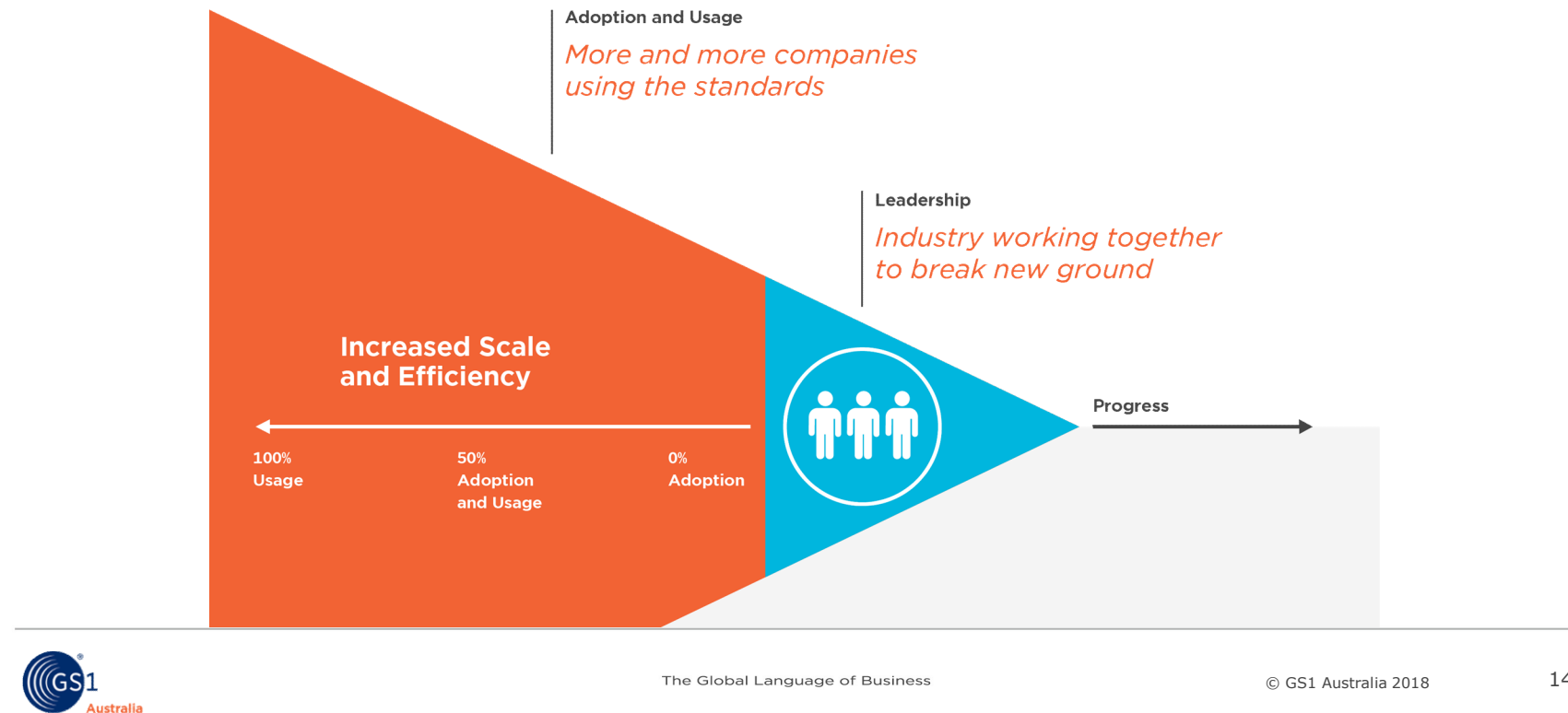
The Power of Industry Moving as One

The application of GS1 Standards is ever-evolving, driven by ongoing engagement with industry leaders working together to forge new paths and create better ways of doing business.

- The pioneering effort of industry leaders builds momentum for the industry as a whole as more companies use the standards.
- Eventually what was once new becomes the norm—an established way of doing business that can benefit all companies.
- Individual companies benefit competitively from implementing standards-based solutions tailored to the needs of their organization.



Our Value to Industries and Companies



Standards Make Interoperability Possible

Sharing unique identification through a common language of standards creates an ecosystem of platforms, applications, and networks that securely links people, places, and things.



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Standards Make Transparency and Trust Possible

**Delivering trusted product
data required for visibility
and traceability, providing
safer environments for
patients and consumers
alike.**



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The only way businesses, big or small,
can move forward is to work together.

They need to be able to understand
each other, anywhere in the world.

**Business requires a common
language, and we make that
possible.**



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Questions?



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Contact information

Marcel Sieira

Head of Customer Engagement

GS1 Australia

T +61 3 0550 3474

E marcel.sieira@gs1au.org

www.gs1au.org



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