



Bringing Trust
and Transparency
to Agriculture

BLOCKCHAIN: Agriculture Value Chain & Food Safety

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Manager



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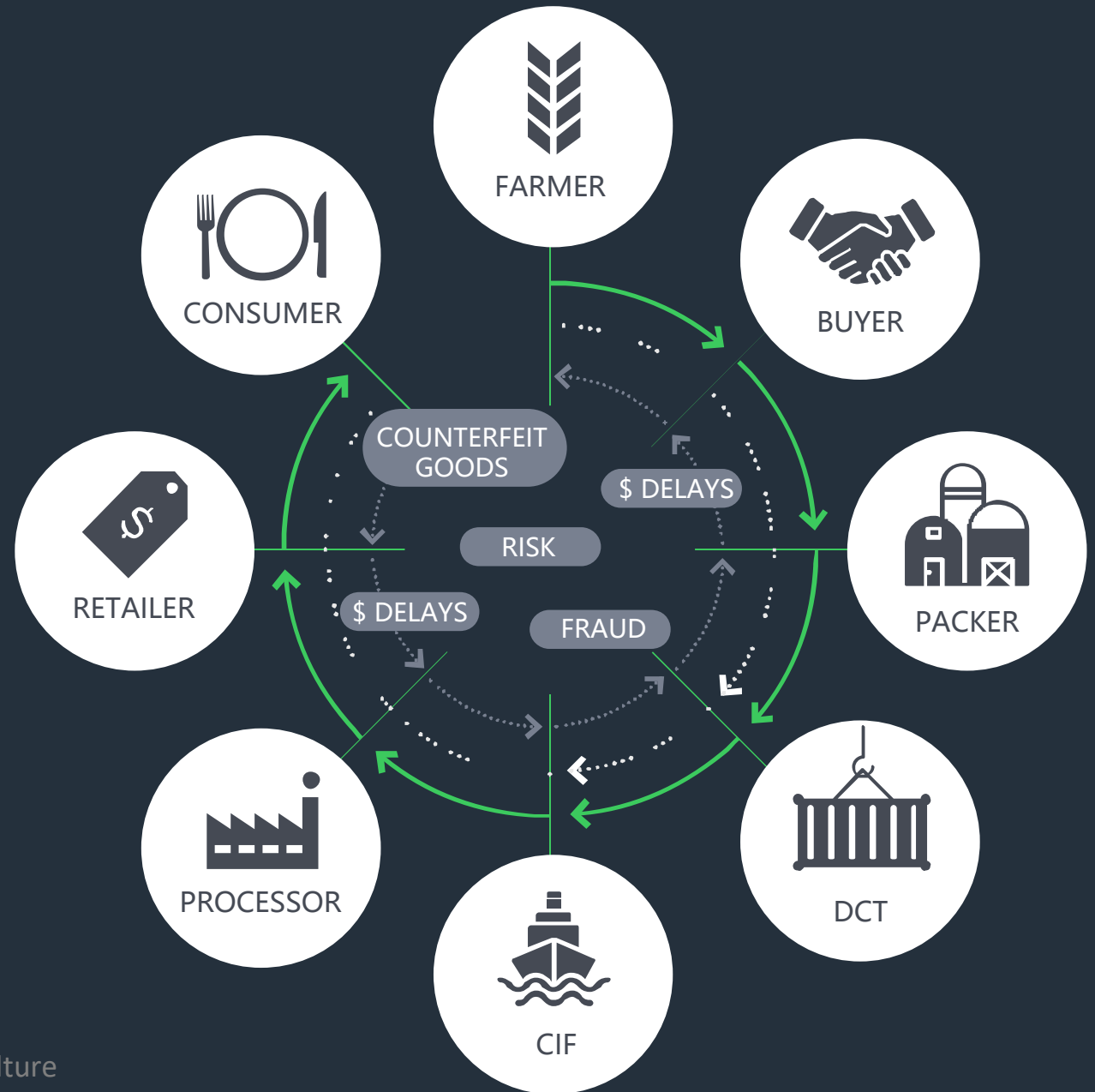
The Opportunit y

\$6T
Global
Agriculture

\$40B
Global Food
Fraud Annually

43%
of Suppliers
Confident to
Collaborate

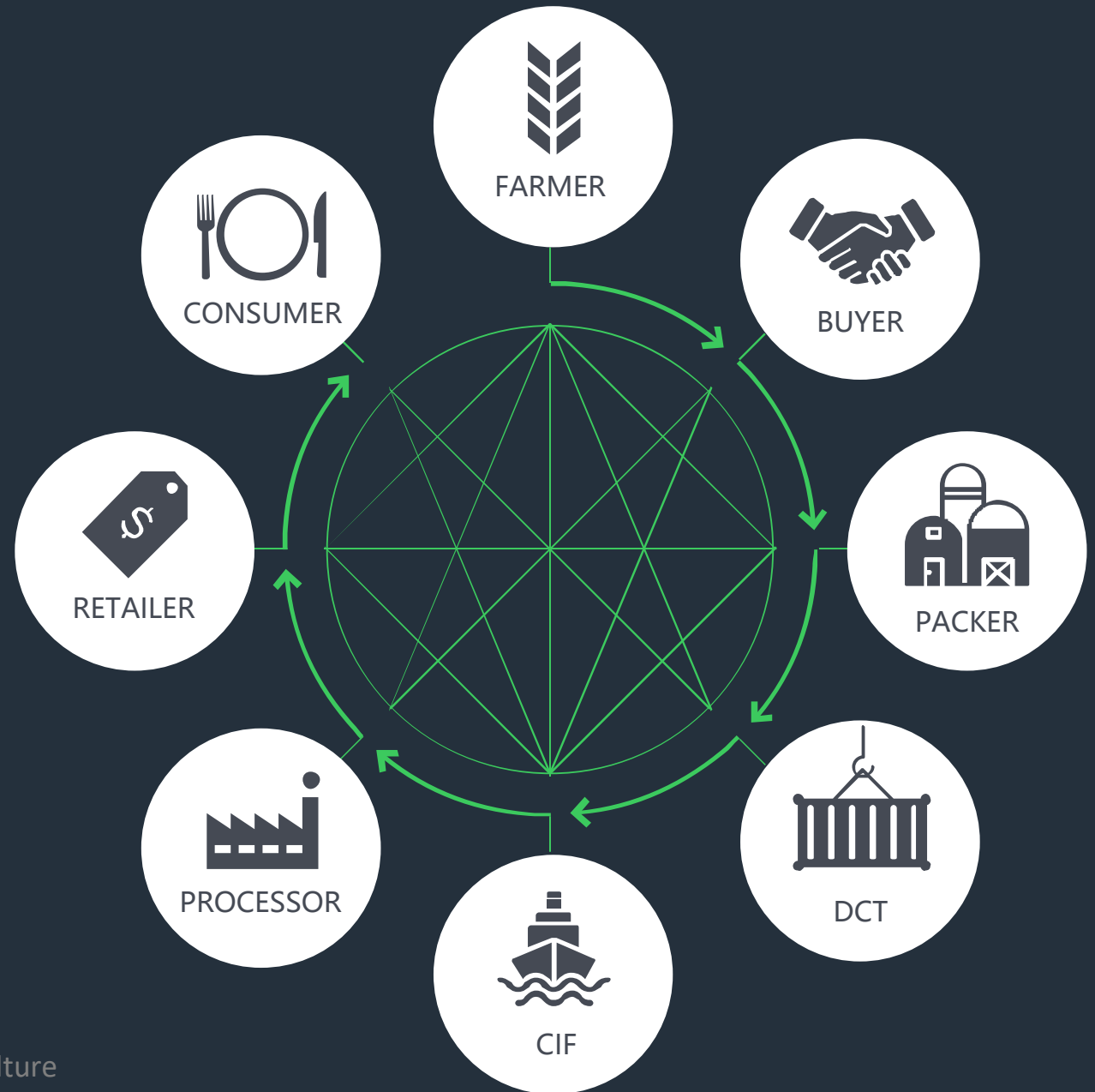
Supply Chains Today



Digital Integrated Supply Chain



PHYSICAL TRADE
INFORMATION FLOWS



Three big problems

FARMERS

don't receive payment
for what they deliver
when they deliver

BUYERS

cannot access finance
they need to pay the
seller on delivery

CONSUMERS

don't know where
their food comes from

The Future of Commodities

World's first
settlement of a
physical commodity
on a blockchain

2016

Digital title & provenance
for agri-commodities

Programmable assets &
seamless value exchange

Inventory finance & structured
inventory products

2017

Launch
of commercial
blockchain
protocol

2018

Transaction & Payment Security



Case Study:

agri^{digital} +



Other Solutions:



Creating Digital Assets

The image displays a development environment for creating digital assets. On the left, a file explorer shows the project structure, including 'DigitalTitle.sol' and 'AgriCoin.sol'. The middle pane shows the Solidity code for 'DigitalTitle.sol', which defines a contract for digital titles. The right pane shows a web browser displaying the 'AgriDigital' website, which features a logo, navigation menu, and a 'Trust & Transparency for Global Agricultural Supply Chains' tagline. A Metamask wallet is also visible on the right, showing a balance of 10.600 ETH.

```
pragma solidity ^0.4.18;

contract DigitalTitle {
    // Constants //
    bytes32 constant public VERSION = 'AgriDigital-0.0.1';

    // Types //
    struct Account {
        uint lockedBalance;
        uint availableBalance;
        mapping (address => uint) pendingPayees;
    }

    // Data //
    address public siteOperator;
    string public season;
    string public grade;
    string public location;
    mapping (address => Account) balance;
    uint256 totSupply;

    /// @return Token symbol
    string public symbol;

    // Functions Public //

    function DigitalTitle(string _tokenName, string _season, string _grade, string _location)
    {
        totSupply = 0;
        symbol = _tokenName;
        season = _season;
        grade = _grade;
        location = _location;
        siteOperator = msg.sender;
    }

    // Using an explicit getter allows for function overloading
    function totalSupply()
    public
    constant
    returns (uint256) {
        return totSupply;
    }
}
```

The website 'AgriDigital' is displayed in the browser. It features a logo with the text 'agridigital' and a tagline 'Trust & Transparency for Global Agricultural Supply Chains'. The website has a navigation menu with 'PRODUCTS', 'RESOURCES', and 'COMPANY'. A 'SEND' button is visible. A Metamask wallet is also visible on the right, showing a balance of 10.600 ETH.

eth_accounts[262]	0x3c64487c20fca4249e22d1d1b0f8ab289ee3a	balance: 1e-18 ether
eth_accounts[263]	0x7c11899b20f78a42d081af0379e96b019a7	balance: 0 ether
eth_accounts[264]	0x3385b24d7094938b7fb2e31d46eae8e4a80	balance: 0 ether
eth_accounts[265]	0x72a1b8e8b317a648f8164ad0c8a18763cd7e	balance: 10 ether
eth_accounts[266]	0x6033ec44a1877a6780a913711380b7c7c982	balance: 10 ether
eth_accounts[267]	0x70652226a0948c694b139094396108ec977ea	balance: 10 ether
eth_accounts[268]	0xe098226382b3a18e8808a309c7f7e1e65f419d	balance: 999999928.9999999999999999 ether

BatchAction	eth_accounts[262]	0x3c64487c20fca4249e22d1d1b0f8ab289ee3a	balance: 1e-18 ether
eth_accounts[263]	0x7c11899b20f78a42d081af0379e96b019a7	balance: 0 ether	
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Payment & Title Transfer

The image shows two overlapping screenshots. The top screenshot is of the AgriDigital dashboard, and the bottom screenshot is of the Microsoft Azure portal showing application logs.

AgriDigital Dashboard:

- Header:** agri digital, Blue Lake Milling
- Left Sidebar:** TRANSACTIONS (Dashboard, Contracts, Deliveries, Inventory, Orders, Prices, Invoices, Payments), STORAGE, SETTINGS
- Main Content:**
 - Trading:** FILTERS (1), Date Range: 90 Days
 - Active cash prices (\$/mt):** Query returned no matching rows.
 - Purchase quantity by counterparty (mt):** Hawker DL & DM
 - Undelivered purchase quantity by month end (mt):** Oats, 1 Sep
 - Purchase quantity by counterparty locations:** Kaniva
 - Purchase Contracts report:**

CONTRACT NUMBER	CONTRACT DATE
C0002502	7/08/2017
 - Transferred Deliveries report:**

DELIVERY NUMBER	CONTRACT NUMBER
D0011021	C0002502
D0011022	C0002502
D0011287	C0002501
 - Deliveries due for payment report:**

DELIVERY NUMBER	CONTRACT NUMBER
D0011287	C0002501
D0011022	C0002502
D0011021	C0002502

Microsoft Azure: blockchain-pilot-api - Log stream

Application logs:

```
2017-08-17T03:34:57 Welcome, you are now connected to log-streaming service.
2017-08-17T03:35:57 No new trace in the past 1 min(s).
2017-08-17T03:36:57 No new trace in the past 2 min(s).
2017-08-17T03:37:57 No new trace in the past 3 min(s).
2017-08-17T03:38:57 No new trace in the past 4 min(s).
2017-08-17T03:39:57 No new trace in the past 5 min(s).
2017-08-17T03:40:57 No new trace in the past 6 min(s).
2017-08-17T03:41:57 No new trace in the past 7 min(s).
2017-08-17T03:42:57 No new trace in the past 8 min(s).
```

The image shows a banner for AgriDigital. The banner features the AgriDigital logo (a stylized 'ad' with a green grid) and the text "Trust & Transparency for Global Agricultural Supply Chains". The background is a stylized illustration of a farm with a blue sky, green fields, and yellow wheat stalks. The banner also includes navigation links: PRODUCTS, RESOURCES, COMPANY, and buttons for "ENQUIRE NOW" and "SIGN IN".

Network & Market Efficiency



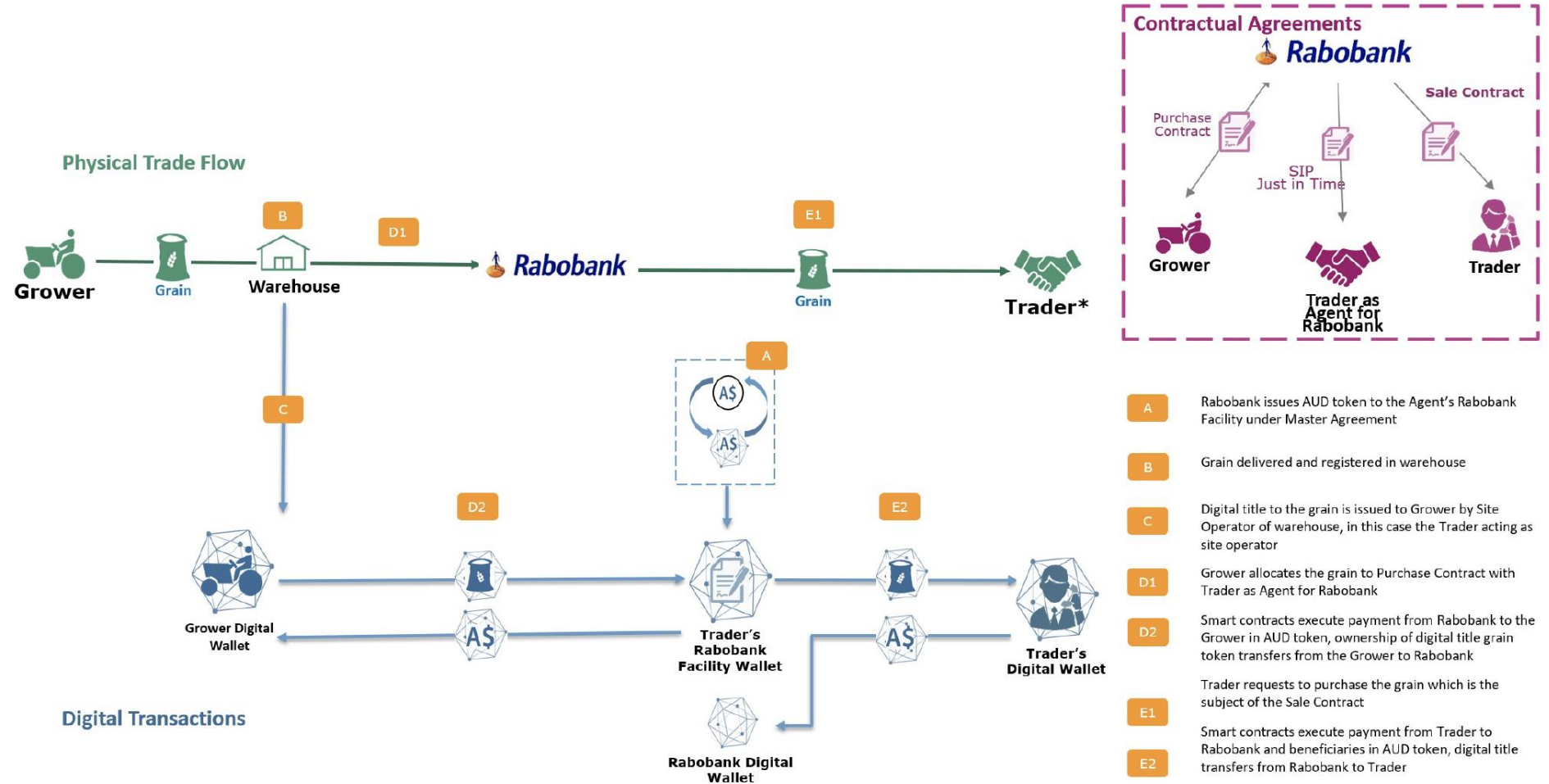
Case Study:



Other
Solutions:



Trade Finance



Traceability & Chain Assurance



Case Study:



Other Solutions:



PROVENANCE

Walmart 

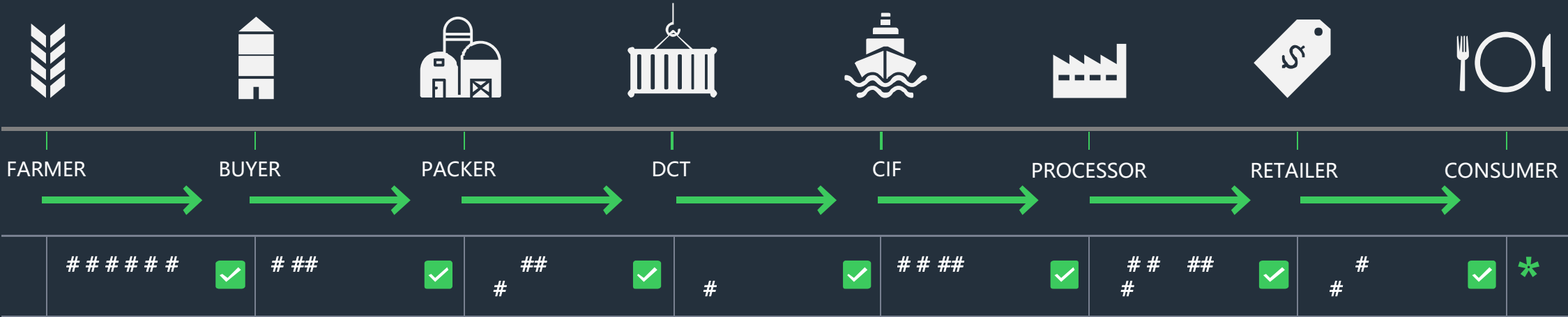


Traceability



##

* PROVENANCE




→ TRADE OF WHEAT ✓ BLOCKCHAIN DATA STORE

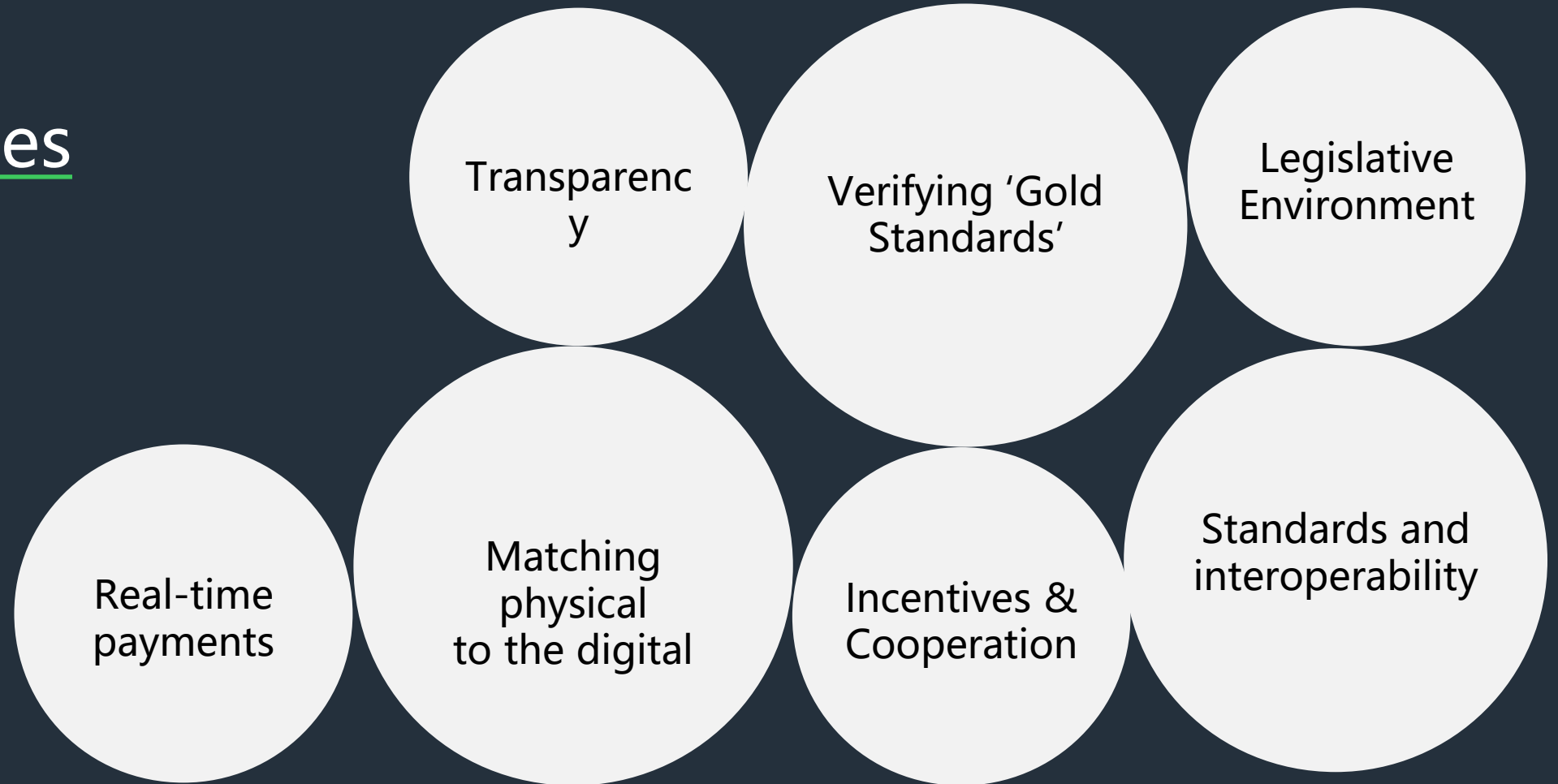


Bringing Trust And Transparency To Agriculture

Chain Assurance

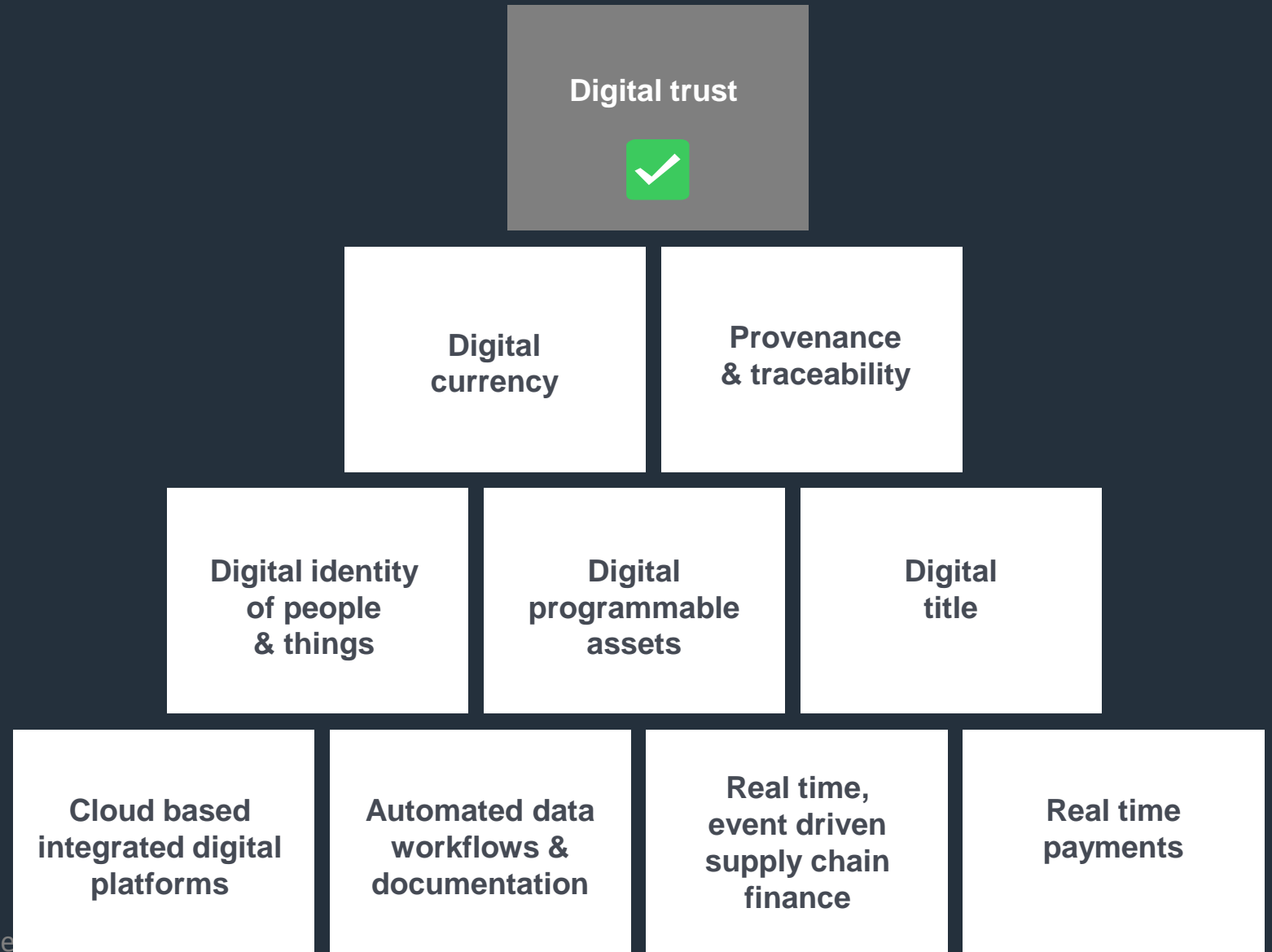
ASSERTION		Provenance																													
1	Certified Organic Farm Assertion	Run is organic: True																													
2	Clean Silo Assertion	The run is certified as organic																													
3	Clean Truck Assertion	<div>Chantel Organics</div> <div></div>																													
4	Enter delivery into AgriDigital																														
5	Huller Bins Register ZERO																														
6	New Internal Bulk Bags Assertion																														
7	Batch Run Changeover	<div>Delivery information</div> <table><tr><th>Delivery Name</th><th>Delivery Date</th><th>Storage Name</th><th>Site Name</th><th>Farm of origin</th><th>Truck Rego</th></tr><tr><td>Delivery #1</td><td>2017-08-24T09:31:47</td><td>Feeder Silo</td><td>Bordertown</td><td>Phillips Farm</td><td>WNY-827</td></tr><tr><td>Delivery #2</td><td>2017-08-24T08:32:26</td><td>Feeder Silo</td><td>Bordertown</td><td>Phillips Farm</td><td>WNY-827</td></tr><tr><td>Delivery #3</td><td>2017-08-24T07:55:28</td><td>Feeder Silo</td><td>Bordertown</td><td>Hanley Farm</td><td>WNY-827</td></tr></table>						Delivery Name	Delivery Date	Storage Name	Site Name	Farm of origin	Truck Rego	Delivery #1	2017-08-24T09:31:47	Feeder Silo	Bordertown	Phillips Farm	WNY-827	Delivery #2	2017-08-24T08:32:26	Feeder Silo	Bordertown	Phillips Farm	WNY-827	Delivery #3	2017-08-24T07:55:28	Feeder Silo	Bordertown	Hanley Farm	WNY-827
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8	First 500KG Diverted to Conventional																														
9	QR Code Generated	<div>Farm information</div> <table><tr><th>Farm Name</th><th>Certified as organic from</th><th>Certified as organic to</th></tr><tr><td>Phillips Farm</td><td>2017-01-01T01:00:00</td><td>2018-01-01T01:00:00</td></tr><tr><td>Hanley Farm</td><td>2017-01-01T01:00:00</td><td>2018-01-01T01:00:00</td></tr></table> <div>Truck information</div> <table><tr><th>Truck Rego</th><th>Certified as clean on</th></tr><tr><td>WNY-827</td><td>2017-08-24T09:28:00</td></tr></table>						Farm Name	Certified as organic from	Certified as organic to	Phillips Farm	2017-01-01T01:00:00	2018-01-01T01:00:00	Hanley Farm	2017-01-01T01:00:00	2018-01-01T01:00:00	Truck Rego	Certified as clean on	WNY-827	2017-08-24T09:28:00											
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Challenges



The Future of Commodities

And the emergence of digital trust



Thank You

agridigital.io
@bridieohlsson

