RFiD JOURNAL

VIRTUALLY LIVE!

The Blockchain Supply Chain: Improving Traceability & Logistics Processes

An AIM Subject Matter Experts Panel

About AIM, Inc.

- **Our Mission**
  - As an unbiased resource for networking, education, advocacy, and standards, AIM will help its members grow their business by fostering the effective use of automatic identification and data capture (AIDC) solutions

- **Our Vision**
  - Advancing the effective use of automatic identification and data capture technologies

- **Our VALUE**
  - Creating partnerships to globalize AIDC industry success

www.aimglobal.org

SEPTEMBER 30 - OCTOBER 1, 2020

Meet the Subject Matter Experts

Scott Austin
Senior Executive VP, Americas

Sowmya Varadarajan
Business Development Leader

Therese Myers
CEO

EVERLEDGER

IBM

Infratab™

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What is Blockchain?

Blockchain history

HTTP to WWW

1989	**1980s -1990s**	**1993**
Two computers talking to each other	*Sending & receiving protocols expand communications*	*World Wide Web, Global Hyper-Linked system is publicly available*

WWW

EVERLEDGER

aim | Advancing Identification Matters

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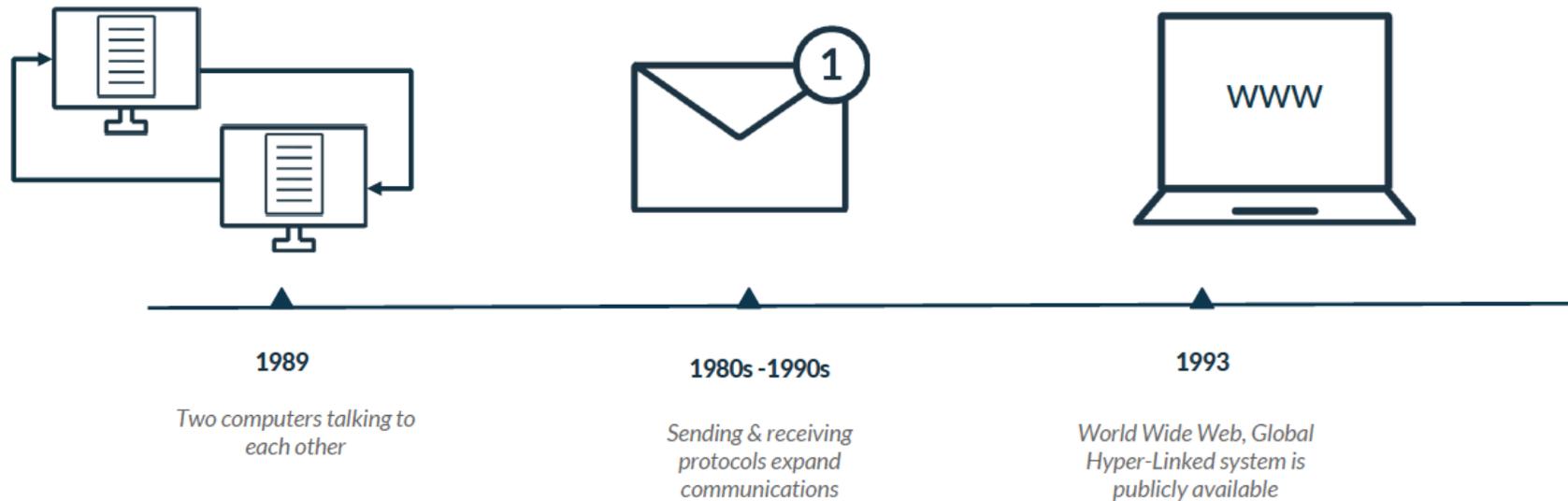
Blockchain History

Blockchain history

From finance to products

In 2009 Satoshi Nakamoto created bitcoin and introduced the concept of a blockchain as a decentralized ledger maintained by anonymous consensus

Late 1990s- early 2000s

Global services, communication, buying & selling, financial transactions & networks(and rise of ATM fees)

2009

Sending & receiving protocols expand communications

Today

Blockchain protocols are now private and public, tracking currency, physical product, enable smart contracts, etc.

Defining Blockchain

Real Life Applications

CONNECTING THE PHYSICAL AND THE DIGITAL

Activating a QR CODE or an NFC tag directly with your phone.

Access a secure product page with product information and item unique journey

All the IDs and the events of each item are stored on the blockchain to provide even more confidence on the authenticity of the product

How blockchain holds unique digital identities for products, using RFID and secure NFC for **authentication and consumer engagement**

READ QR OR NFC

ACCESS SECURE PRODUCT PAGE

SUMMER 19
MIDI SUNDRESS

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quis varius blandit netus aliquam a, lectus justo.

Item Code:	12800RT3012
Material:	100% cotton
Colour:	Grey
Size:	8 (UK)

REVIEW UNIQUE PRODUCT JOURNEY

16.10.2019 ■ **QUALITY CHECK BY K&B**
📍 LONDON

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

LOG IN TO VIEW MORE INFO

MCQ

10.10.2019 ■ **QUALITY CONTROL BY K&B**
📍 LONDON

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

LOG IN TO VIEW MORE INFO

27.09.2019 ■ **MANUFACTURED**
📍 LONDON

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

LOG IN TO VIEW MORE INFO

LOG IN TO LOAD MORE EVENTS

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Minerals & Metals

How blockchain holds unique place to support sustainability initiatives from mine to recycling.

Artisanal mining is a significant source of critical minerals. Some 20% of global Cobalt is acquired through ASM.

The speed of growth of demand outweighing supply, the Opaque supply chain and the critical need for resource optimisation makes blockchain a key technology to support supply chain efficiency and compliance.

GHG life cycle emissions measurement and Human Rights compliance are also supported.
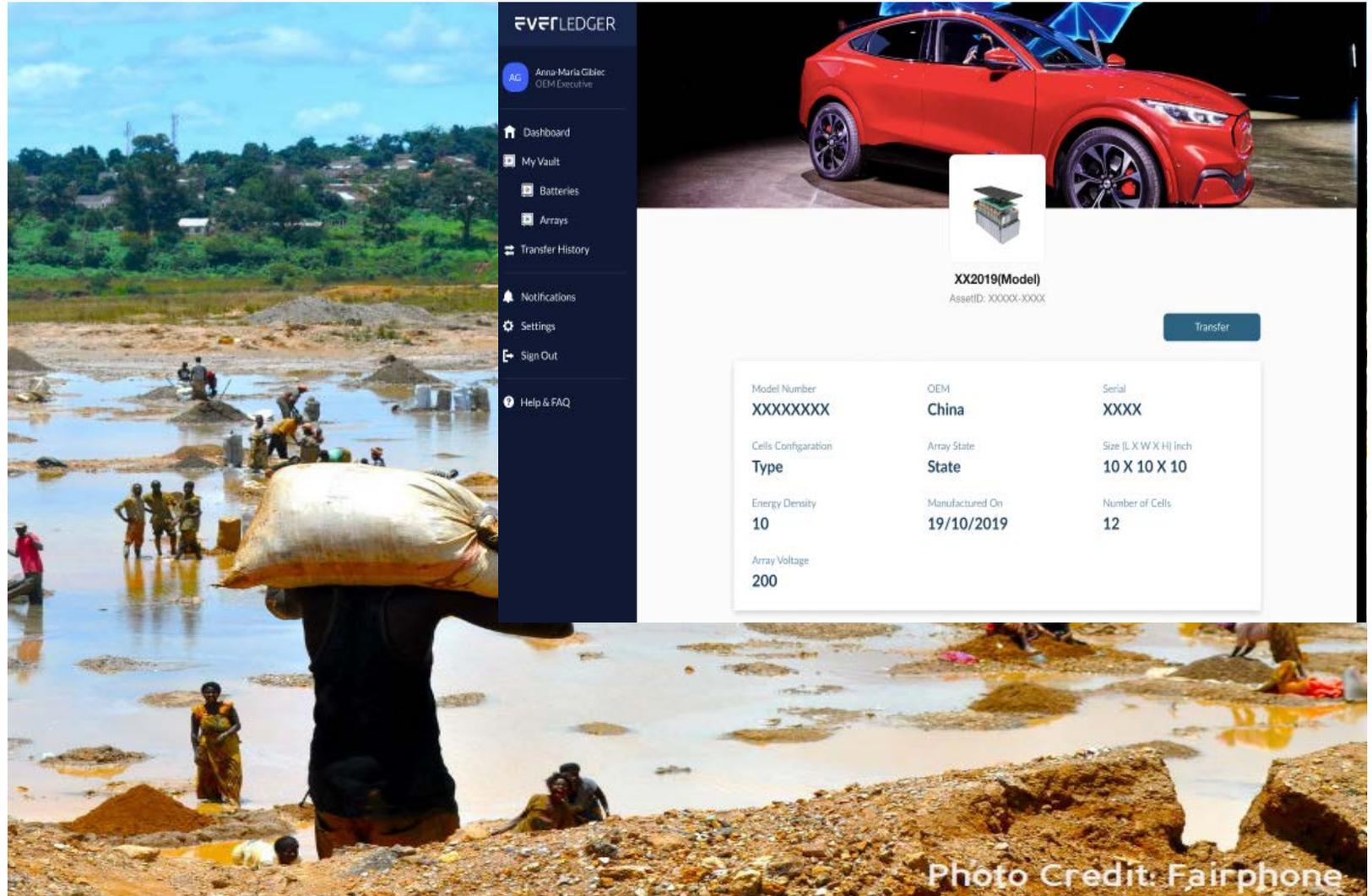
Photo Credit: Fairphone

WATCH THE VIDEO

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freshtime
Infratab

Real Life Application

Sea Bass, Sea Brine,
AB Vassilopoulos (AB), National
Technical Institute of Athens, Infratab
Monitoring shelf life from harvest to
processing to retail store to consumer

Authenticity
Freshness
Value

BLOCKCHAIN
fish
How fresh?

2

Carrefour

"The pomelo **sold faster** than the year before due to blockchain," Delerm said.

"We had **a positive impact** on the chicken versus the non-blockchain chicken."

REUTERS

TECHNOLOGY NEWS   JUNE 3, 2019 / 1:09 PM / 4 MONTHS AGO

Carrefour says blockchain tracking boosting sales of some products

Emma Thomasson   4 MIN READ

BERLIN (Reuters) - French retailer Carrefour SA has seen sales boosted by the use of blockchain ledger technology to track meat, milk and fruit from farms to stores and will extend it to more products to increase shopper trust, an executive said on Monday.

Scan QR Code with your phone camera and type in the missing numbers below in **RED**

Carrefour

9242 0836A 2

Découvrez la traçabilité de votre produit

Renseigner votre numéro de lot

9242 0836A 2

Je découvre

Trouver le numéro de lot

Opportunities in a Digital World

freshtime®
Infratab®

Pandemic

Store & Transport

Dispense

Prepare
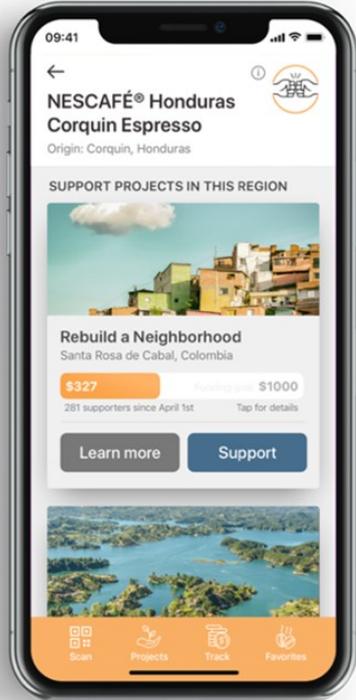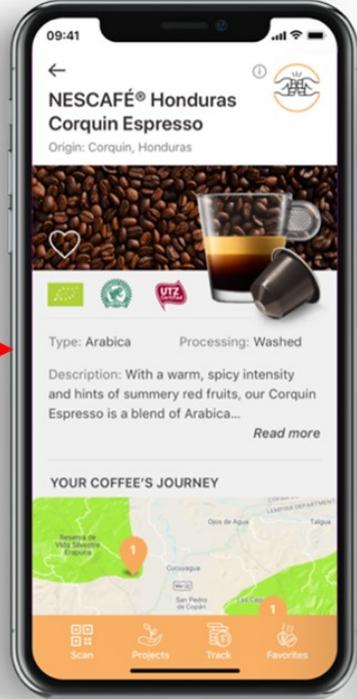
Covid-19 vaccine

The challenge: Temperature sensitivity of the vaccine

Storage & transport: -70°C

OK at clinic receiving?

OK at time of vaccination?

Who was vaccinated?

BLOCKCHAIN
care

How it it?

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Shortages of COVID-19 Emergency Equipment in U.S. Cities

https://www.usmayors.org/issues/covid-19/equipment-survey/

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IBM's Rapid Supplier Connect:
Emergency supplier onboarding and inventory availability to get COVID-19 responders the equipment they need
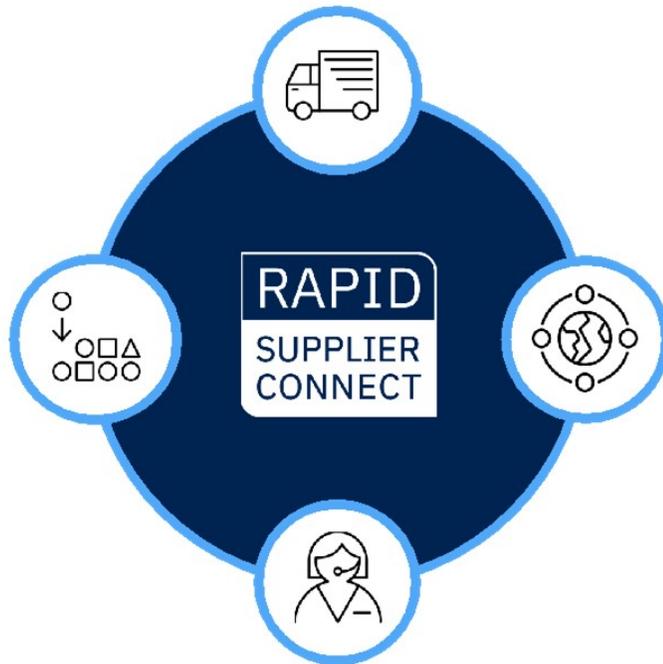
Rapid closes the gap between "need" and "have".

- Suppliers will be able to create their own digital identity containing key information typically required by buyer's procurement organization.

- Suppliers will be able to list the medical equipment categories they support.

- Suppliers will post their inventory availability.

- Buyers will have a single source of truth for supplier information including the product categories they support.

The Changing Face of Retail

- Affect on Bricks & Mortar
- Inventory Impact
- Online Trust & Transparency

US retail landscape during Q2 2020 , in $billions

Ecommerce sales

44.4%

$138.96
2019

$200.72
2020

Total retail sales

$943.94
$964.47

2.2%

2019
2020

Web penetration

20.8%

2020

Source: Digital Commerce 360 analysis of U.S. Department of Commerce data
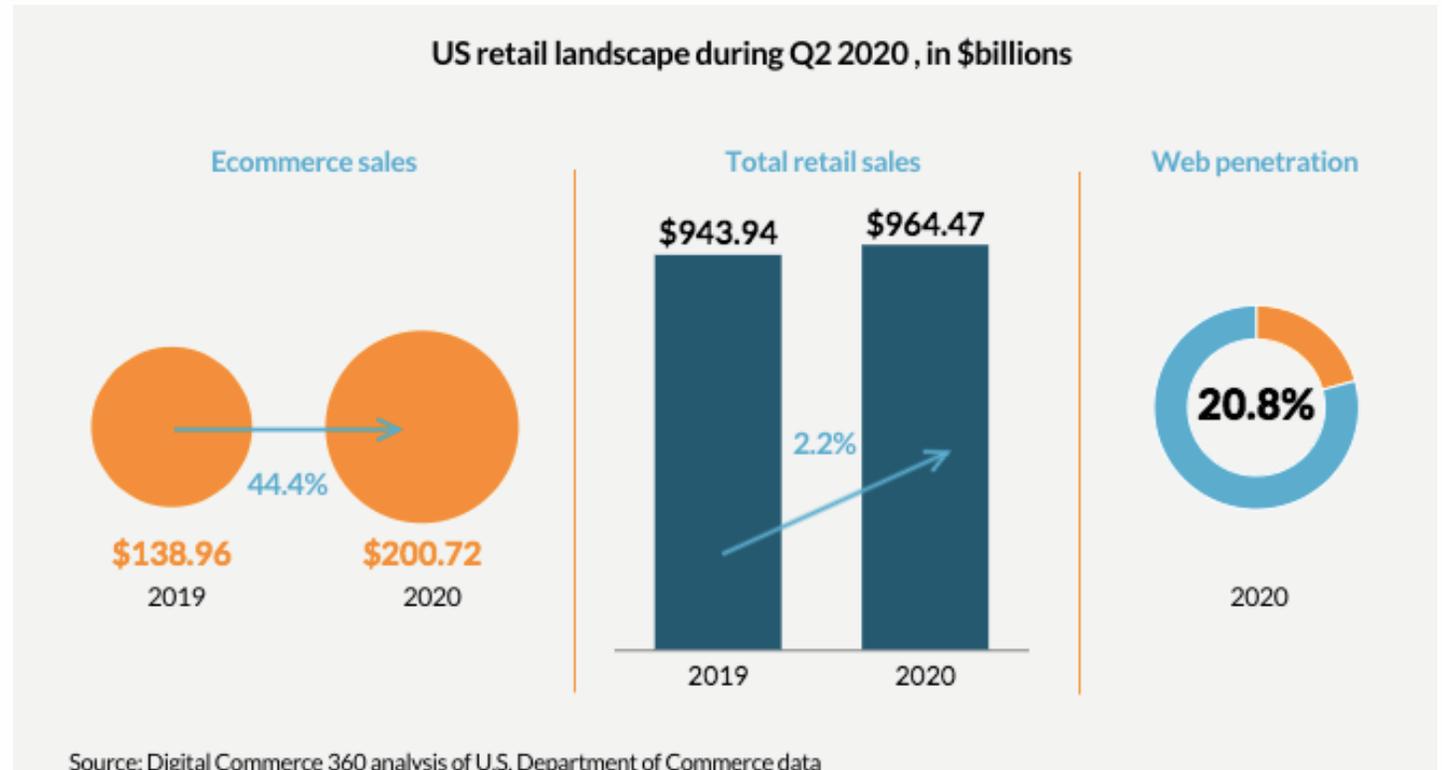
Digital Commerce 360, Aug 18,2020

Blockchain in Circular Economies

Enabling Sustainability Data across Life-Cycle

SmartFace™ RFID labels
Greenprint Assessment Tool

FSC/ Rainforest Alliance

SAC approved audits by Elevate
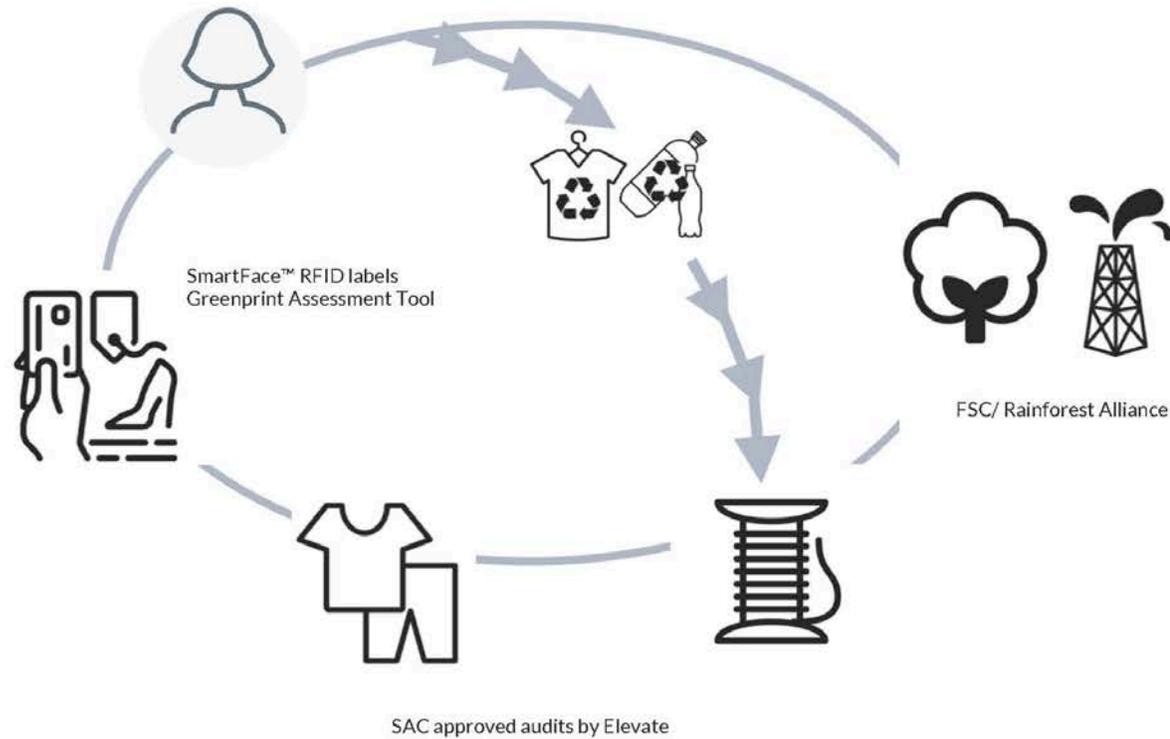
Sustainable Development Goals

ENERGY
— kWh —

GHG
— tonnes CO2-e —

SOLID WASTE
— lbs —

FOSSIL MATERIAL
— barrels of oil-e —

TREES
— trees-e —

WATER
— gallons —

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Blockchain for Business and Verification Efficiency
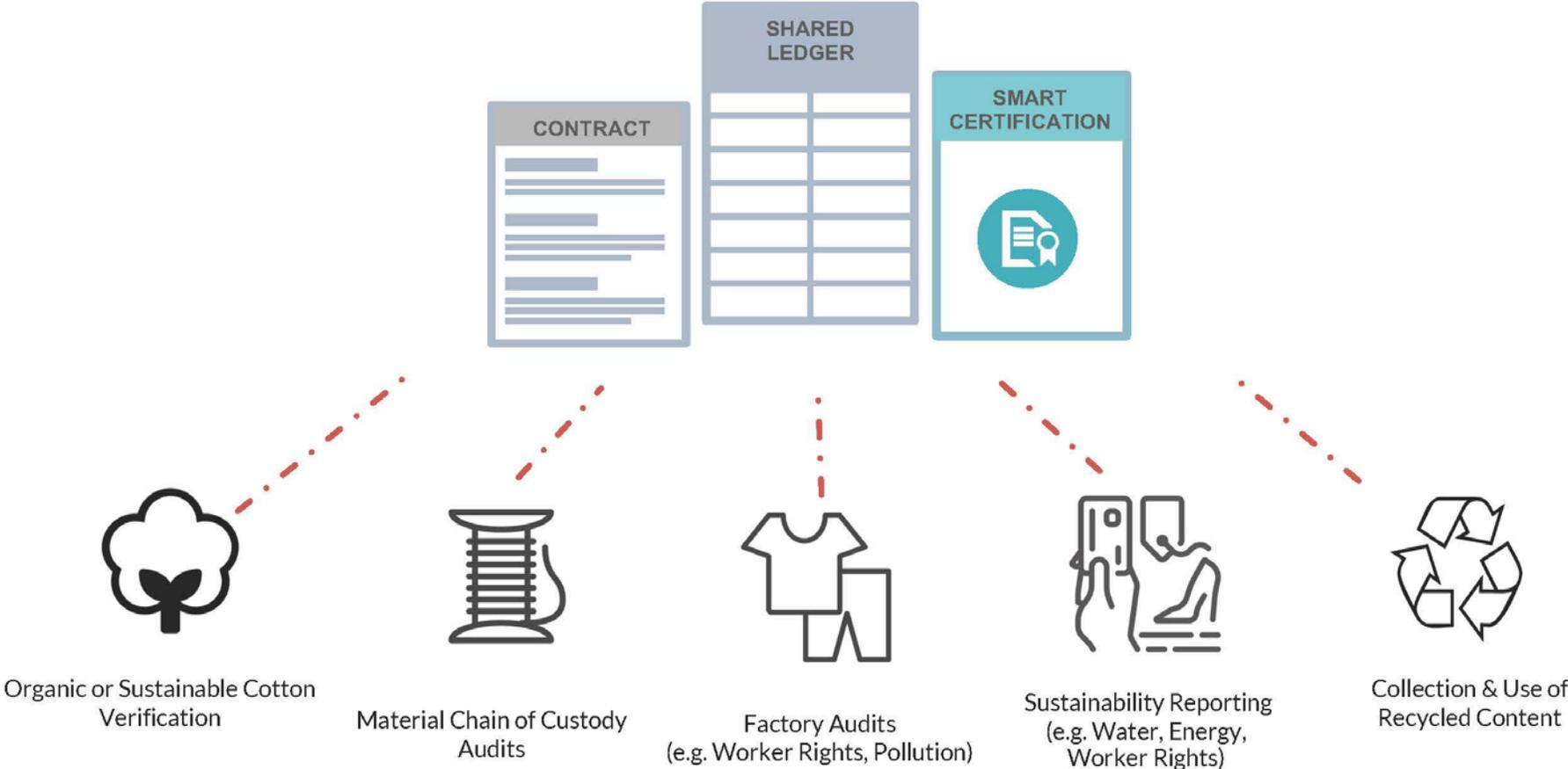
SHARED LEDGER

CONTRACT

SMART CERTIFICATION

Organic or Sustainable Cotton Verification

Material Chain of Custody Audits

Factory Audits (e.g. Worker Rights, Pollution)

Sustainability Reporting (e.g. Water, Energy, Worker Rights)

Collection & Use of Recycled Content

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Circular Economy

Energy

Perishables

Packaging

Freshness delivered as ordered is the key to the Circular Economy

When freshness is measured, made visible, and managed to brand's customer satisfaction standards, the rest is easy.

BLOCKCHAIN
reduce waste

Fresh Delivery

4

Plastic Bank uses IBM Blockchain for Social Good

SOLUTION:

- Monetize plastic to create dignity and value in plastic collection and establish financial inclusivity

- Empower people to earn a livelihood to provide food, clothing, tuition, and access to doctor care for their families

- Establishing a new customer community for local retailers; data collection provides helpful analytics

- Enable corporations to support sustainability and UN SDGs

PROBLEM:

The biggest inflow of plastic pollution into the oceans comes from the world's poorest regions

75%
Of consumers believe brands can change society for the better

Future of Blockchain

*IBM is making blockchain real for business with **100+ active business networks** and **600+ engagements** from ideation to production.*

everledger

Unlisted Securities

Borsa Italiana

U.S. Customs and Border Protection

Clearing & Settlement

Provenance

SBI

MÆRSK

FDA

stellar

RCBC

Bank Guarantees

CLS

nab

BBVA

BNI

Global Trade

Healthcare

Trade Finance

Universal Payments

gsf

Carrefour

AIG

WORLDCOM FINANCE

mandiri

Desjardins

Belastingdienst

Kroger

Tyson

Danamon

KASIKORNTHAI

PermataBank

Scotiabank

Insurance

Food

Identity

McLANE

Smithfield

Walmart

BANK BRI

RBC

Mc

Nestlé

Driscoll's

we.trade

sovrin

BMO

Distributed Energy

TenneT

Government

SMART DUBAI

Dole

ENERGY BLOCKCHAIN LABS

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Contact Us

Scott Austin
Senior Executive
Vice President, Americas
Everledger
scott@everledger.io

Sowmya Varadarajan
IBM Global Markets
Business Development Leader
-Industrial Market - NA
Phone: 1-646-678-0517
E-mail:
svarada@us.ibm.com

Therese (Terry) Myers
CEO
Infratab, Inc.
tmyers@infratab.com
office (805) 874-4619
mobile (805) 340-9020

20399 Route 19, Suite 203
Cranberry Township,
Pennsylvania 16066 USA
Phone: +1.724.742.4470
info@aimglobal.org

Questions or Comments?

THANK YOU

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USE OF BLOCKCHAIN TECHNOLOGY DIAMONDS & GEMSTONES

How our tech platforms ads value to the industry via increased levels of transparency.

Traditionally Opaque Supply Chains.

Provenance as value creation, enhanced customer experience and brand equity preservation.

How an open source blockchain platform can capture asset data from mine-to-market, connecting globally-dispersed **peer-to-peer networks**
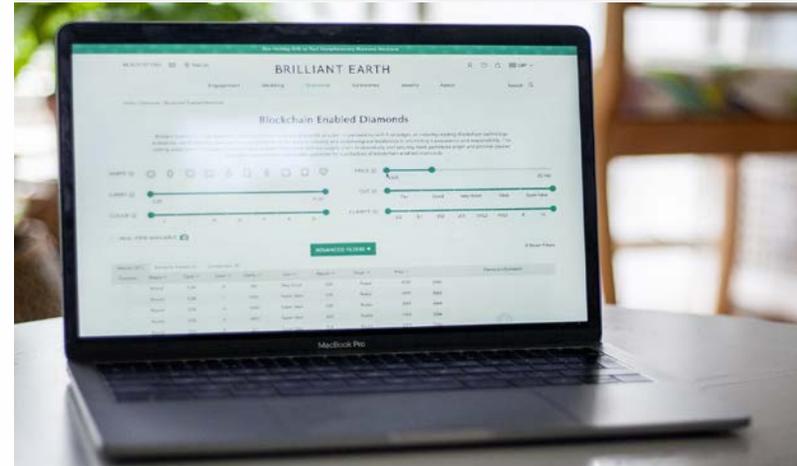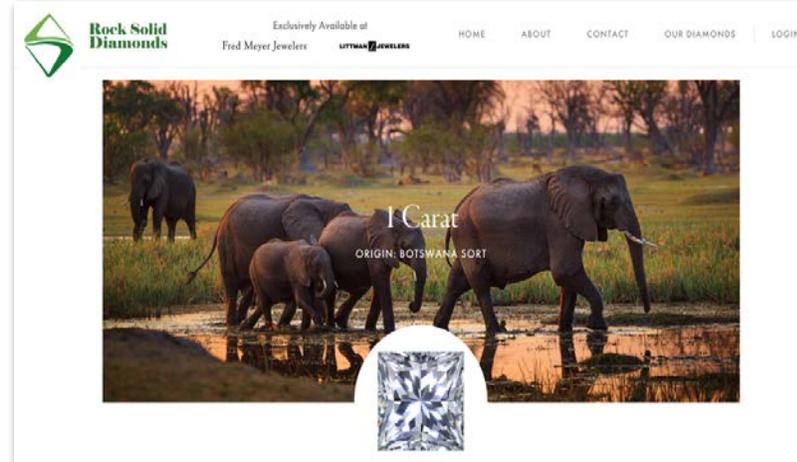
VISIT WEBSITE

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Future of Blockchain

Community-grown food
Shelf life monitored from planting to delivery,
Traded, bought, sold via internet
neighborhood marketplaces

Fresh
Flavor
Care

BLOCKCHAIN
personal
How fresh?

FLOOR 8

NFC

Your Internet
SHOP Neighborhood
Marketplace

Bamboo Lettuce

Mary's

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A Forrester Emerging Technology
Projection: Total Economic Impact™
Study Commissioned By IBM
July 2018

Emerging Technology Projection: The Total Economic Impact™ Of IBM Blockchain

Projected Cost Savings And Business Benefits
Enabled By IBM Blockchain

Visit:
https://www.ibm.com/blockchain