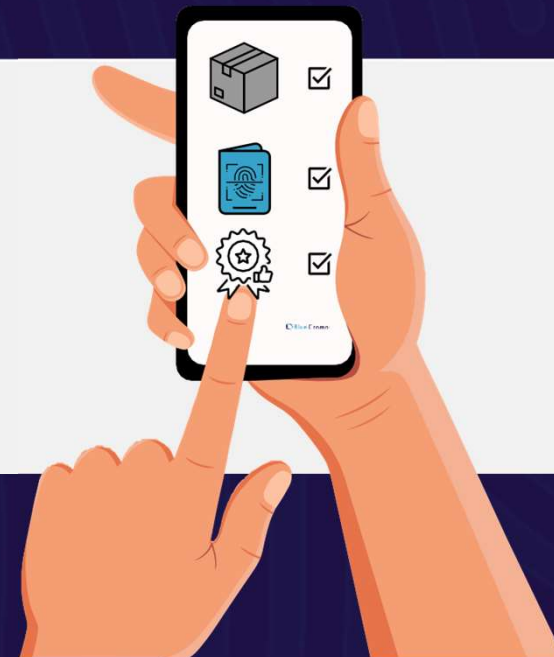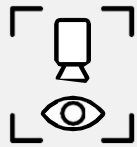# Genesis by Blue Cromos

AI-powered brand protection & supply chain management
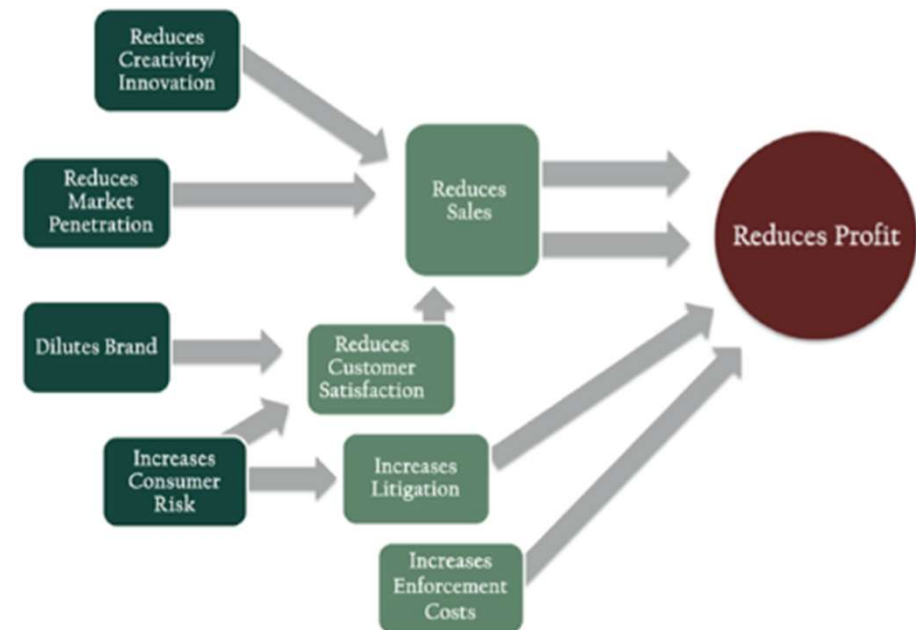
Blue Cromos

Why Blue Cromos?

Brand protection - Increasingly important

Growing requirements on transparency and environmental impact tracking.

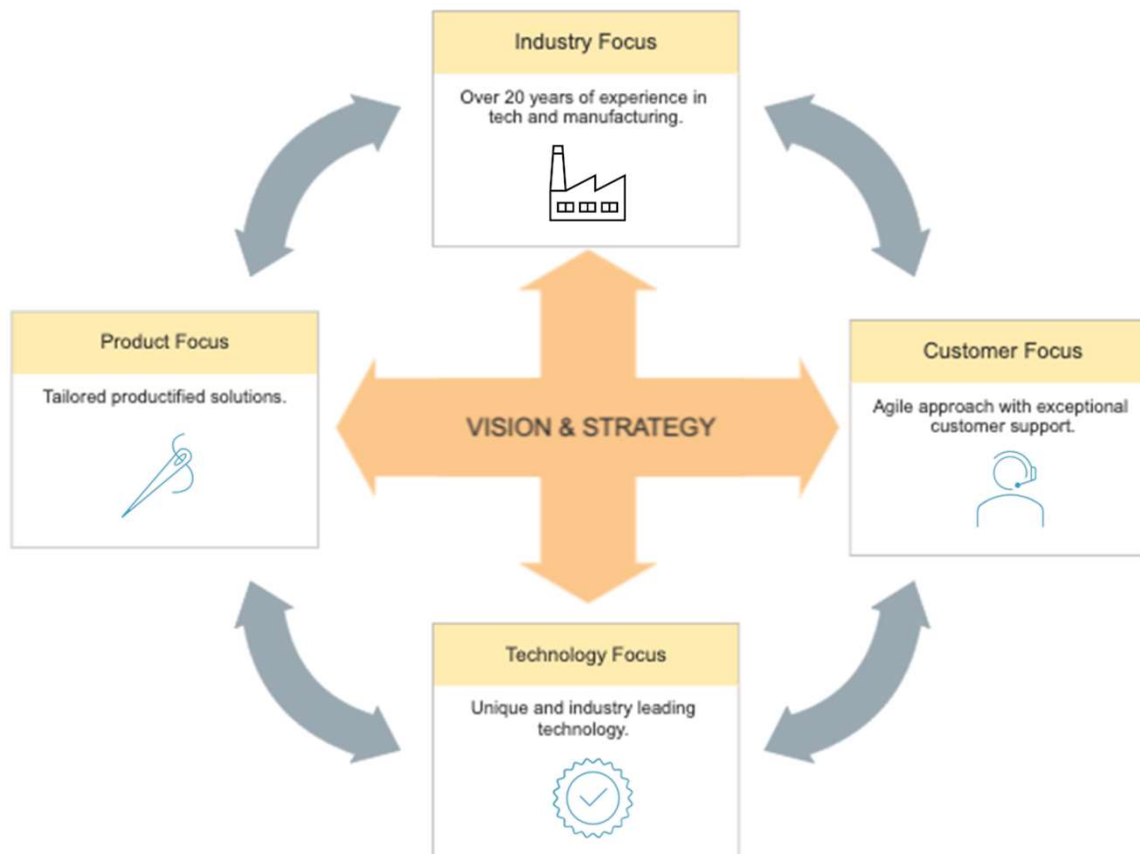The counterfeit market is growing 12,5% each year and will reach $211,3 billion by 2026.

Conventional authentication methods are limited.

*Center for anti-counterfeiting and product protection

Who We Are

Dedicated brand protection experts

Industry Focus

Over 20 years of experience in tech and manufacturing.

Product Focus

Tailored productified solutions.

VISION & STRATEGY

Customer Focus

Agile approach with exceptional customer support.

Technology Focus

Unique and industry leading technology.

A young company made up of experienced people.

We know the industry inside out through decades of industry experience.
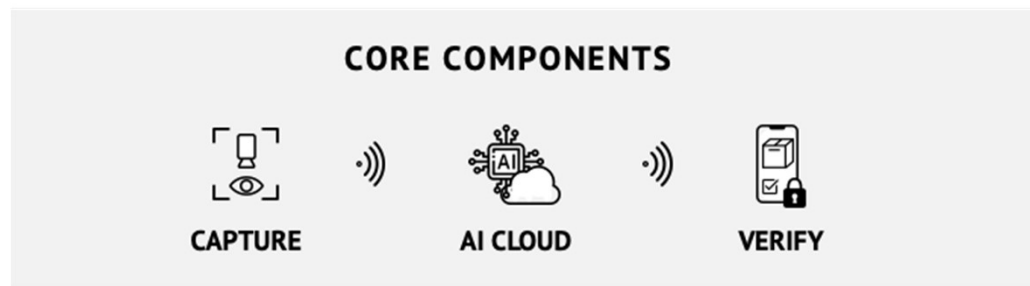
What We Do

Embracing brand protection and product authentication needs

By utilizing the latest tools, technology and thinking, we ensure secure, future proof solutions that are fit for purpose also over time.

Solutions

CORE COMPONENTS

CAPTURE · AI CLOUD · VERIFY
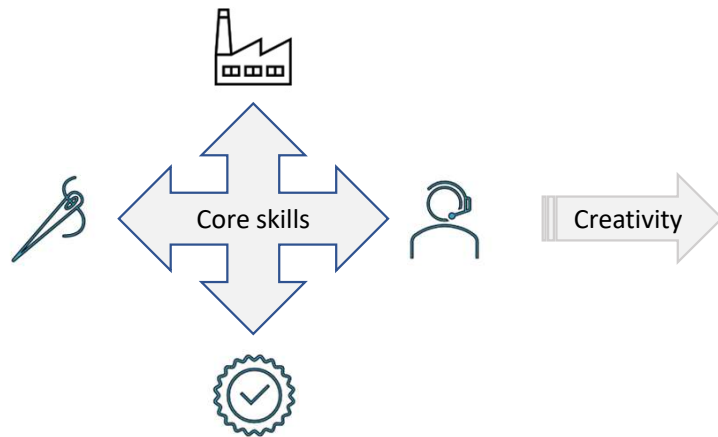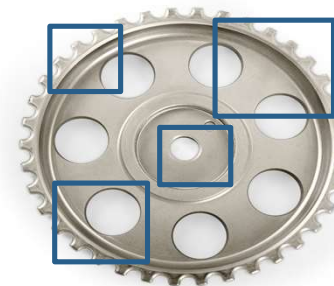
Meet BC Genesis

Fingerprinting (Digital Twinning)

- Patented cloud-based platform that uses AI to determine areas of interest on a product and/or its packaging where item-specific features can be observed and recorded.

- Offering fingerprint technology for multiple products without the need to change products or processes.

- The authentication of products can then be conducted throughout the supply chain offering end-to-end traceability.

- The system is self-learning with refinements to the process automatically and retroactively applied to the initial sample, so that every item from the very first is uniquely identifiable.

Item in packaging – identifiable by unique features and barcode

Item with markings – identifiable by unique features and DMC code

Item without markings – identifiable by unique features

BLUE CROMOS

5

BC Genesis – how it works

Identification process

Several images of each item taken (scan*)

Images uploaded to computer

Images analyzed

Key points extracted, identifying descriptors to make a good fingerprint

28695355703823437

Unique fingerprint and serial number generated
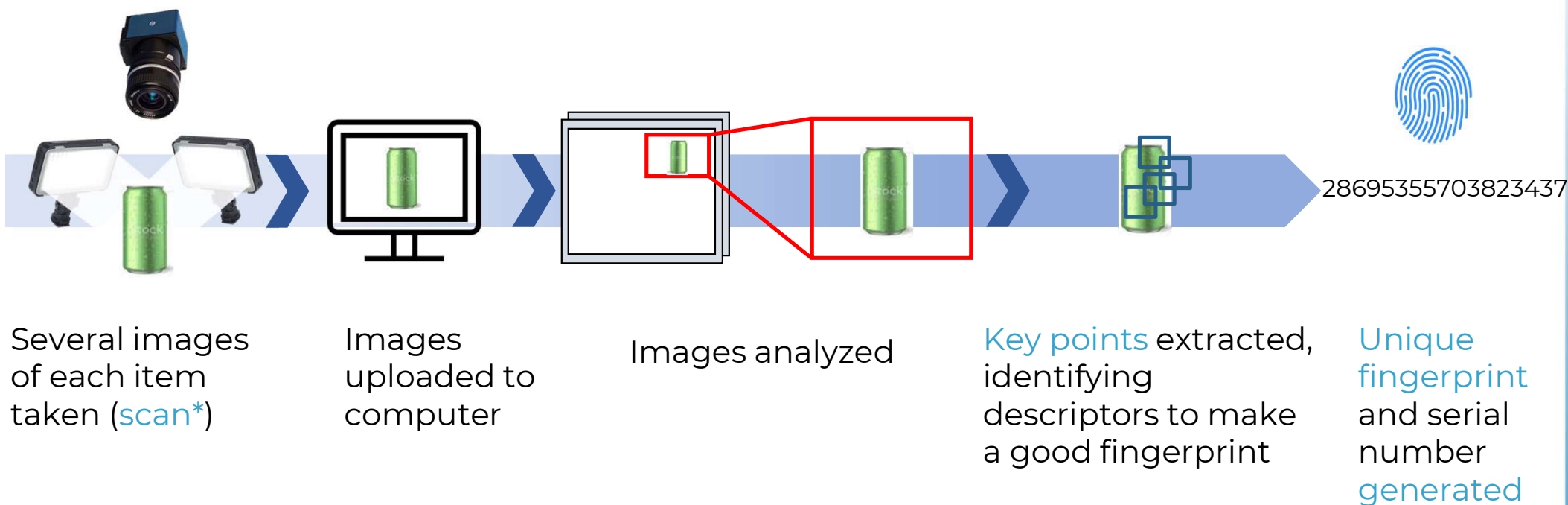
*Genesis optically captures the natural surface "fingerprint" of individual products via a standard industry camera.

BC Genesis – how it works

Differentiation process

ITEM A1

28695355703823437

The items match*

ITEM A1

28695355703823437

ITEM A1

28695355703823437

The items do not match*

ITEM A2

45876098212359027
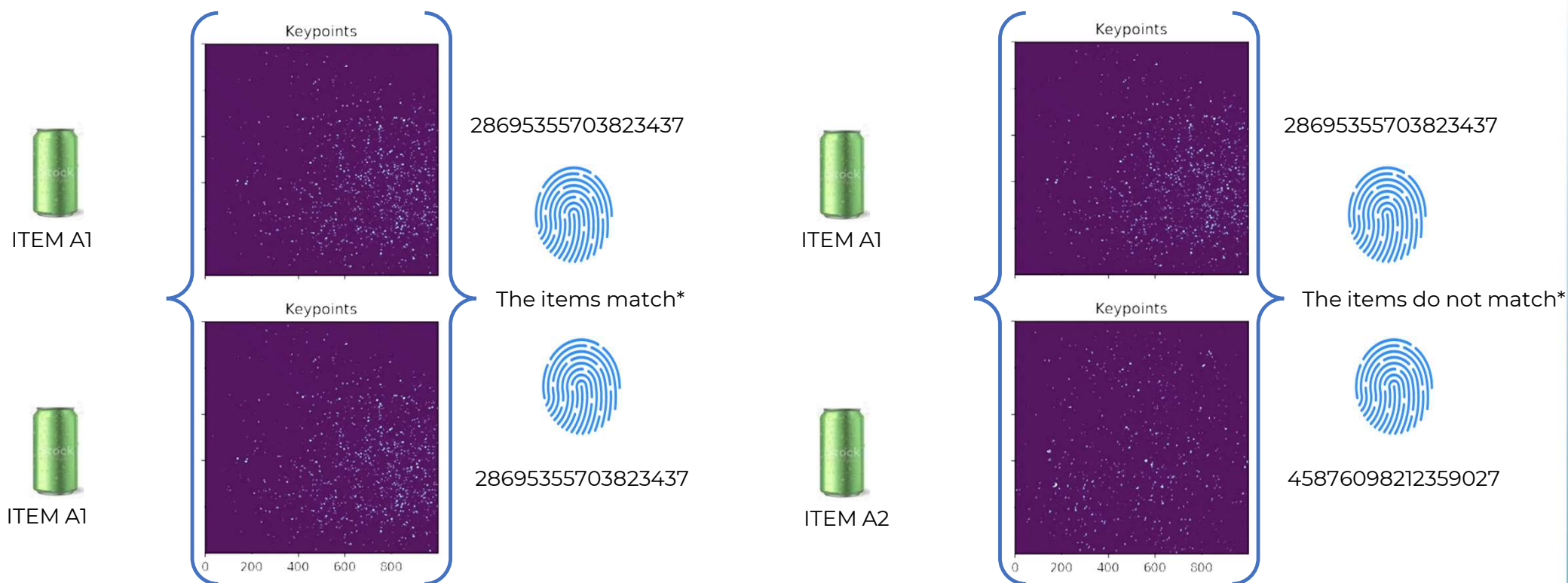
*The authentication of products can then be conducted throughout the supply chain via a standard industry camera or a simple guided smartphone application.

What BC Genesis 3 Offers

Easy-to-integrate AI-driven solutions

✓ **Quality Assurance** that uses imaging technology to detect and log product manufacturing tolerances.

✓ **Digital Product Passport (DPP)** for each individual item produced.

✓ **Track and Trace** for each individual item throughout the supply chain.

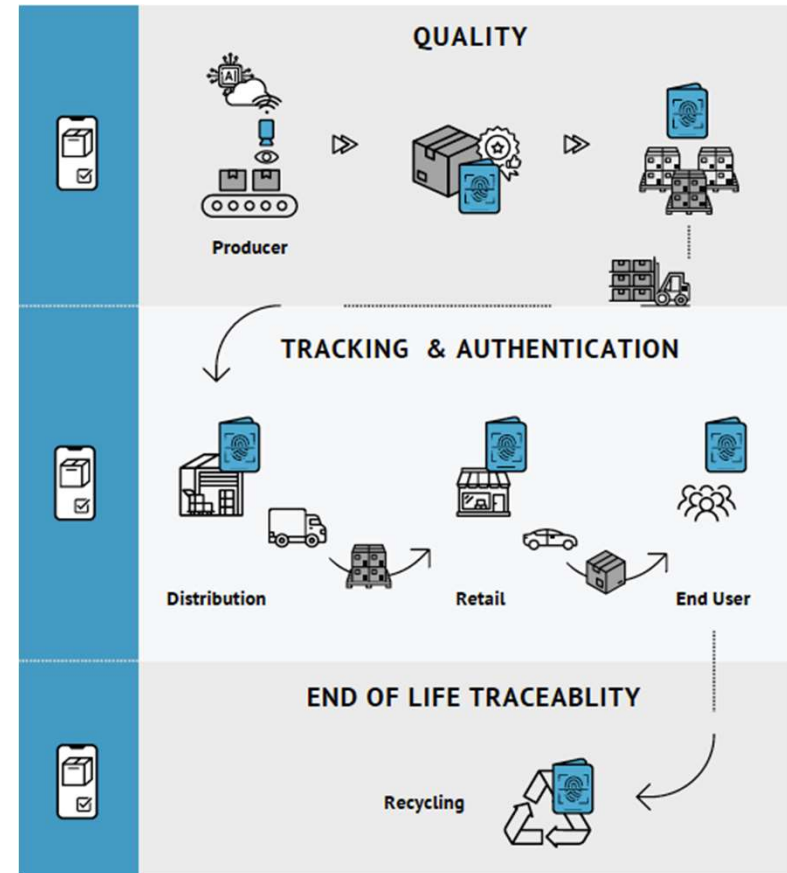✓ **Secure Authentication** that helps authenticate original items throughout the supply chain.

QUALITY

Producer

TRACKING & AUTHENTICATION

Distribution   Retail   End User

END OF LIFE TRACEABLITY

Recycling

BC isQuality

Quality Assurance

- ✓ **Reduce downtime** instantly by detecting and rectifying quality issues

- ✓ **Cut waste** by proactively identifying the need for equipment maintenance

- ✓ **Save time and resources** by catching printing errors in real-time

- ✓ **Improve customer satisfaction** and reduce complaints

- ✓ Consistently meet **regulatory compliance** for packaging quality

CAPTURE

Factory

UPLOAD

CHECK & MONITOR

TOLERANCES

ABC *Smear*

ABC *Skew*

ABC *White lines*

ALERT

ALERT

ALERT
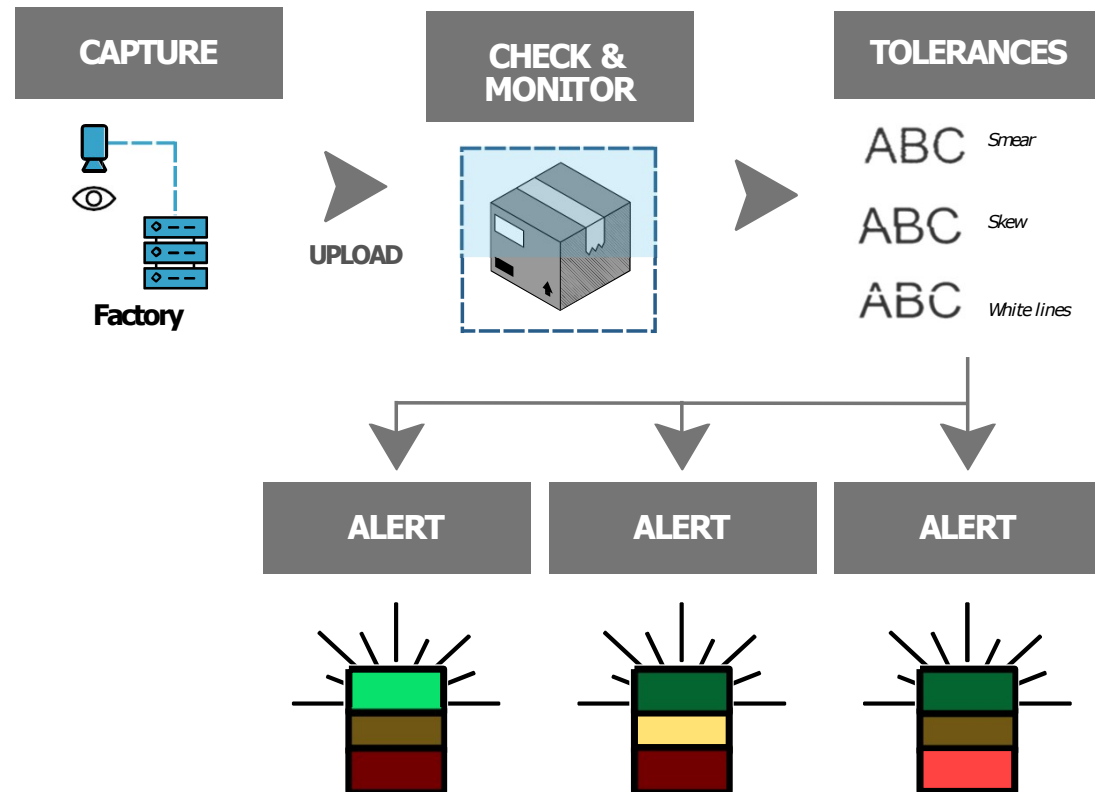
BC isPassport & isTrax

Product Identity and Tracking

CAPTURE

Factory

UPLOAD

PRODUCTION SYSTEM

Passport

SYNCHRONIZE

CLOUD

AI

Fingerprints

Passport

APP

PART XZ2527
ID 2781927265

MATERIALS   REPAIR   RECYCLE
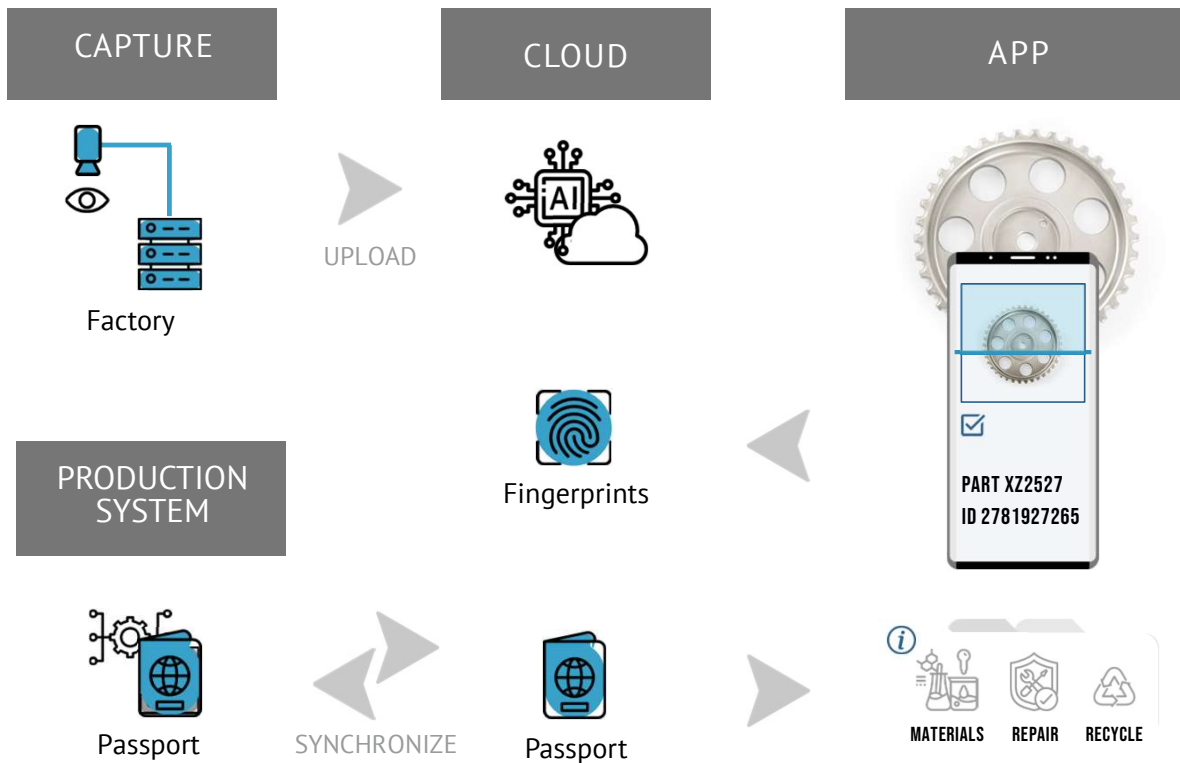
- **Streamline** supply chain processes and reduce labor costs

- Make products **safer** with reliable and verified data

- Enhance **recycling** processes with improved component verification

- Maximize **traceability** with digital product passports (DPP)

- Build consumer **trust** with improved transparency and open sustainability data

BC isAuthentic

Authenticity Reassurance

- Eliminate counterfeit risks with accurate digital fingerprints

- Fast, effortless installation, no need for changes to the product or packaging

- Verify original products with ease, anywhere in the logistics chain

- Simple and quick authentication with intuitive mobile app

- Catch counterfeited goods

CAPTURE

Factory

UPLOAD

Fingerprints

DISTRIBUTION

☑ AUTHENTIC

CLOUD

AI

RETAIL

☑ AUTHENTIC

APP

☑ AUTHENTIC

BC Genesis 3

System Overview

Internet Firewall

Local Storage

Production Cell Firewall

Optional integration

Production Line*

Existing Production System

*Existing cameras mounted in the assembly or packaging line may be used depending on position and angle

*Depending on the factory and cycle times rack mounted NAS with disks may be used

| Standards	Descripton
RAMI 4.0	Reference Architectural Model Industrie 4.0. RAMI is a service-oriented architecture for industry, combining IT and other components in a layer and lifecycle model structured like a layered 3D cube. It breaks down complex processes in to easy-to-understand packages.
Digital Twin Technology	Digital Twin technology creates a virtual representation of a product that uses real-time data track its progress from creation to recycling. Blue Cromos Platform creates a digital twin of every item produced. The twin can be identified and validated from an ID label or from visual characteristics alone.
Blockchain	Blockchain combines with Digital Twin technology to provide a cost-effective and scalable solution for data tracking through blockchain ledger traceability.
GS1	Internationally standardized data identification, capture & sharing for millions of products worldwide.
Cloud	Microsoft Azure, Amazon Web Services available as option Dimensioned to agreed throughput

BC Genesis 3

Specs, features, and computer requirements*
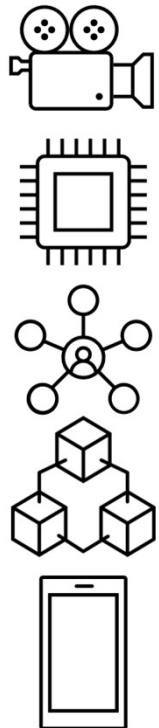
Camera	Specification
Resolution	2 Megapixel minimum; 5 Megapixel typically optimal
Frame speed	Recommend 10x item rate on production line
Interface	USB or Ethernet with PoE
Recommended models	Basler, Cognex, Keyence

Computer	Specification
Operating System	Windows 10 or later; Linux available as option
Minimum CPU	1 gigahertz (GHz) or faster with 2 or more cores on a compatible 64-bit processor or System on a Chip (SoC)
Minimum memory	16GB
Storage Capacity	Volume dependent (approx 60 kilobytes per item scanned)
Storage Type	Internal, Hyper-V Stack or other Edge component
Connectivity	USB3, Gigabit Ethernet
VPN	Secure Connect VPN to AI Cloud
Graphics	Compatible with DirectX 12 or later with WDDM 2.0 driver

Firewall	Specification
Pre-configured to work with:	Siemens Shop Floor LAN Firewall, Phoenix Contact Mguard

Code Reader	Specification
Pre-configured to work with:	Barcode, QR, DMC, Blockchain, NFT

Phone	Specification
Pre-configured to work with:	Android 9 or later
	Samsung Galaxy 10, Google Pixel 4 or later

*Minimum system requirements for installing, certain features may
require specific hardware

BC Genesis applied

Pre-configured for a variety of verticals

AUTOMOTIVE

PHARMACEUTICAL

CONSUMER GOODS

BLUE CROMOS

BC Genesis applied

Example consumer goods

- Match manufacturing with assembly needs
- Make special inquiries to ERP instantly

- Plugs in data to already existing logistical systems
- Helps improve decision making processes

ERP

Logistics

Order #

*Data goes though API's
(Differing API's depending on the data type)

API

Manufacturing level   **Supply chain**   **Distributor**   **Reseller**

Manufacturing line   Single unit   Box, multiple units   Pallet with boxes   Pallet with boxes   Warehouse   Pallet with boxes   Box, multiple units   Single unit   Shop   Purchase

API   API

BL

BN

ERP   Order #

Continuous product authentication and data transfer throughout the supply chain

BC Genesis applied

Example automotive

- Match manufacturing with assembly needs
- Make special inquiries to ERP instantly

- Plugs in data to already existing logistical systems
- Helps improve decision making processes

ERP

Logistics

*Data goes though API's
(Differing API's depending on the data type)

Order #

API

Manufacturing level

Supply chain

Assembly line

Reseller

VIN 1234567890

Manufacturing line | Single unit | Box, multiple units | Pallet with boxes | Pallet with boxes | Assembly factory | Pallet with boxes | Box, multiple units | Single unit | Assembly line | Assembly | Finished product

API

API

BL

BN

ERP

Order #

Continuous product authentication and data transfer throughout the supply chain

Genesis by Blue Cromos

**AI-powered brand protection &
supply chain management**

Contact Us For More Information

Blue Cromos