International Council of Chemical Associations

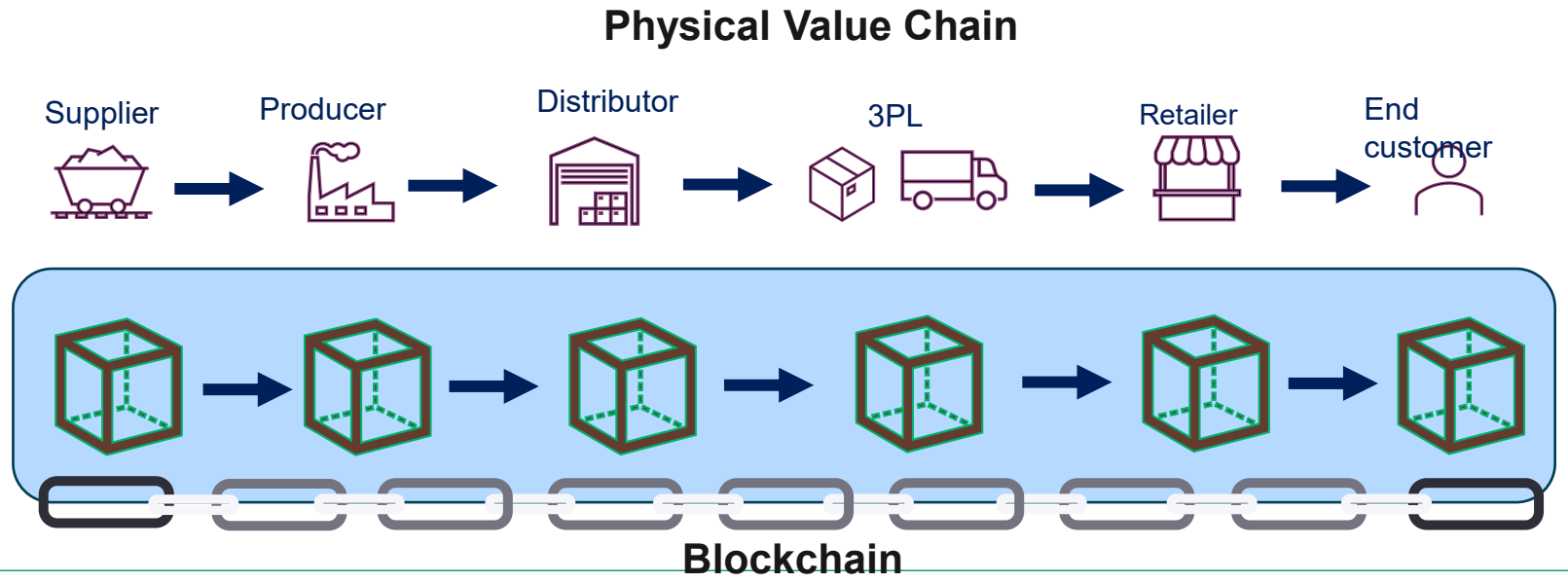
ICCA – Harnessing Technology Innovation

22 June 2025

Blockchain

- The network of networks - Organizations operate in digital silos but blockchain allows siloed systems to interoperate in an ecosystem with the appropriate governance, privacy, permissions and controls required
  - *" Blockchains will do for business ecosystems what ERP did inside the enterprise – EY"*

- Blockchain enhances trust, transparency, auditability and immutability to the ecosystem



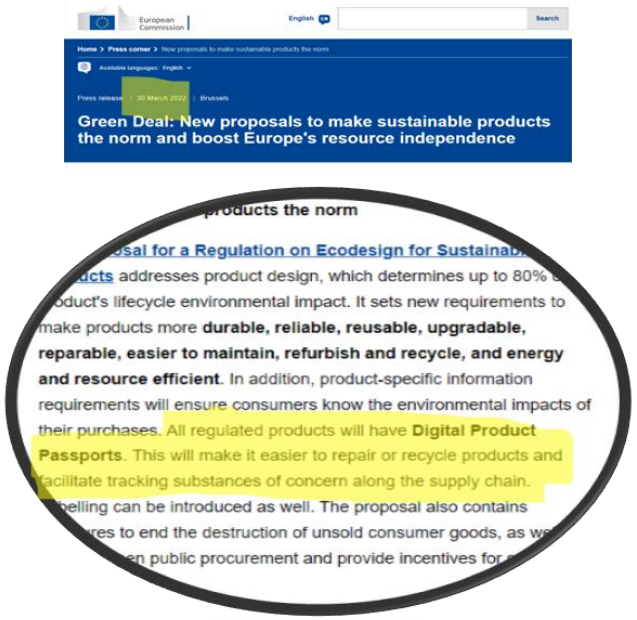
Benefits

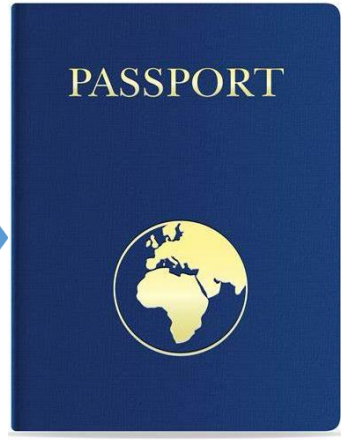
1. Data Integrity and immutability
2. Decentralization
3. Real-time monitoring
4. Transparency
5. Enhanced collaboration
6. Efficiency gains throughout the value chain

Barriers

1. Interoperability / Lack of standards
2. Scalability (transaction throughput)
3. Energy consumption raising concerns about sustainability and environmental impact
4. Security: nodes can still suffer attacks
5. Regulatory landscape still evolving creating uncertainty
6. Cost of Implementation can be significant
7. User adoption
8. Complexity and Expertise

What is the Digital Product Passport





EU Commission Legislation Proposal includes the following data points

- Name of the model
- Producer
- Size, color, and picture of the model
- Location of the manufacturing plant
- Origin of raw materials
- Environmental impact indicators
- Circularity indicators
- Social indicators / Compliance
- Chemical content
- Recycled content
- Use instructions
- Recycling instructions
- Dismantling instructions
- Other labels and green claims

DPP Objectives

- Ensure that actors along the value chain, in particular consumers, economic operators, and national authorities, can **access product information** relevant to them
- Facilitate the **verification of product compliance** by competent authorities
- Enable **traceability of products along the value chain** in an **immutable** way

DPP could accelerate the green & digital transition by promoting information sharing & collaboration

Digital Product Passport (Art. 7/8) – EU Commission Legislation Proposal

- Mandatory for all products to be placed on the market
- Products-specific (or products groups) delegated act will include the following requirements related to the DPP
- the information to be included in the product passport pursuant to Annex III;
- the types of data carrier to be used;
- the layout in which the data carrier shall be presented and its positioning;
- whether the product passport is to correspond to the model, batch, or item level;
- the manner in which the product passport shall be made accessible to customers before they are bound by a sales contract, including in case of distance selling;
- the actors that shall have access to information and to what information they shall have access (…);
- the actors that may introduce or update the information (…);
- the period for which the product passport shall remain available.
- Exemptions if technical specifications are unavailable or already digital provision of information provided by EU law

Annex III

(a) minimum DPP requirements of art. 7(2) and 8(2) or by other Union law applicable to the relevant product group;

(b) the unique product identifier (…);

(c) Global Trade Identification Number as provided for in standard ISO/IEC 15459-6 or equivalent of products or their parts;

(d) relevant commodity codes, such as a TARIC code (…);

(e) compliance documentation and information under the ESPR (…);

(f) user manuals, instructions, warnings or safety information, as required by other EU laws applicable to the product;

(g) info related to the manufacturer, i.e its unique operator identifier (…);

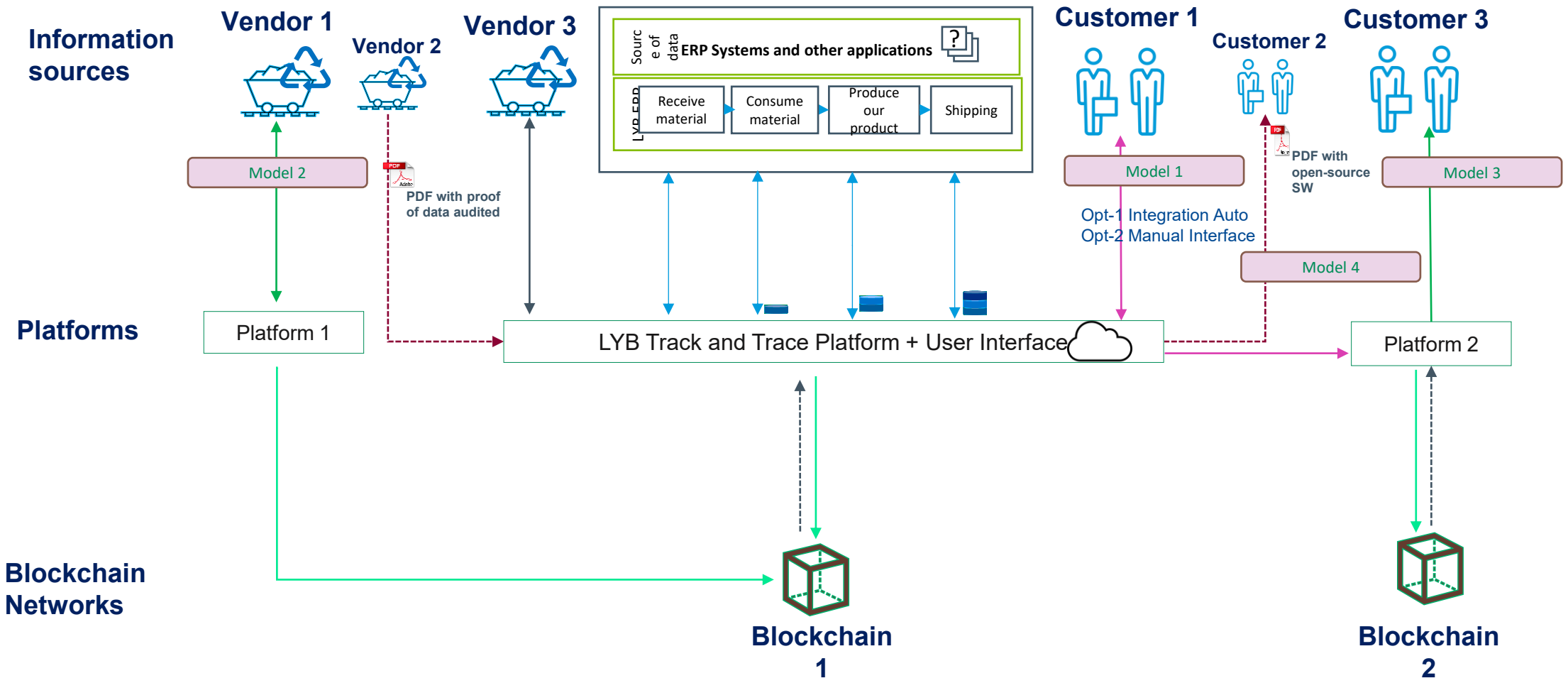
(h) unique operator identifiers (…);

(i) unique facility identifiers;

(j) information related to the importer (…);

(k) the name, contact details and unique operator identifier code of the economic operator (…).

Conceptual Design – Representation of DPP Ecosystem



Examples of Traceability projects

Examples of Traceability projects

Initiative	Organisations involved	Objective	Year of announcement
Aura Blockchain consortium	LVMH, Cartier and Prada	Provide consumers with high level of transparency and traceability throughout the lifecycle of a product.	March 2021
TextileGenesis	H&M, ArmedAngels, Mara Hoffman and Chicks	Provide consumers with the most sustainable and climate-friendly clothing and home textile products.	November 2020
FibreTrace	7Forallmankind	Digital solution that showcases transparency through a digital chain of custody.	September 2021
Trustrace – Decathlon Trustrace - Adidas	Adidas, Decathlon	Achieve material traceability at scale, gaining greater visibility into its complete supply chain down to the material level, by using TrusTrace's digital traceability platform.	2022
Circularise	Porsche	Porsche and its suppliers partnered with Circularise to use blockchain and a patent-pending Smart Questioning technology to set up secure, end-to-end traceability for specific material streams.	2020
TracrTM	De Beers Jewellers	Underpins trust for stakeholders throughout the diamond value chain by assuring a diamond's provenance, traceability and authenticity.	2020
GreenToken	Unilever	GreenToken to bring traceability and supply chain transparency. This solution allows companies to tell what percentage of palm oil products they purchased from a sustainable origin and track it to the end consumer product.	2022