UN/CEFACT

Sustainable and Digital Trade Facilitation Week

8-12 July 2024

Palais des Nations
Geneva

42nd FORUM

30th PLENARY

SESSION 2 | Protocols over Platforms - how to scale transparent supply chain tracing to meet sustainability goals

Mr. Steve Capell
Vice-Chair UN/CEFACT

Nancy Norris
Vice Chair, UN/CEFACT

Maria Teresa Pisani
Chief ad interim
Trade Facilitation Section
UNECE

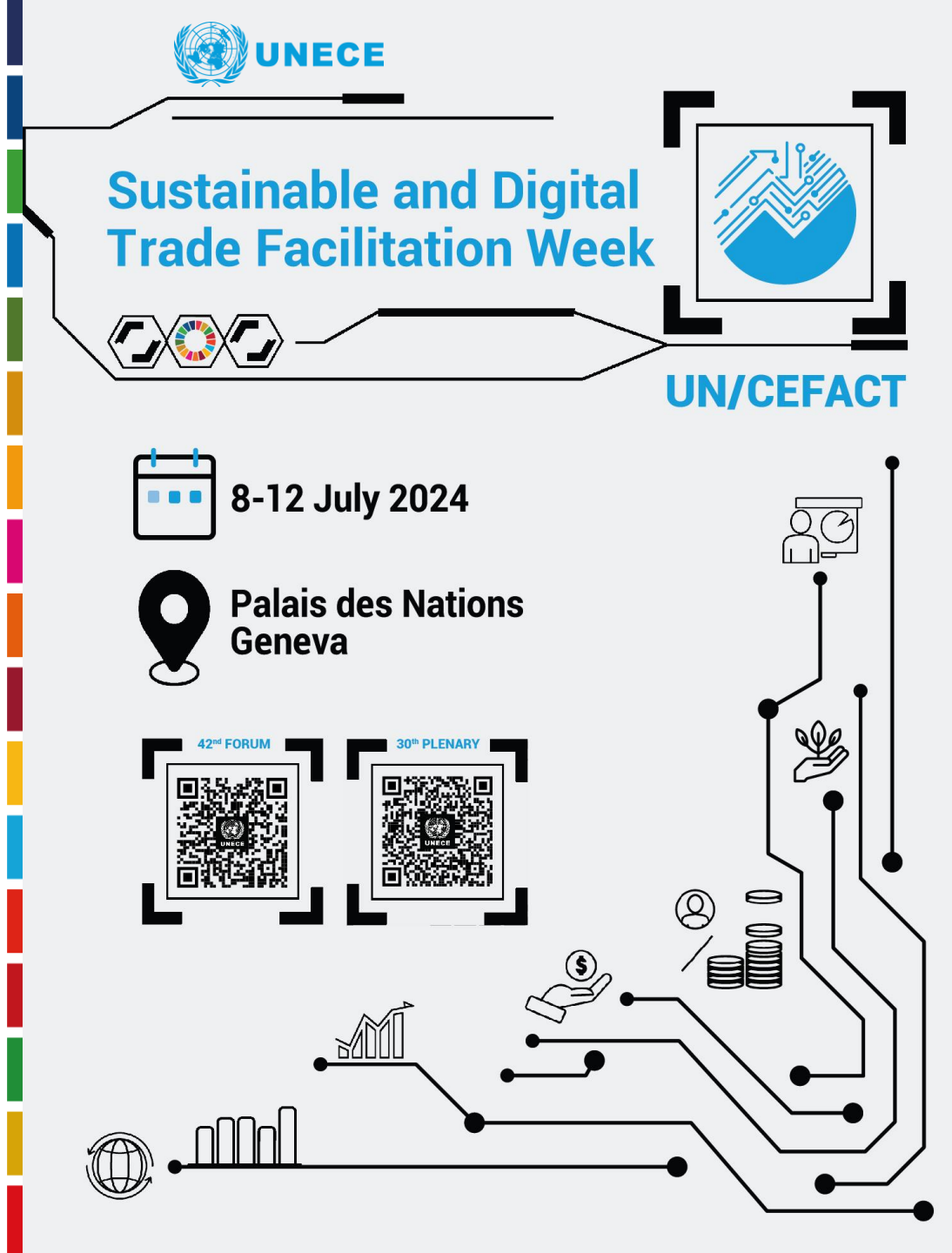
Carolynn Bernier
CIRPASS

Ben Chalmers
Senior Vice President,
Mining Association of
Canada

UN/CEFACT Forum Session 2: Protocols over Platforms

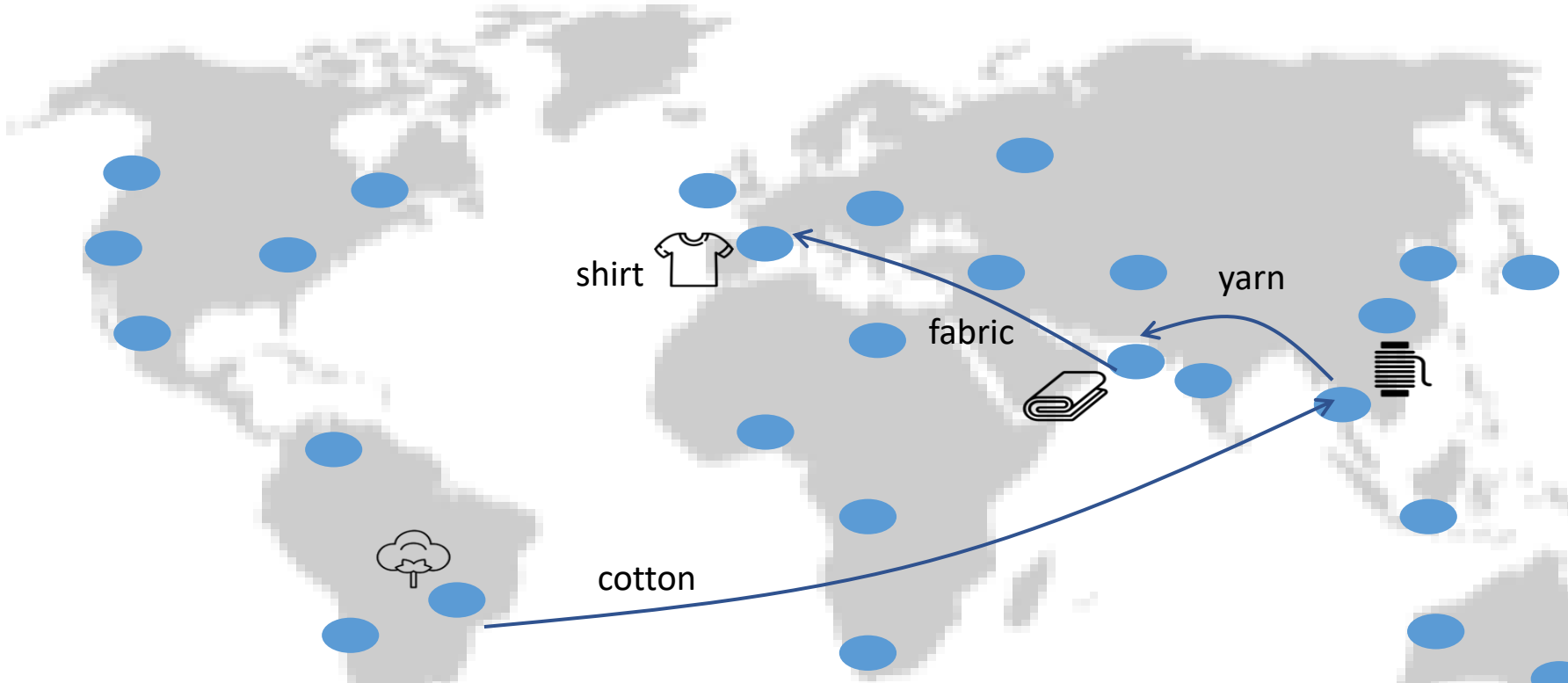
8 July 2024

14:30-16:00 CET



Transparency is the sunlight that exposes greenwashing

But it has to work AT SCALE to have any impact



UNTP

Our goal

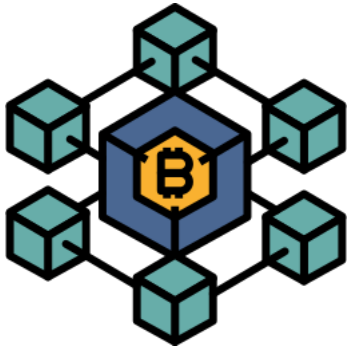
Thousands of platforms, millions of value-chains, billions of transactions

10 million UN DPPs per day

But the data we need exists in thousands of islands

Depending on your value chain partners to choose the same traceability & transparency platform as you is like saying “I can trade with anyone so long as they have an account at my bank”. Or “you can phone anyone so long as they are on the same network”. **It cannot work at scale**.

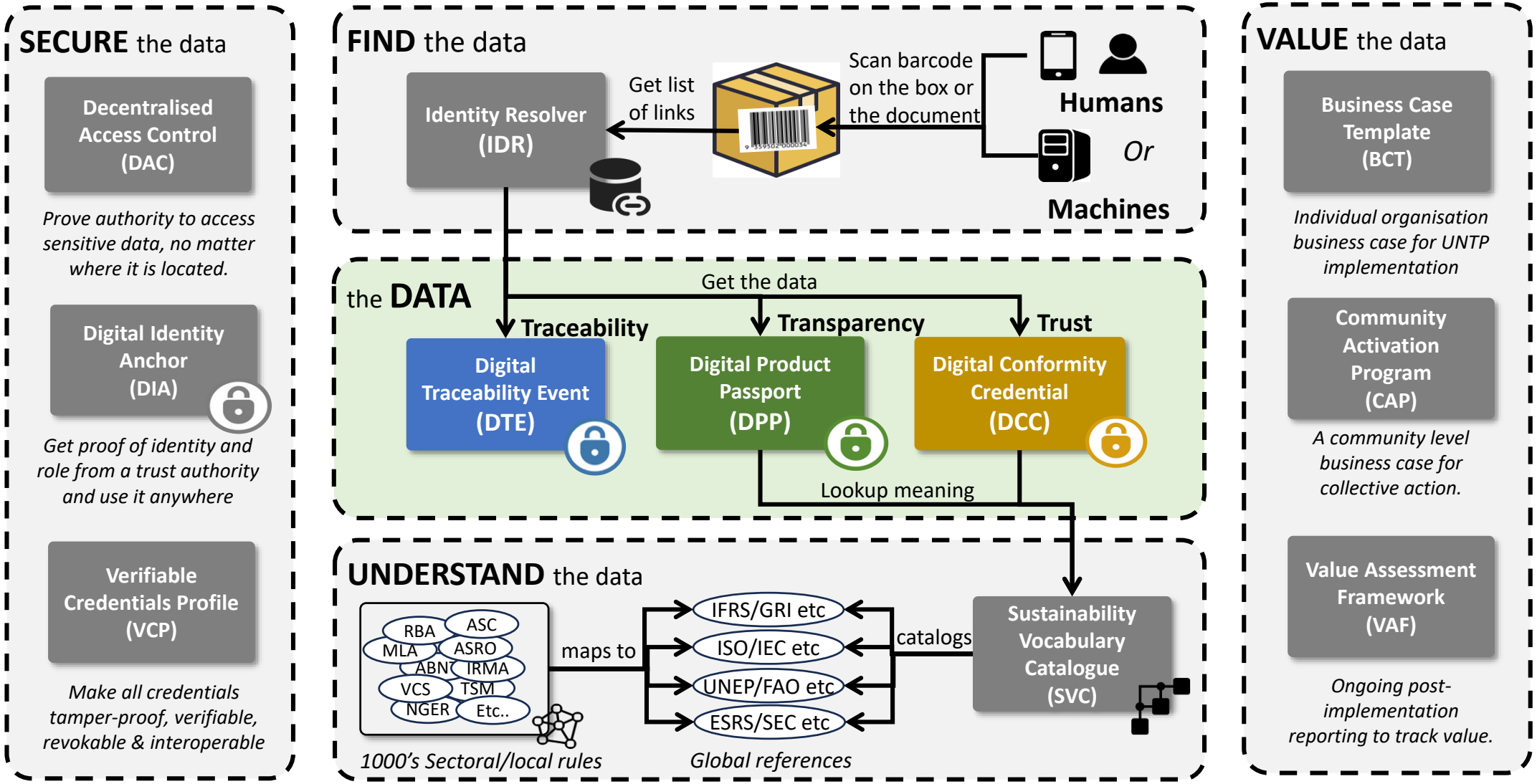
There are many banks
But you can move funds easily



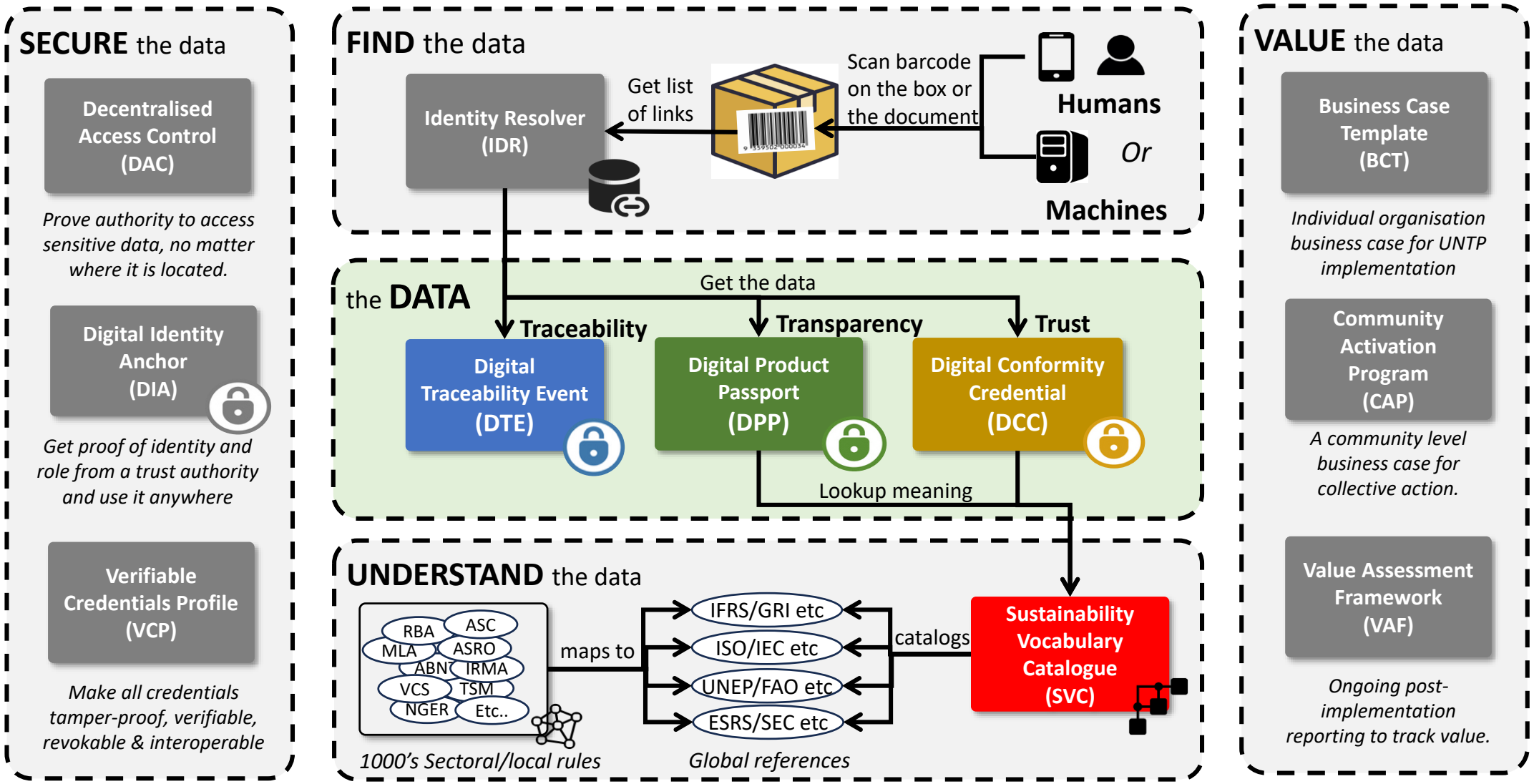
There are many traceability platforms
But they are mostly islands

Even powerful brands cannot easily reach across industry boundaries. Farmers raising cattle are doing so for their food buyers. Leather is a by-product. The fashion brand using that leather for handbags has no influence on the farmer.

So we need interoperability standards – like UNTP

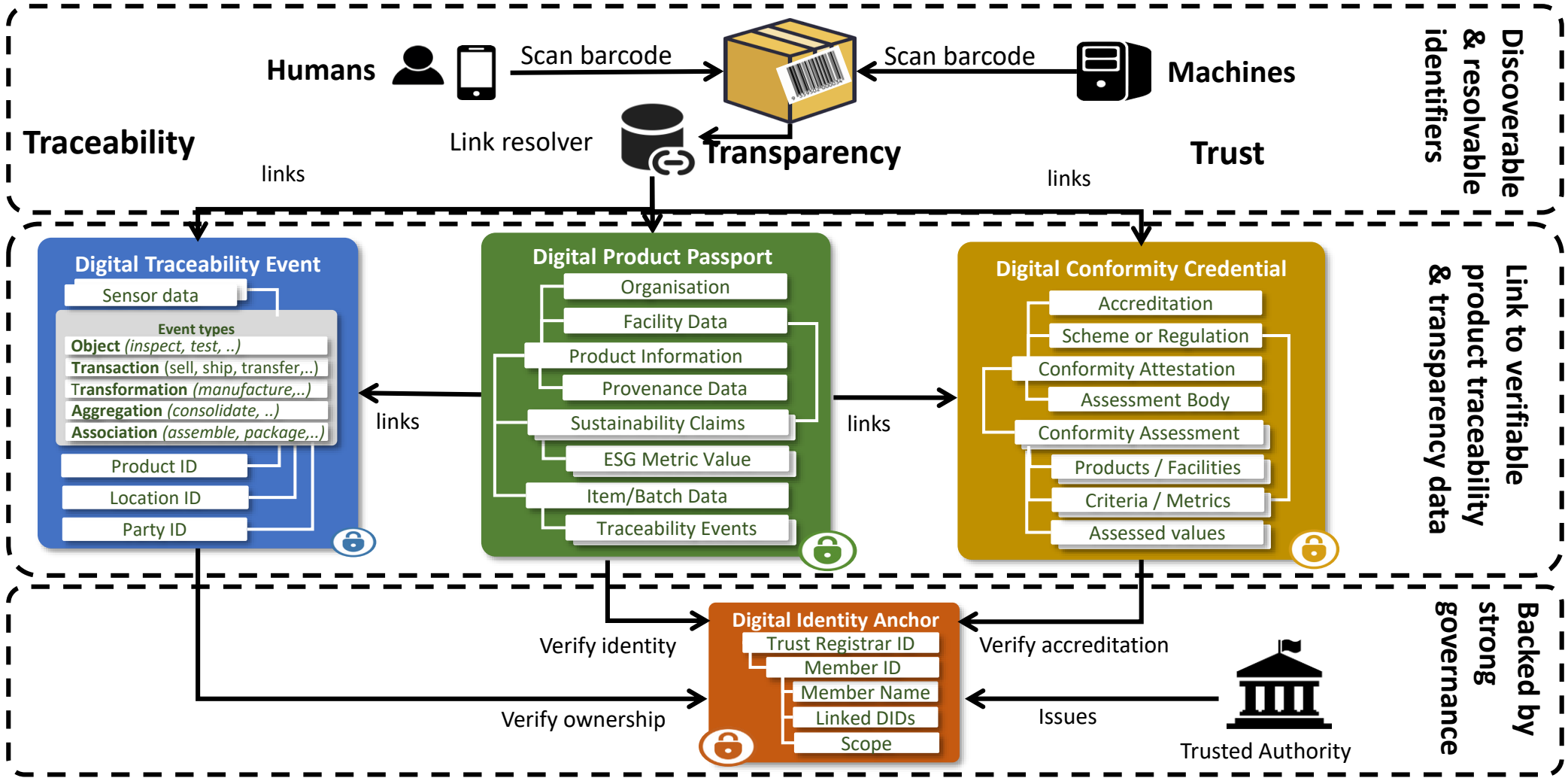


Lets look at the semantic interoperability challenge.



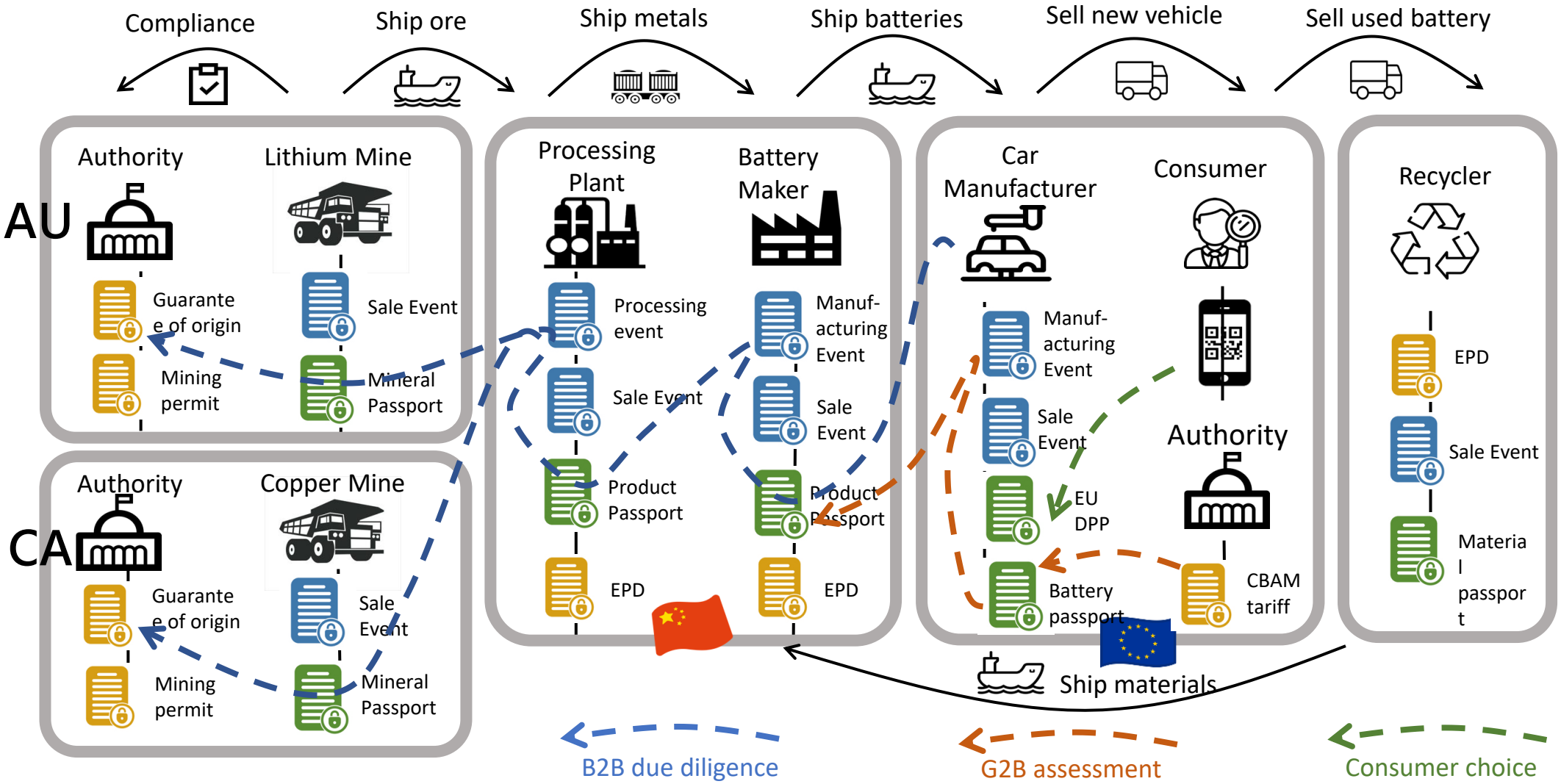
UNTP defines three core types of credentials

That each value chain actor can **independently** issue



Which can be linked together via resolvable IDs

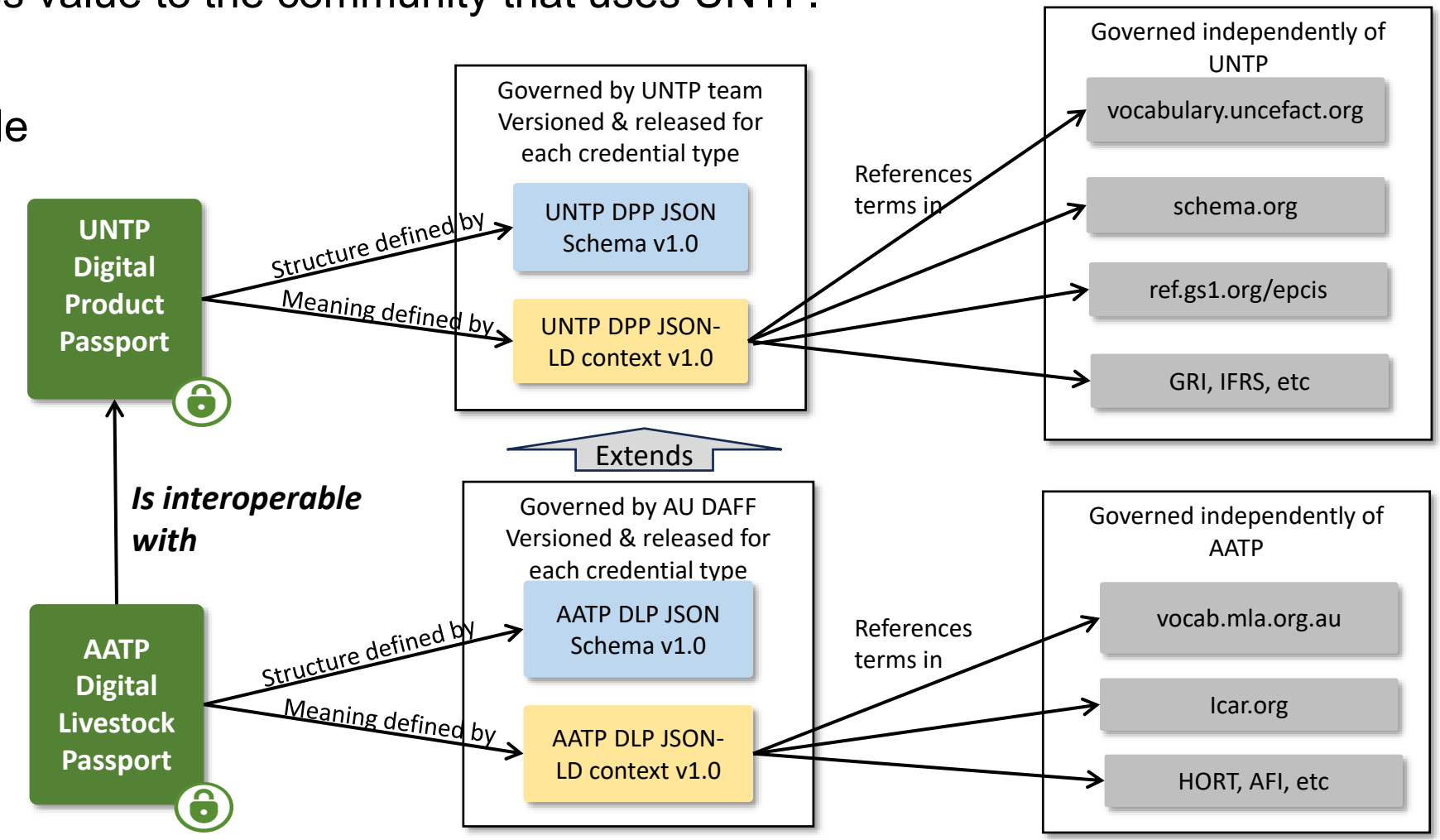
So that value chain transparency is like pulling on the end of a string of linked data.



And extended for industry & geographic sectors

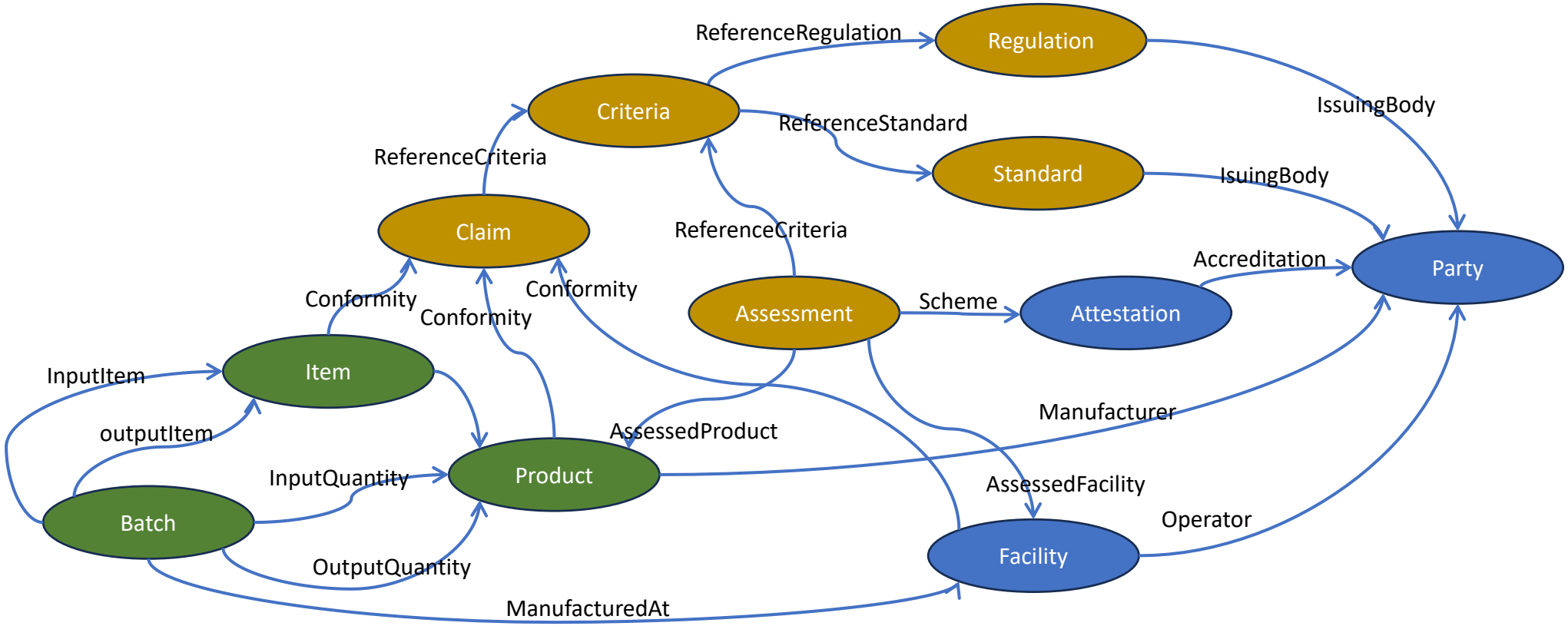
We aren't alone in defining semantic standards and we can't dictate industry or country specific standards for every case. But we can offer a simple and extensible common core that provides value to the community that uses UNTP.

For Example



So that a “transparency graph” starts to appear.

JSON-LD is a standard for machine readable linked data. The worlds most widely used semantic library (schema.org) uses it to power google searches. By using JSON-LD we simplify the task of ingesting hundreds or thousands of individual credentials and creating **meaningful transparency graphs.**



Why is this so important for UNTP?

- Because **decentralised** networks of data as envisioned by UNTP as well as EU DPP and others - **depend** on standards to be interoperable.
- Because **existing systems and platforms** must become interoperable. UNTP allows them to offer more value to their customers by reaching across boundaries.
- Because the **volume** of data that will need to me analysed for a confident assessment of a transparency graph requires **automation** – or costs will be infeasible.
- Because, with **around 150** digital product passport initiatives in various sectors and jurisdictions. Without a common core, transparency cannot scale.
- Because each industry and/or country specific sector is **independently** governed. The UN cannot dictate standards to them, but can **offer value**.
- Because reaching **10 million** interoperable DPPs per day will need **hundreds of communities** to see value in taking and extending UNTP for their members.

CIRPASS-2 project

42nd UN/CEFACT Forum:
Session 2: Protocols over Platforms

Carolynn Bernier, CEA

July 8, 2024

Funded by
the European Union

What are CIRPASS and CIRPASS-2 ?

- Funded by the European Commission under the **Digital Europe Programme**
- **Duration:** 18 months (from Oct 2022 to March 2024)
- **Coordination and Support Action (CSA)**
- **2M euros budget**
- **31 partners**

Build consensus on a standards-based DPP system

- Funded by the European Commission under the **Digital Europe Programme**
- **Duration:** May 2024 – April 2027
- **Innovation Action (IA)**
- **12,6M euros budget**
- **49 partners**

Deploy at scale Digital Product Passports in four target value chains and demonstrate data-enabled B2B activities that promote circularity

Funded by the European Union

Digital Product Passport in a Nutshell

A **Digital Product Passport (DPP)** is a structured collection of product-related, **machine-readable** data with pre-defined scope and agreed data management and access rights conveyed through a **unique product identifier** and that is accessible via electronic means through a **data carrier**.

The DPP is an **information system for the circular economy.**

Funded by the European Union

EU DPP – Regulatory sources

- The DPP is mentioned in many policy and regulatory texts of the European Commission. The most important are :
    - **Battery Regulation**
        - Formally adopted summer 2023.
    - **Ecodesign for Sustainable Products Regulation (ESPR)**
        - Adopted, May 2024.
        - Preparatory work for ESPR delegated act for textiles, iron and steel are currently ongoing.
- But also:
    - **Construction Products Regulation**
    - **Toys regulation**
    - **Detergents regulation**
    - **Packaging and Packaging Waste Regulation**
    - **Critical Raw Material Act**

    - **Link to CSRD → carbon reporting on steel and aluminum**

Funded by the European Union

DPP design

DPP-system

DPP-data

(to be developed before DPP deployment)

Digital Product Passport

(to be identified when developing product-group specific secondary legislation)

- All standards and protocols related to the IT architecture, like standards on:
  - Data carriers and unique identifiers
  - Access rights management
  - Interoperability (technical, semantic, organisation), including data exchange protocols and formats
  - Data storage
  - Data processing (introduction, modification, update)
  - Data authentication, reliability, and integrity
  - Data security and privacy
- The DPP registry

Possible Track & Trace identifiers

- Economic operator's name, registered trade name
- Global Trade Identification Number or equivalent
- TARIC code
- Global location number
- Authorised representative
- Reference of the back-up data repository
- …

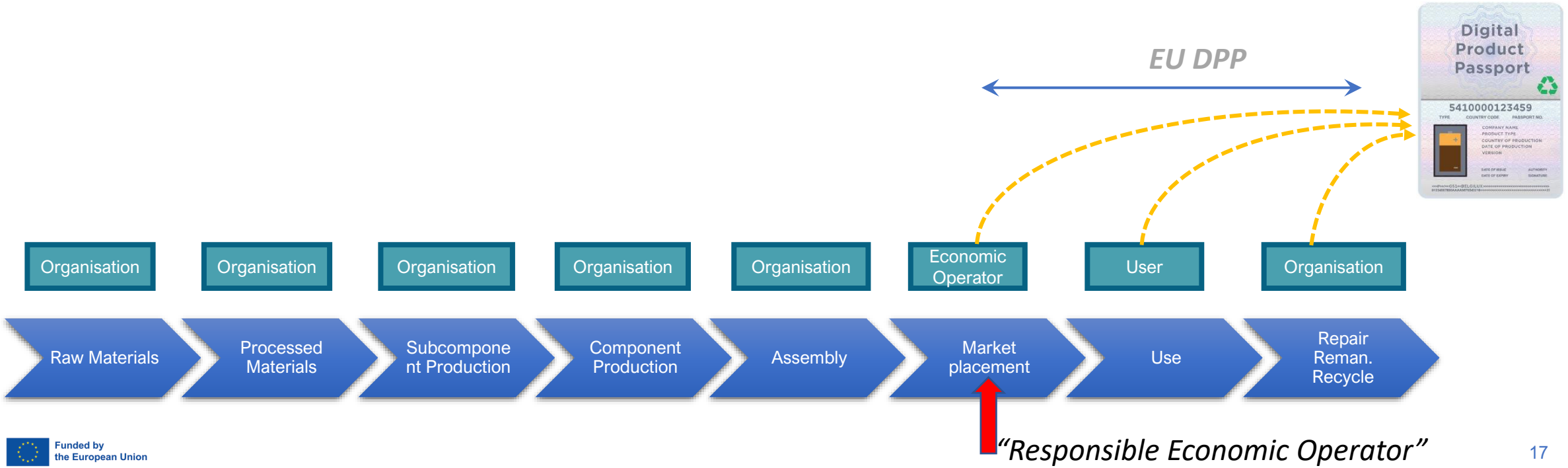
Example of potential attributes

- Description of the material, component, or product
- Recycled content
- Substances of concern
- Environmental footprint profile
- Classes of performance
- Technical parameters
- …

European Commission

What problem are we trying to solve?

- "How can **all industries** agree on a common DPP system that is
  - **compliant** to the requirements of future regulations and that is capable of supporting the massive issuing of DPPs in 2027 (Battery Regulation)?
  - **extensible and flexible** to supporting **beyond-mandatory** data exchanges to enable new circular business models?"



Funded by the European Union

Regulatory and beyond-regulatory requirements for the DPP system

Policy requirements

- No proprietary solutions
- Open standards and interoperable formats
- Decentralized data storage
- Both **static** and **dynamic** data
- **Public** and **private** access data

- **Currently, no focus on data quality!**

Business requirements

- Acceptability: Maximum reuse of legacy systems and legacy data
- Accommodate both **regulatory** and **non-mandatory** (business-model-specific) and evolving information requirements.
- Future-proof and easy to deploy: A DPP system with built-in flexibility based on state-of-the-art technologies but sufficiently mature to support DPPs in 2027

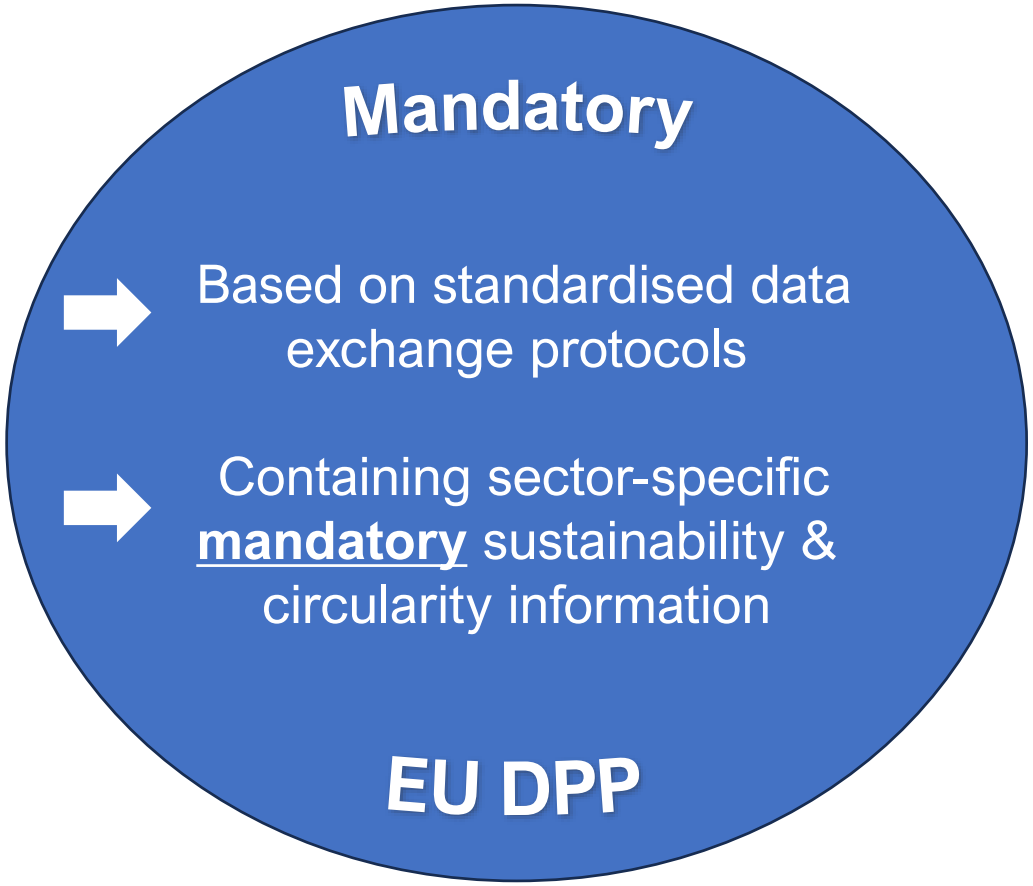
The DPP is an information system for the Circular Economy.

The **Semantic Web** stack already comes with most of the necessary (and mature) access control, usage control, verification, data ingestion, data manipulation, data exploitation tools **to link data and meta data**.

Funded by the European Union

Why is the DPP System an incredible opportunity?

- **CIRPASS Vision:** The DPP links the EU internal market to the data economy.



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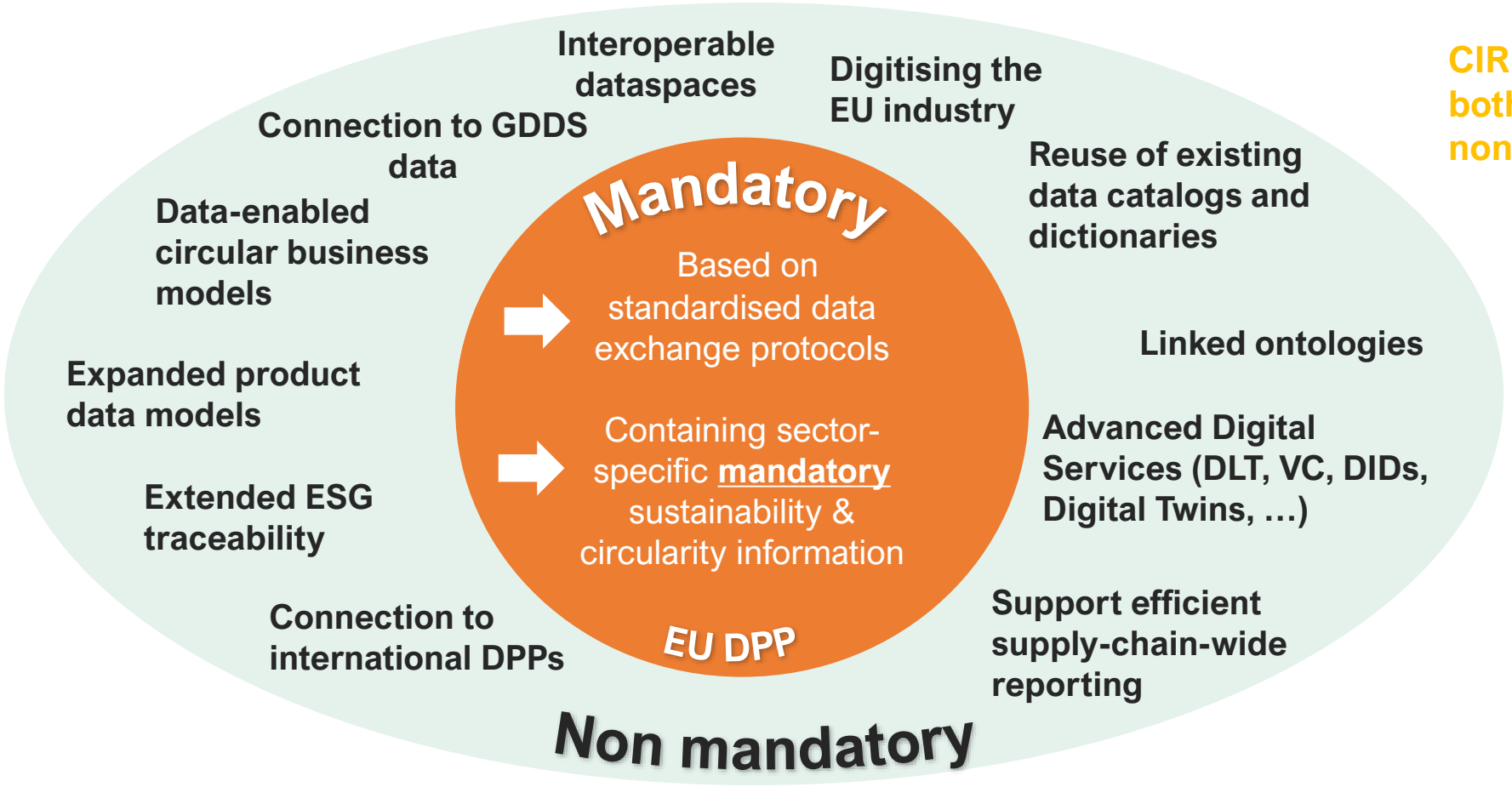


CIRPASS-2 addresses both mandatory and non-mandatory DPPs

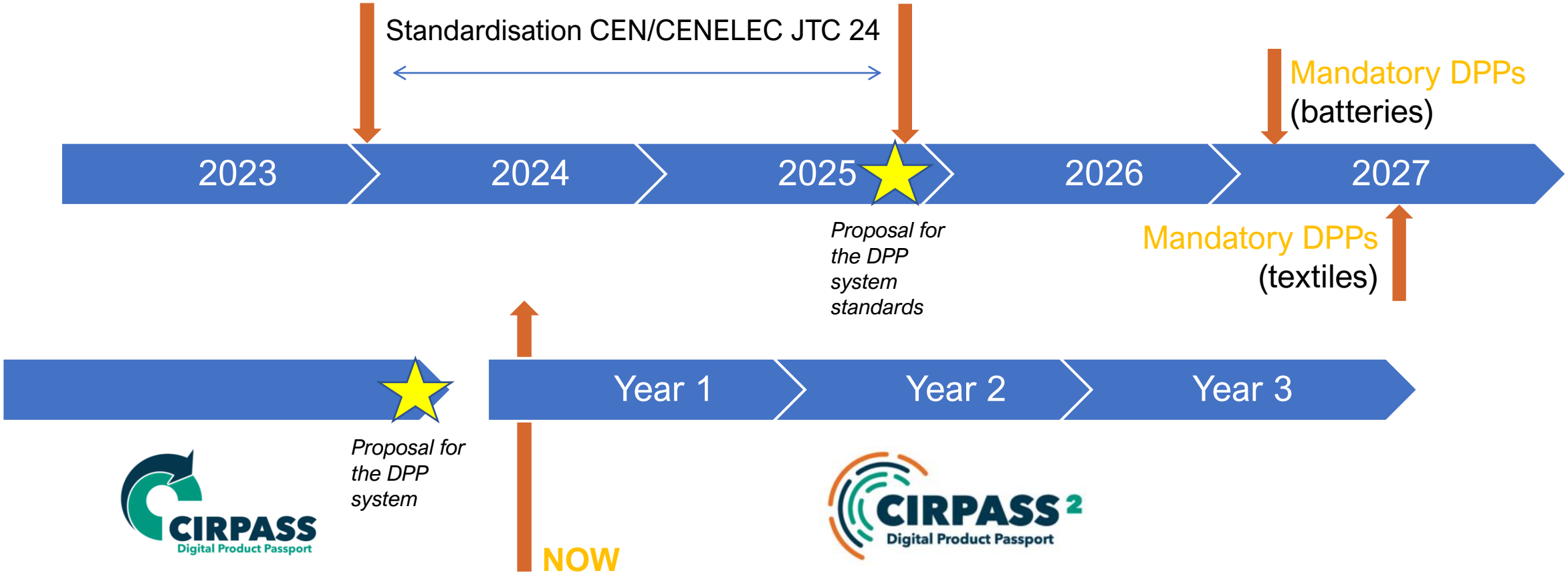
Funded by the European Union

Main achievements of the CIRPASS project

- CIRPASS proposal for the DPP system :
  - Consensus on an inclusive approach to product identification.
  - A future-looking vision for the DPP system architecture, looking beyond current regulation.
  - A flexible “every-solution-fits” approach to data sharing, based on **semantic interoperability.**
    - →transport the semantics with the data…
- A working relationship with the European Commission DPP team.
- A large stakeholder community (>4500 persons)

Funded by the European Union

Standardisation & CIRPASS-2 - Timelines



Funded by
the European Union

CIRPASS-2 Objectives

- 1 - Deploy and validate at scale and in real-life setting Digital Product Passports in four target value chains
  - Focus on B2B activities that promote circularity
  - While supporting the ongoing CEN/CENELEC standardisation work

- 2 - **Demonstrate cross-pilot interoperability**

- 3 - Provide support to SMEs in their uptake of DPPs. Support the deployment of DPP-as-a-Service

- 4 - Support the deployment and adoption of DPPs by other sectors targeted by upcoming European regulations and beyond

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CIRPASS-2 Lighthouse Pilot Ecosystems (13)

Pilot	Pilot Leader(s)	DPPaaS?	Upstream Ecosystem Typology	Targeted Products	Targeted "R" Strategies	Downstream Ecosystem typology
PA1	IOXIO	yes	STJM (Finnish Textile and Fashion Industry association), VTT (Research Institute), SITRA (Finnish Innovation Fund), 1 entreprise brand, several SME brands	Textiles - Workwear (PaaS)	Reuse, Repair, Maintenance, Remanufacturing and, eventually Recycling	Coordinated by STJM: Reuse/repair: 1 SME, 1 entreprise Reman : 1 SME Waste Collection : 1 SME Recycling : 1 SME
PA2	Kezzler	yes	Global top 10 brand, SME brand, Upstream traceability solution provider, ERP & CRM system provider, GS1	Textiles - Fashion	Reduce, Reuse, Repair	Retailer, Inventory management system provider Refurbish : Supply-chain management operator Repair : SME repair service Reuse : Resale Service Platform Recycler : Sorting and recycling operator
PA3	EON	yes	PVH (entreprise), SME fashion brand	Textiles - Fashion	Resell, Collection, Sorting and Recycling	Collecting, sorting, re-selling, and recycling : 1 SME
PA4	atma.io, circular.fashion	yes	2 entreprise brands/retail, B2G data model consultant	Textiles - Fashion & Sportswear	Resell, Repair, Sorting, Recycle, Circularity validation	Sorting technology provider : SME Sorting : 1 entreprise, 1 SME Repair, upcycle : 1 SME
PA5	TripleR	yes	6 mattress manufacturers, DPP platform provider	Textiles - Mattresses	Collectors, Remanufacturers/Refurbishers/Dismantlers and Recycling	Refurbish : 2 SME
PA6	Scantrust	yes	label provider, interoperability partner, 6 SME producers, 1 mid-size producer, 1 industry association	Textiles - Bedding, shoes (Electronics)	Reuse, Recycle	Recycling : 1 SME
PB1	Arcelik	no	Arçelik A.Ş	Electronics - Vacuum Cleaners	Reuse, Re-sell, Repair, Refurbish	Arçelik A.Ş
PB2	DDCC, ZVEI	yes	DDCC consortium partners (>50 OEMs & owner/operators)	Electronic & electrical equipment	Reuse, Repair, Refurbish, Remanufacture, Repurpose	DDCC owner/operator partners and ZVEI member companies
PB3	Whatt.io	yes	2 brands, Importer	Electronics - Audio and Emergency Lighting Equipment	Repair, Maintenance, 3D parts manufacturing	Maintenance : commercial building staff Repair : 2 additive manufacturing labs
PB4	OBADA/TBS	yes	ASCDI (trade association and marketplace, trust anchor for its members)	Electronics - IT equipment	Repair, Recycle	2 B2B marketplace
PB5	EcoWise	yes	Gorenje (manufacturer)	Electronics - Tumble Dryers	Repair, Refurbishment, and Recycling	1 end of use collector
PC1	Michelin	no (?)	Industry governance body, 2 ecoorganisms	Tyres	Remanufacturing, Recycling	2 retreaders, 2 collectors, 1 recycler, 1 sorting technology provider,
PC2	Cobuilder	yes	2 manufacturers, eco-organism, legal expert	Construction products	Reuse, Repair, Refurbishing, Repurposing, Recylcing	Contractors, quality control

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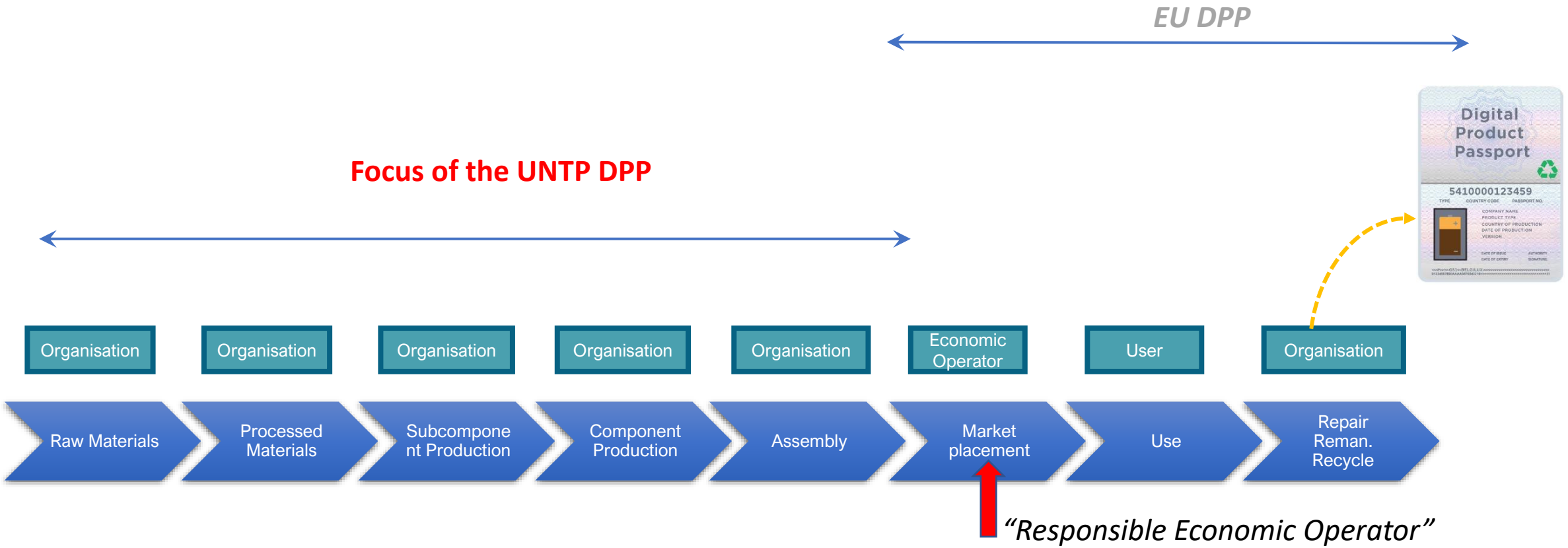
Connecting the EU DPP the UNTP DPP

- A logical way to provide high quality supply chain data to regulatory DPPs:



Funded by the European Union

For a detailed comparison of EU DPP and UNTP DPP : "***DPP Prototypes***" available https://cirpassproject.eu/project-results/

Thank you!

www.cirpass2.eu

Contact us : info@cirpass2.eu

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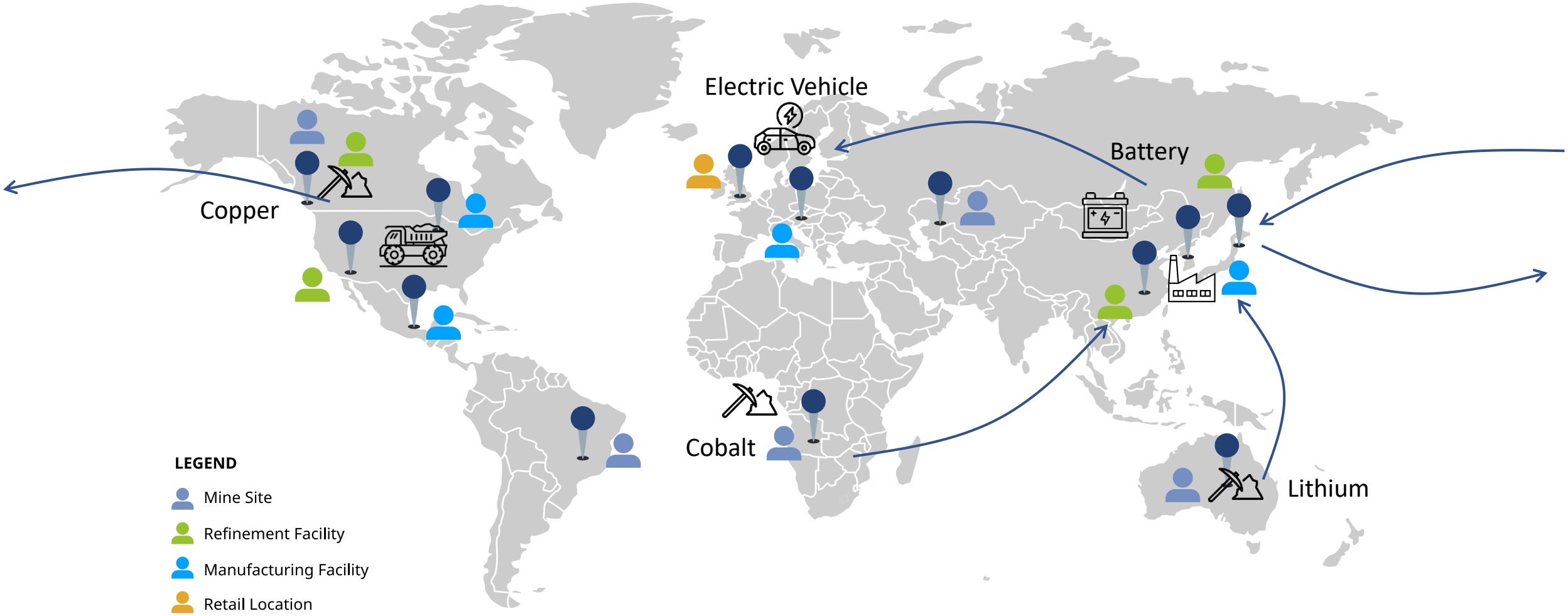
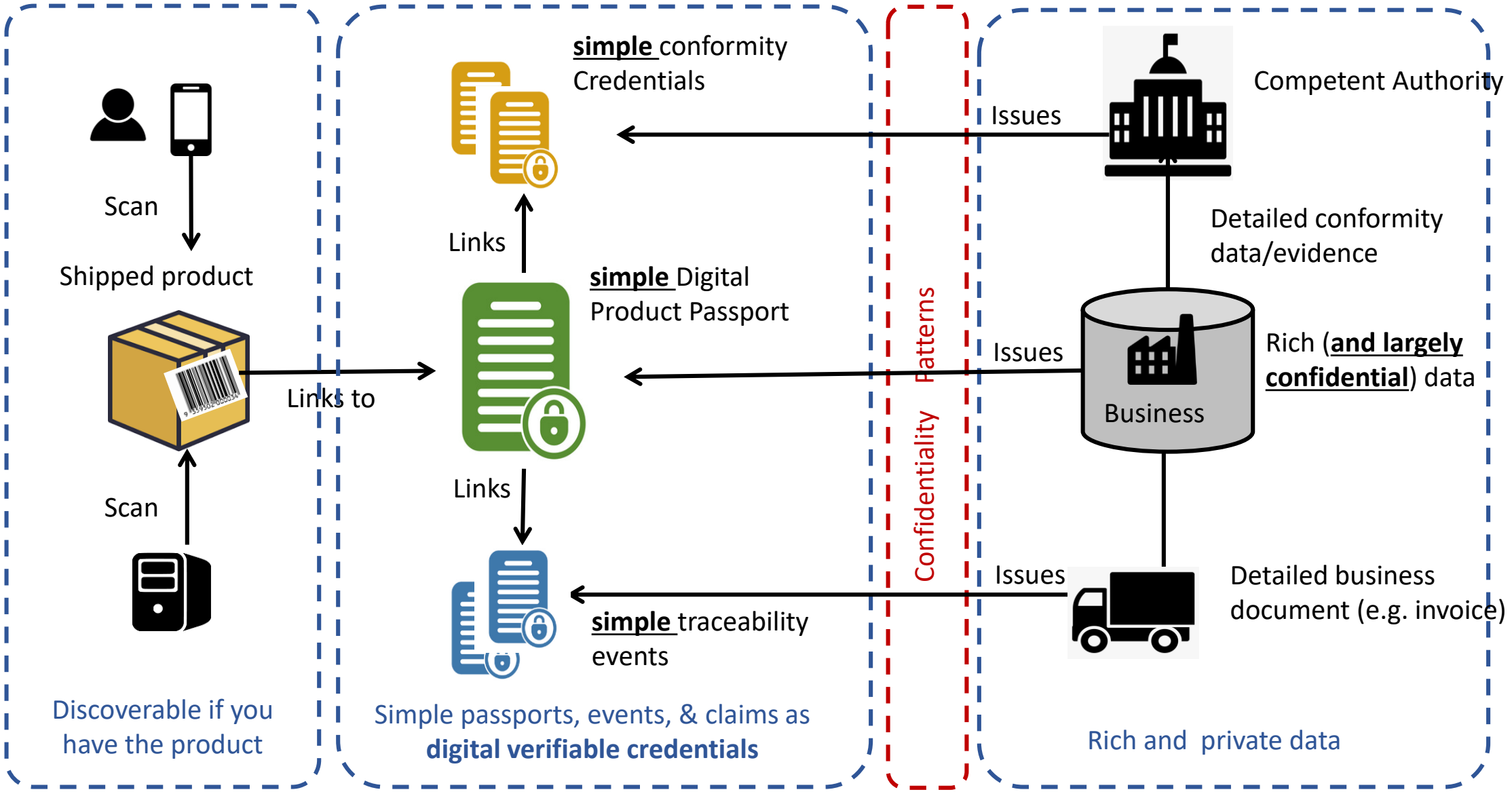
United Nations Transparency Protocol (UNTP): Critical Raw Materials



Uplift critical raw material supply chain resilience and sustainability.

UNTP - single implementer perspective



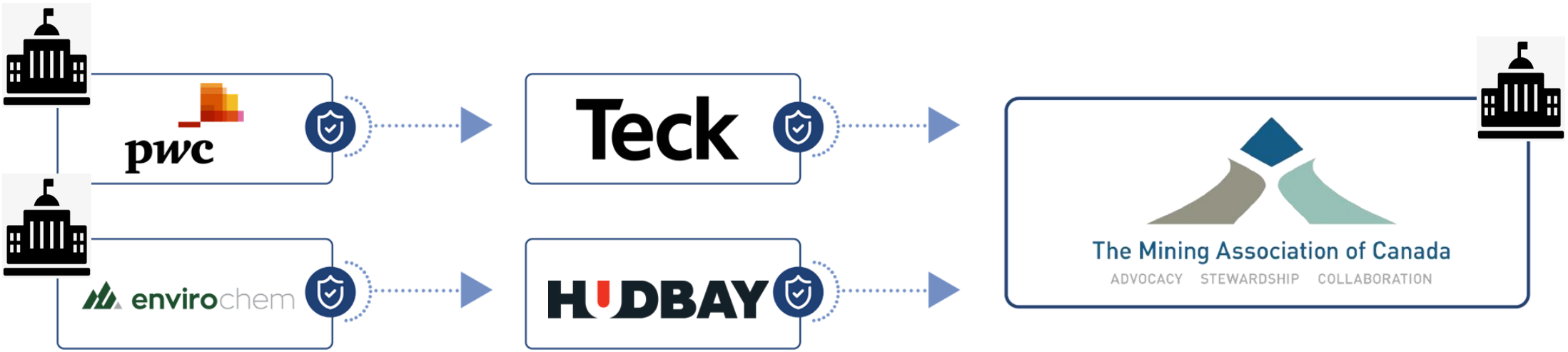
B.C. Mines Act Permit

KEY TAKEAWAYS

- Major mines operators in British Columbia can now prove their permit status using their Mines Act Permit digital credential.
- Permit status must be confirmed in many business interactions and needs to be shared in a quick and secure way.
- Verified in real-time, anyone viewing the credential can be confident the information is current and correct, without having to confirm with the Government of B.C.

ENERGY & MINES DIGITAL TRUST

Toward Sustainable Mining

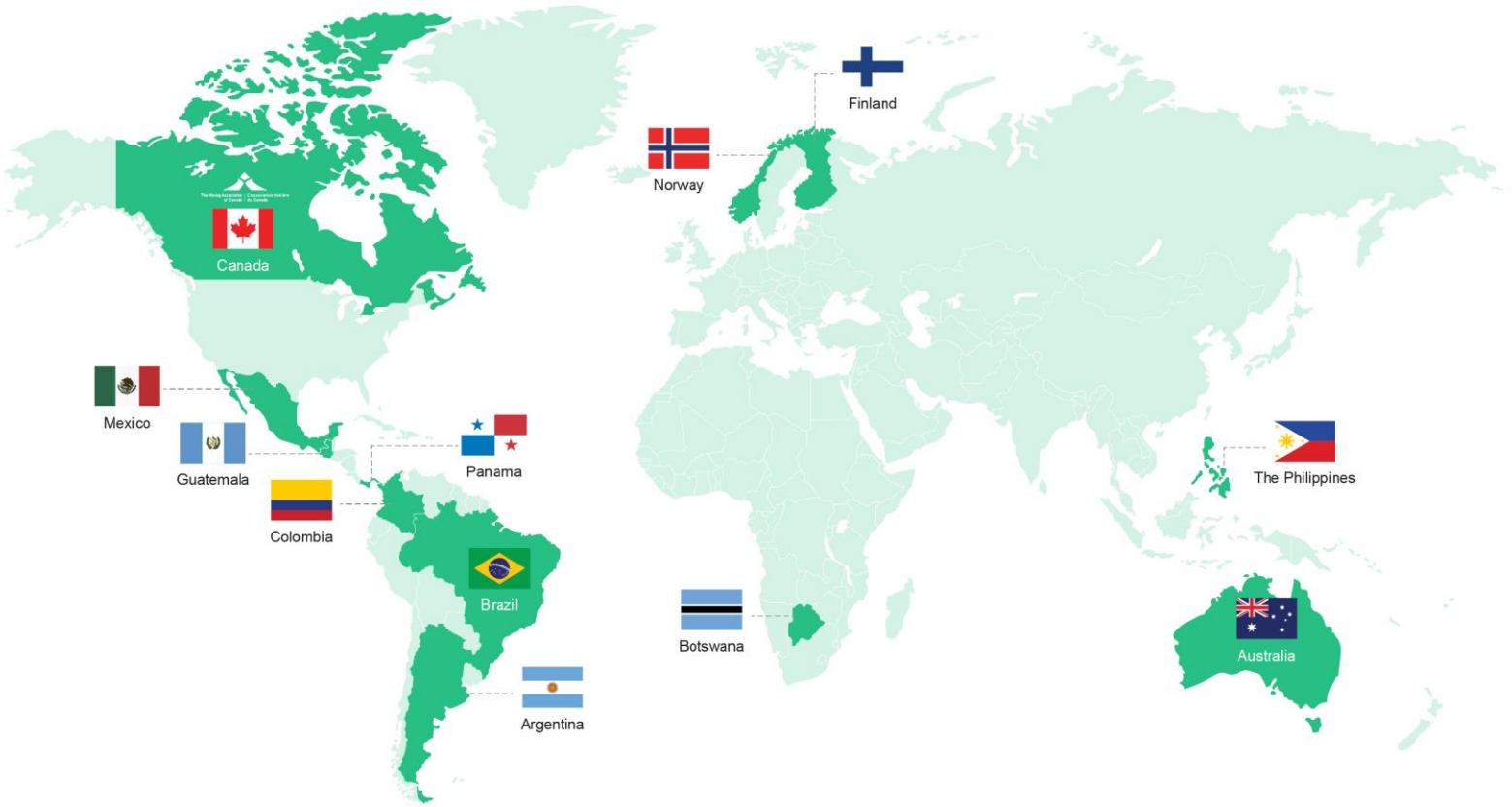


KEY TAKEAWAYS

- Increasing desire for verified ESG data at the mine site level.
- Reduced administrative burden.
- EMDT's governance work with pilot participants will apply internationally, with a notable potential for wide scale adoption.

ENERGY & MINES DIGITAL TRUST

TSM – A Global Responsible Mining Standard



- Adopted by national associations in 12 countries
- Over 200 companies actively implementing
- 6 national Community of Interest Panels established and more in development
- Recognized by a growing number of global manufacturers and investors (e.g., Apple, Tesla, BMW, La Mancha Capital)

TSM Protocols

Communities & People

- Indigenous and Community Relationships
- Safe, Healthy & Respectful Workplaces
- Crisis Management & Communications Planning
- Preventing Child and Forced Labour
- Equitable, Diverse & Inclusive Workplaces

Environmental Stewardship

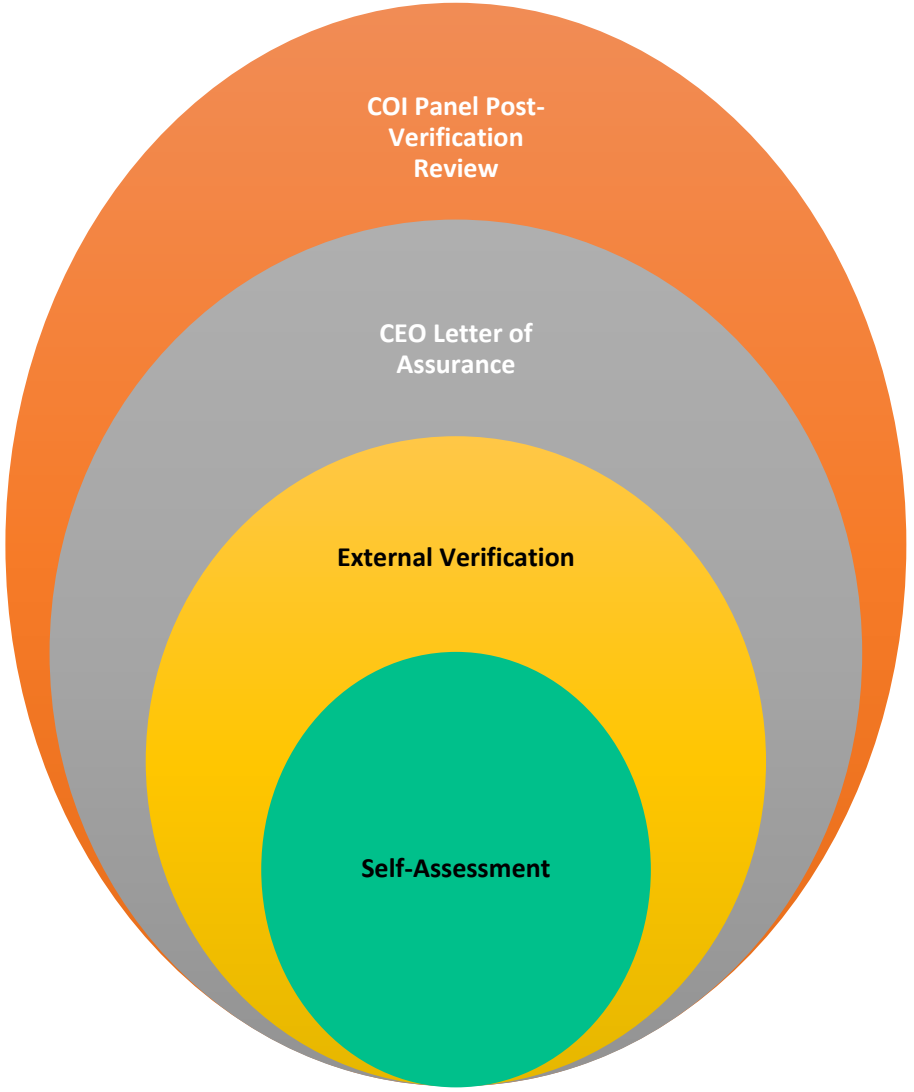
- Tailings Management
- Biodiversity Conservation Management
- Water Stewardship
- Climate Change

Rating System

AAA	Excellence and leadership.
AA	Systems and processes are integrated into management decisions and business functions
A	Good practice. Systems and processes are developed and implemented.
B	Procedures exist but are not fully consistent or documented. Systems and processes are planned and being developed.
C	Does not meet all the criteria for Level B

Verification Process

- Annual self-assessments
- External verification of self-assessments by trained verifiers every three years
- Verification summary reports published with identified gaps to reach Level A
- Advanced notice of verifications and interviews with communities of interest
- Mandatory site visit
- Document review and interviews with communities and workers
- Letter signed by CEO that the results are externally verified according to requirements
- Potential for selection by the COI Panel for a post-verification review dialogue



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Session 2 – Protocol over Platforms: How to scale transparent supply chain tracing to meeting sustainability goals

The UNECE Sustainability Pledge Initiative

Maria Teresa Pisani
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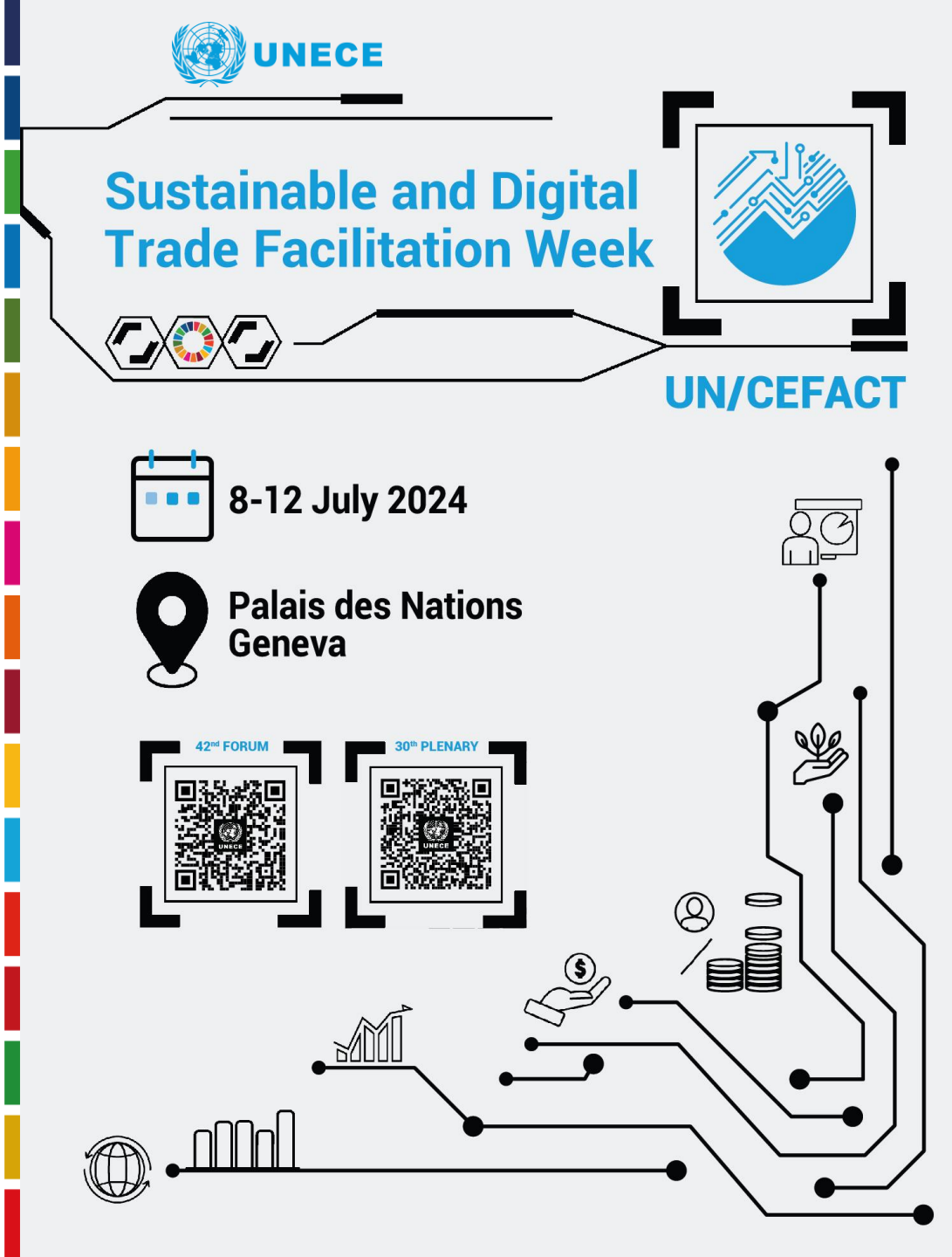


UNECE Framework Initiative: Scaling up the Toolbox

Enhancing Traceability and Transparency of Sustainable Value Chains in the Garment and Footwear Industry

+250 project experts

+**33** consultation meetings+**2000** participants

+900 experts in the wide network

+190,000 companies represented

Blockchain pilots +**100 partners** (brands-manufacturers, IGOs, standard setters, academia/start-ups)

+30 countries

The Toolbox

01. Policy Recommendation & Call to Action

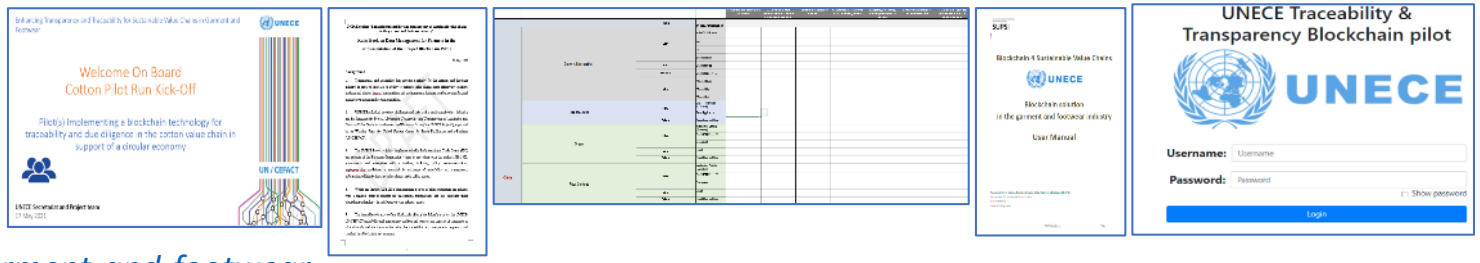
Adopted in April 2021

02. Traceability&Transparency Standard & Imp Guidelines

Adopted in April 2021

03. Blockchain Pilots & Capacity Building

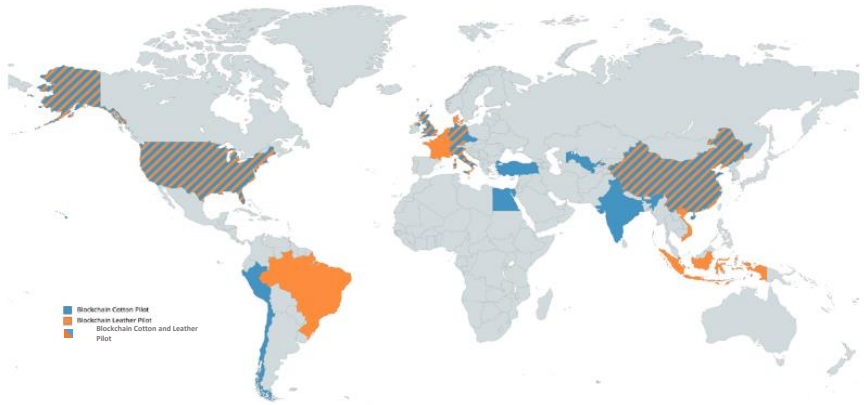
Ongoing



Project webpage https://unece.org/trade/traceability-sustainable-garment-and-footwear

Blockchain Pilots

Pilots geographical coverage and key figures



20 use cases

100 partner companies

23 countries

106 coaching sessions

+179 experts trained

Partners

Haelixa, ZDHC, OEKO-TEX® CONFIDENCE IN TEXTILES, ICEC, LEATHER WORKING GROUP, GLOBAL ORGANIC TEXTILE STANDARD GOTS, better cotton, SMIT & ZOON

FONDAZIONE PISTOLETTO CITTADELLARTE BIELLA, WWF TÜRKIYE

IFC International Finance Corporation WORLD BANK GROUP, FAO

Candiani DENIM, Vivienne Westwood, STELLA McCARTNEY, Mulberry, Lenzing Innovative by nature, GIORGIO ARMANI, Danish Crown, Albini GROUP, adidas, FILMAR, WEBA Switzerland, BERTO INDUSTRIA TESSILE, POLETTI SHIRTS, PH, INDORAMA, DS DENIM SERVICE, EHR, Tyson, tapestry, minerva foods, MARCHI & FILDI END TO END SOLUTION PROVIDER, samo, PrimeAsia, APACHE, ICA YARNS, bcn, Scan-Hide, Leather Links, RICHARD HOFFMANS, SEKEM, SÖKTAS, the cat's PAJAMAS, REDA, Creditex

Overview of products' use cases

Recycled denim jeans

Organic shirt

Regenerative Turkish cotton T-Shirt

Uzbek cotton T-shirts

Inclusive Peruvian cotton pyjama

Low environmental impact cotton socks

Chemical compliant and sustainable leather handbag

100% certified wool Flannel jacket

Chemical compliant and sustainable leather sneakers

UNECE

THE SUSTAINABILITY PLEDGE TRACK IT, TRACE IT, WEAR IT!

Funded by the European Union

United for greater traceability, transparency and circularity in the garment and footwear sector

Pledges, Actors & Partners

THE SUSTAINABILITY PLEDGE

TRACK IT, TRACE IT, WEAR IT!

111 — PLEDGES

+800 — PARTNERS

+100 — PLEDGING ACTORS

28 — COUNTRIES

The Community of Practice (June 2024)

UNECE
THE SUSTAINABILITY PLEDGE
TRACK IT, TRACE IT, WEAR IT!
Funded by the European Union

UNECE Sustainability Pledge 3-years monitoring report

[The Sustainability Pledge 3-years monitoring report | UNECE]

Sustainability Pledge Facts and Figures

Progress chart of pledges, actors and countries between 2021-2024

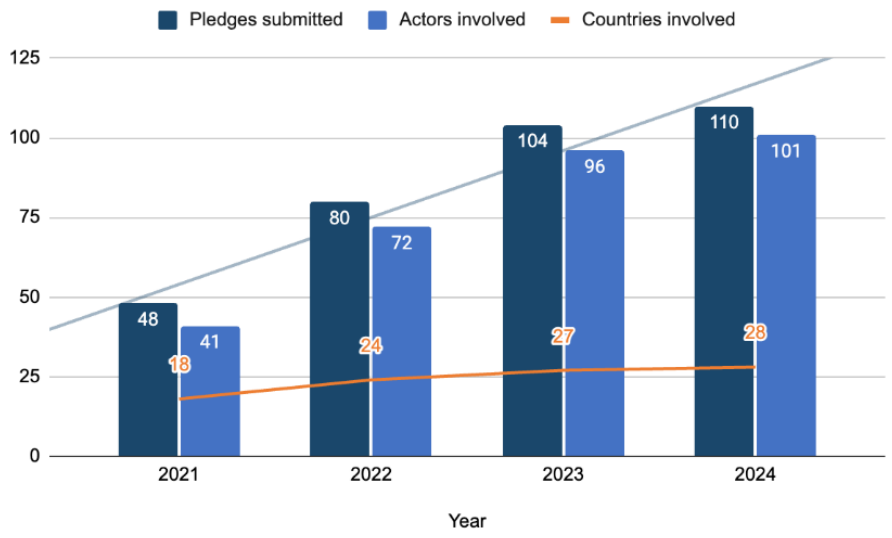


Figure based on 110 pledges related data (updated on June 2024)

110
Pledges received

100+
Actors involved

800+
Partners involved

28
Countries involved

2024 data

Geographical coverage - Map of countries with the number of pledges detail

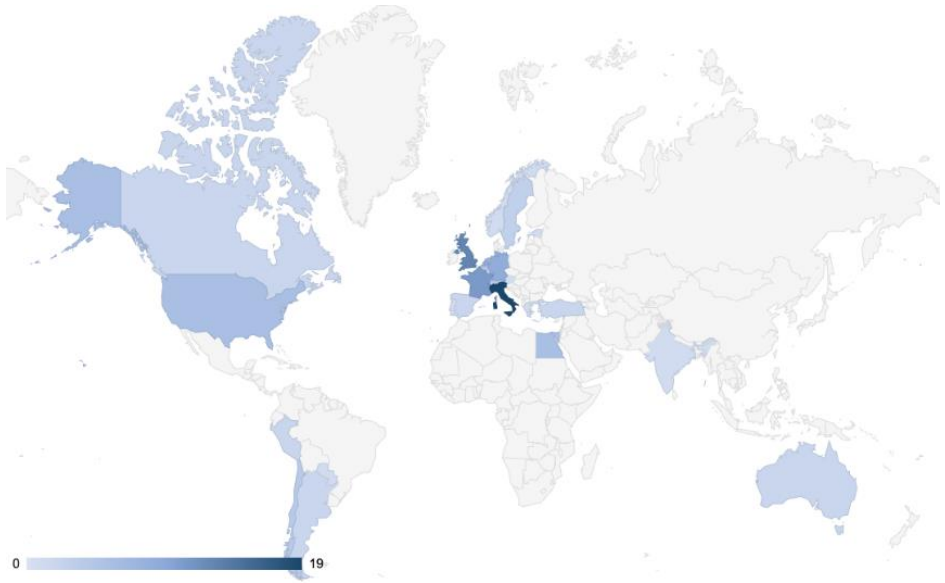


Figure based on 110 pledges related data (updated on June 2024)

"Committing to UNECE's Call to Action and The Sustainability Pledge aligned with our existing sustainability efforts, amplifying our impact through collaboration and global initiatives. [...], it reinforced our strategic direction and provided additional support in advancing sustainability goals within our organisation" **(quote by a private initiative)**

Next steps

Enhancing Transparency and Traceability for Sustainable Value Chains in Strategic Sectors for the Green and Digital Transitions in the UNECE region and beyond (Phase III)

Garment and Footwear sector

- Focus on **downstream traceability** to promote transition to circular textiles value chain
- Expand the use of the SLCP Gateway into new adjacent sectors such as **home textiles**

Beef and bovine hides

- Create integrated traceability solutions for the meat and leather value chain to enable **full traceability of leather products** up to the farm level;
- Accompanying support to implementation of **Deforestation Regulation** in partner countries

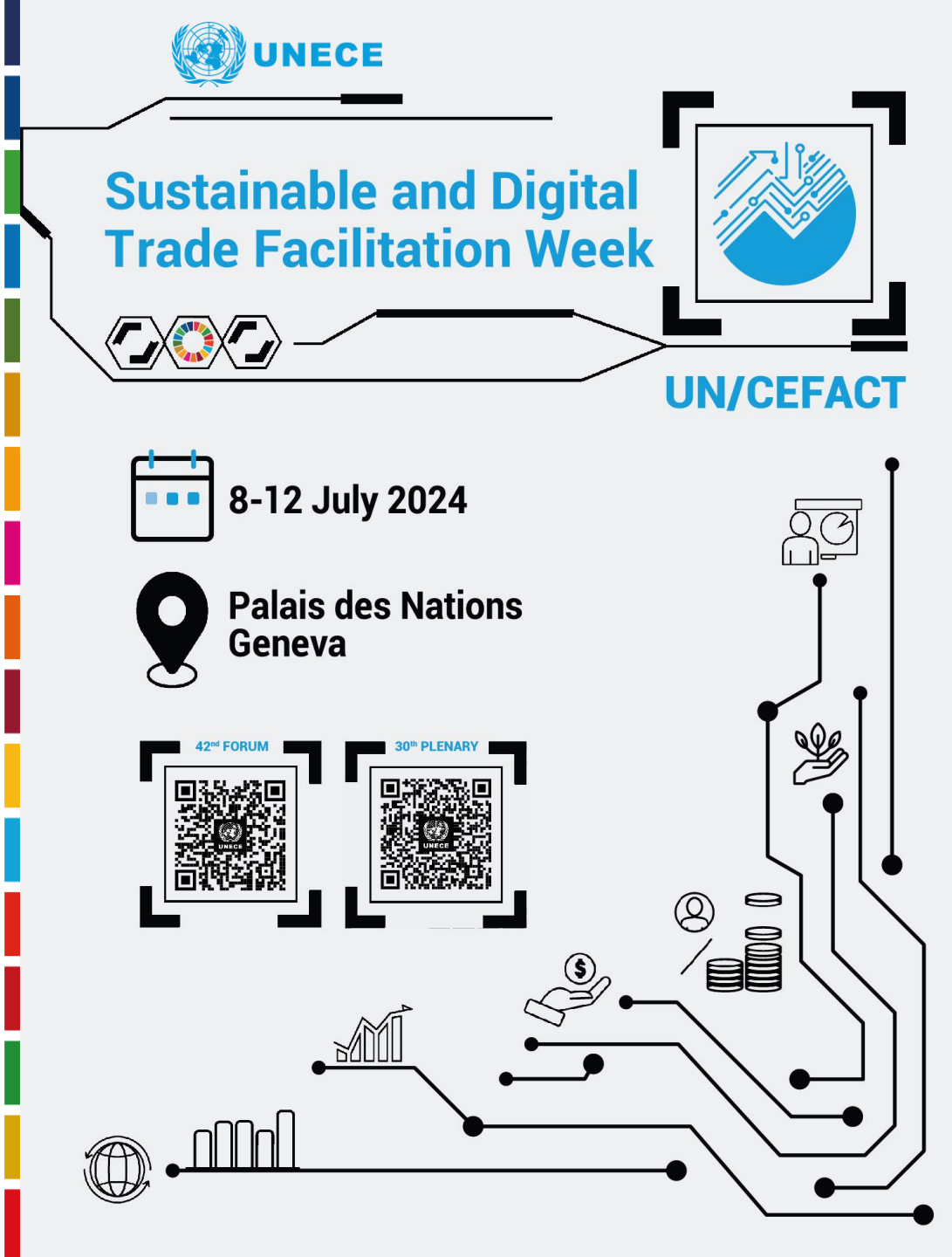
Critical Raw Material

- Provide solutions that meet traceability needs of **CRM Act, Batteries Regulation** and **CSDDD**
- Address traceability challenges of a CRM with **artisanal and small-scale mining** operations in partnership with EPRM

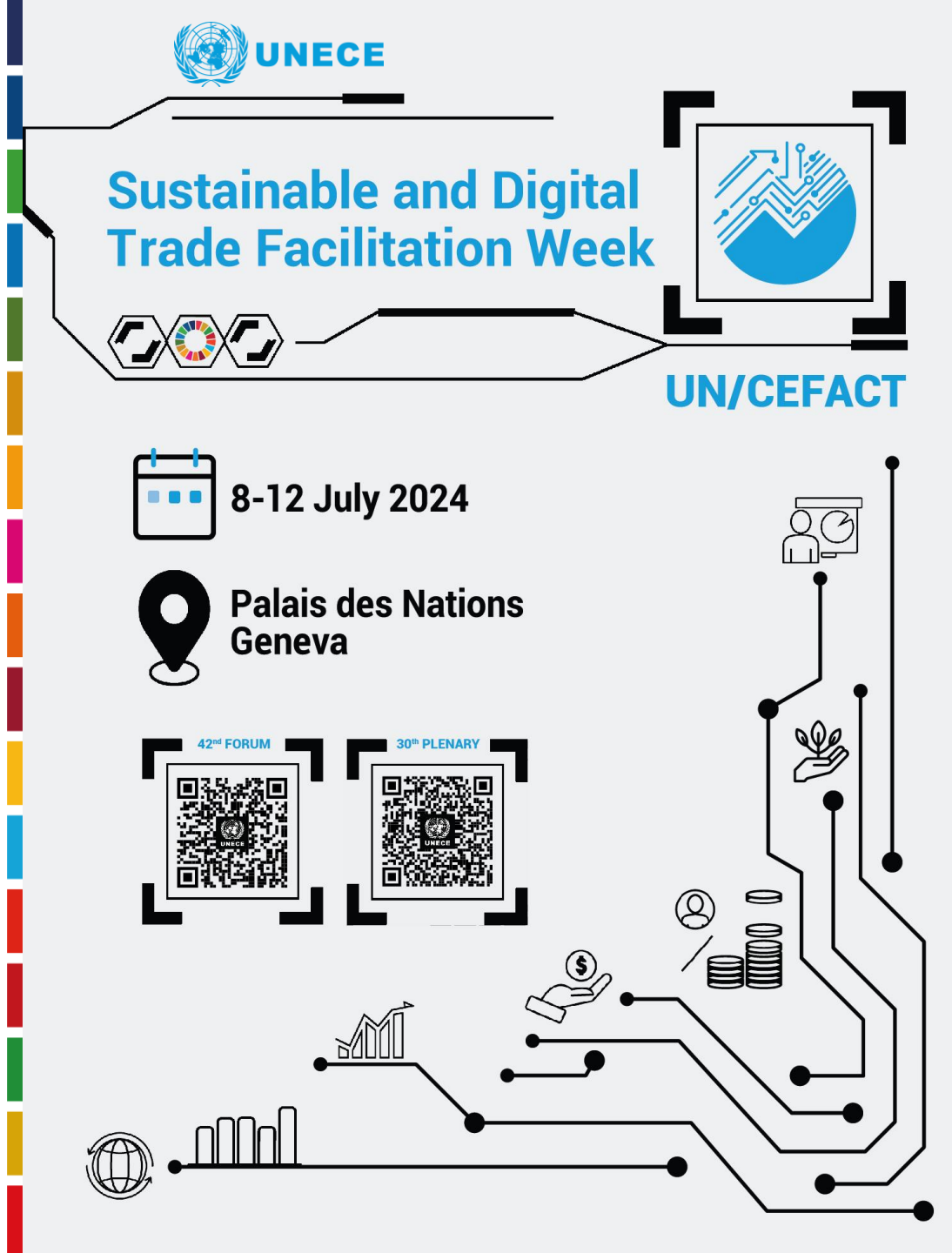
Thank you!

Maria Teresa Pisani
Chief ad-interim Trade Facilitation Section
UNECE

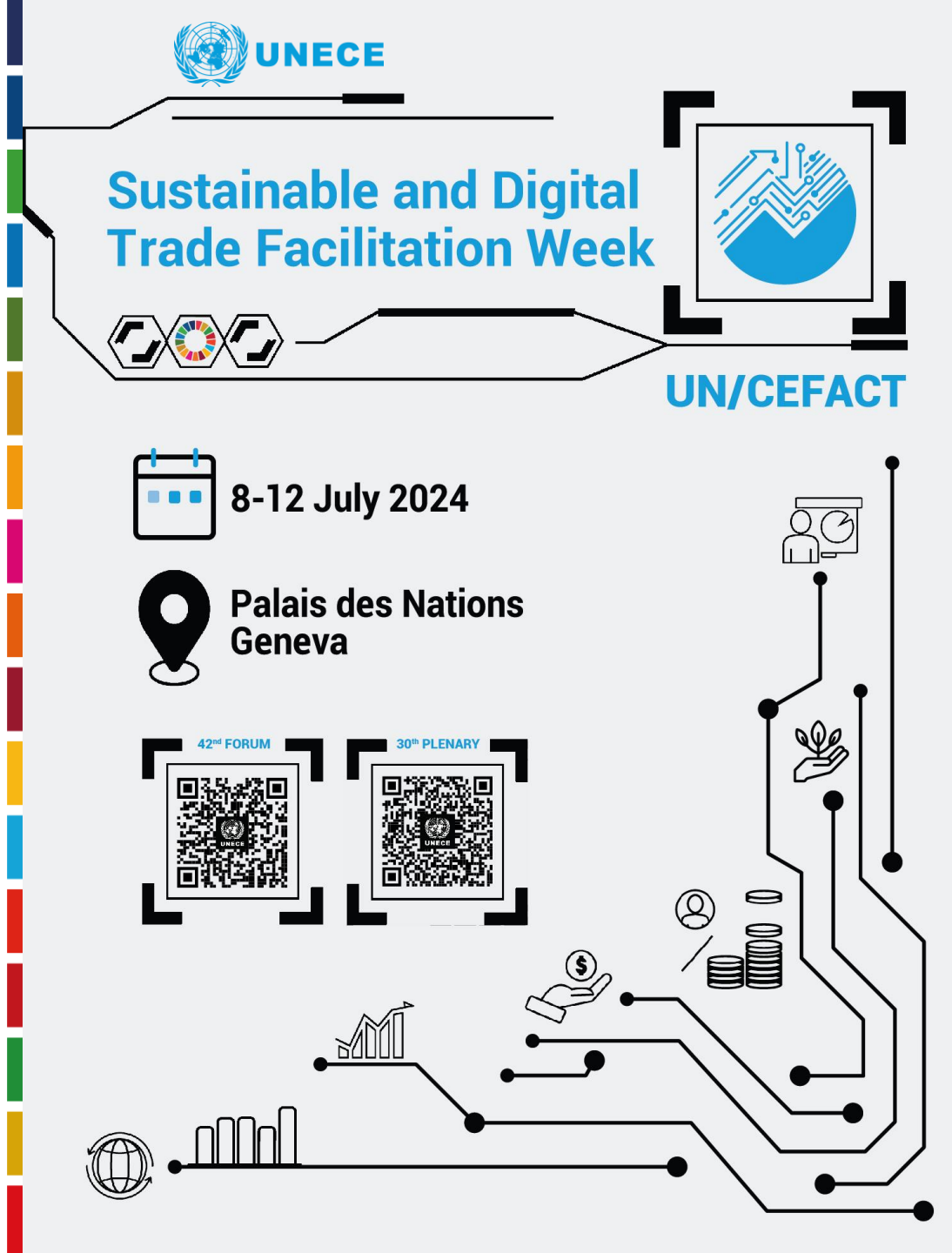
Date: 08 I 07 I 2024



Questions and Discussion



Thank you!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