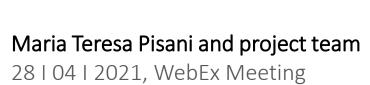
Enhancing Transparency and Traceability for Sustainable Value Chains in the Garment and Footwear Industry

Traceability for Sustainable Garment and Footwear Wednesday, 28 April 13:30-16:00 CET

UNECE

36th UN/CEFACT Forum Agriculture, Fisheries and Agri-food Domain











I. Outcomes of the 27th session UN/CEFACT plenary and 69th ECE session 13:30-13:50

- II. Next steps 2021 and 2022 13:50 15:15
- a) Training plan, capacity-building
- b) The Sustainability pledge: communication actions, visual identity
- c) Business Process Analysis for textile and leather
- d) Business Requirement Specifications for textile and leather
 - $\,\circ\,$ Code Lists and Identifiers
 - XML messages
- e) Project's blockchain applications in cotton and leather
- **IV.** Q&A and wrap-up 15:15-15:30



- Recommendation No. 46 Maria Teresa Pisani
- Call to Action Francesca Romana Rinaldi
- Executive Summary and Mapping Policy Developments on Traceability and Transparency – Claudia di Bernardino
- Policy Brief Harnessing the Potential of Blockchain Technology for Due Diligence and Sustainability in Cotton Value Chains - Olivia Chassot



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	TOOLBOX	DELIVERABLES	TARGETS/BENEFICIARIES
2019-2021	Policy model	Policy Recommendation Guidelines Action plan✓Call to Action/Sustainability Pledge✓Business Process Analysis☑	 Policymakers Opinion makers Garment & footwear makers
2020-2021	Business and data model (the info exchange standard)	Business Process Analysis☑Business Requirements Specifications• Business & Data Model ✓• Use Cases & CCBDA ✓• Code lists, IDs and e-messages☑	 Sustainability analysts Business analysts Data analysts Data system designers
2020-2022	Technology model	Blockchain Pilots Cotton Leather 	 Tech solution providers Service providers
2021-2022	SUPPORTING INSTRUMENTS	Capacity-building and outreach	
	, , , , , , , , , , , , , , , , , , , ,	i-stakeholder policy dialogue platform es, legislations and initiatives and policy br	ief



Outcomes of the 27th UN/CEFACT Plenary and 69th ECE Session



27th UN/CEFACT Plenary 19 April - 20 April 2021



69TH SESSION OF THE COMMISSION PROMOTING CIRCULAR ECONOMY AND SUSTAINABLE USE OF NATURAL RESOURCES IN THE UNECE REGION 20-21 APRIL 2021 | ROOM XVII | PALAIS DES NATIONS | GENEVA

UNECE 69th Commission Session 20 April - 21 April 2021

DOCUMENT TITLE AND DOCUMENT SYMBOL	Status
Recommendation No. 46: Enhancing Transparency and Traceability of Sustainable Value Chains in the Garment and Footwear Sector ECE/TRADE/C/CEFACT/2021/10 (EN $-$ FR $-$ RU)	Adopted*
Call to Action for Recommendation No. 46: Enhancing Transparency and Traceability of Sustainable Value Chains in the Garment and Footwear Sector ECE/TRADE/C/CEFACT/2020/6/Rev.1 (<u>EN</u> – <u>FR</u> – <u>RU</u>)	Endorsed*
Executive Summary for Policymakers : Enhancing Transparency and Traceability of Sustainable Value Chains in the Garment and Footwear Sector and Report on Policy Developments on Traceability and Transparency ECE/TRADE/C/CEFACT/2021/11 (EN) & ECE/TRADE/C/CEFACT/2021/INF.3 (EN)	For information
Policy Brief – Harnessing the Potential of Blockchain Technology for Due Diligence and Sustainability in Cotton Value Chains ECE/TRADE/C/CEFACT/2021/12 (<u>EN</u>)	For information



At the twenty-seventh UN/CEFACT Plenary **UNECE Member States embraced a series** of policy recommendations, implementation guidelines and an information exchange standard that together make it possible to assert and verify sustainability claims in the highly globalised garment and footwear sector.

Olga Algayerova Executive Secretary of UNECE

#UNECE4circularity UN/#CEFACT

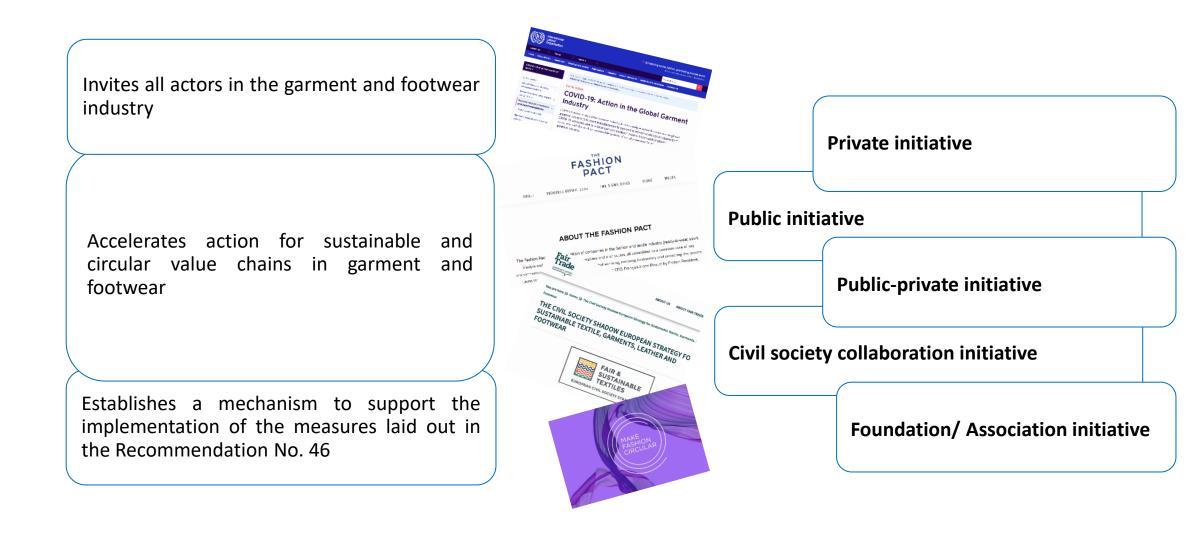


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United Nations ECE/TRADE/C/CEFACT/2020/6/Rev.1 Economic and Social Council Distr.: General 11 March 2021 English	NEXT KEY DATES
Original: English, French, Russian Original: English, French, Russian Donomic Commission for Europe cutive Committee tre for Trade Facilitation and Electronic Business aty-seventh session aty-seventh session ty-seventh session by a 19-20 April 2021 6 (b) of the provisional agenda mmendations and standards: rerables in support of the circular economy	By May 10 th Letter inviting actors to submit the Pledges
Call to Action for Traceability, Transparency, Sustainability and Circularity of Value Chains in the Garment and Footwear Sector Submitted by the UN/CEFACT Bureau Summary The sixty-ninth session of the United Nations Economic Commission for Europe (UNECE) will take place on 20-21 April 2021 at the Palais des Nations, in Geneva. The Executive Committee (EXCOM) has decided that the theme of the session will be: "Promoting circular economy and sustainable use of natural resources in the UNECE region" (EXCOM/CONCLU/109 and EXCOM Informal Document No. 2020/38). The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and its secretariat have been requested to consider how to contribute to the cross-cutting theme	By September 10 th Deadline to submit Pledges
of the UNECE session (ECE/TRADE/C/CEFACT/2020/INF.14 and ECE/TRADE/C/CEFACT/2020/INF.15). In light of this, and in connection with the ongoing UN/CEFACT project on traceability and transparency of sustainable value chains in the gament and footwear sector (ECE/TRADE/C/CEFACT/2020/INF.16), the twenty- sixth Plenary was asked to support a "Call to Action" (ECE/TRADE/C/CEFACT/2020/6) as a contribution of UN/CEFACT to the sixty-ninth session of UNECE (ECE/TRADE/C/CEFACT/2020/2) Plenary decision 20-07). This "Call to Action" invites all actors in the gament and footwear industry to take action for traceability and transparency in order to accelerate the sustainability and circularity of value chains in this industry, in line with the United Nations 2030 Agenda for Sustainable Development. The initiative aims to establish a mechanism to support the uptake of measures in the proposed UNECE Recommendation No. 46 (ECE/TRADE/C/CEFACT/2021/10 submitted for approval to the twenty-seventh session of the UN/CEFACT Plenary) as well as relevant UN/CEFACT standards, and to support the monitoring of their implementation. Document ECE/TRADE/C/CEFACT/2020/6/Rev.1 is submitted by the UN/CEFACT	September 21 st Presentation of Pledges
Bureau and its secretariat to the twenty-seventh session of the UN/CEFACT Plenary for endorsement.	UN

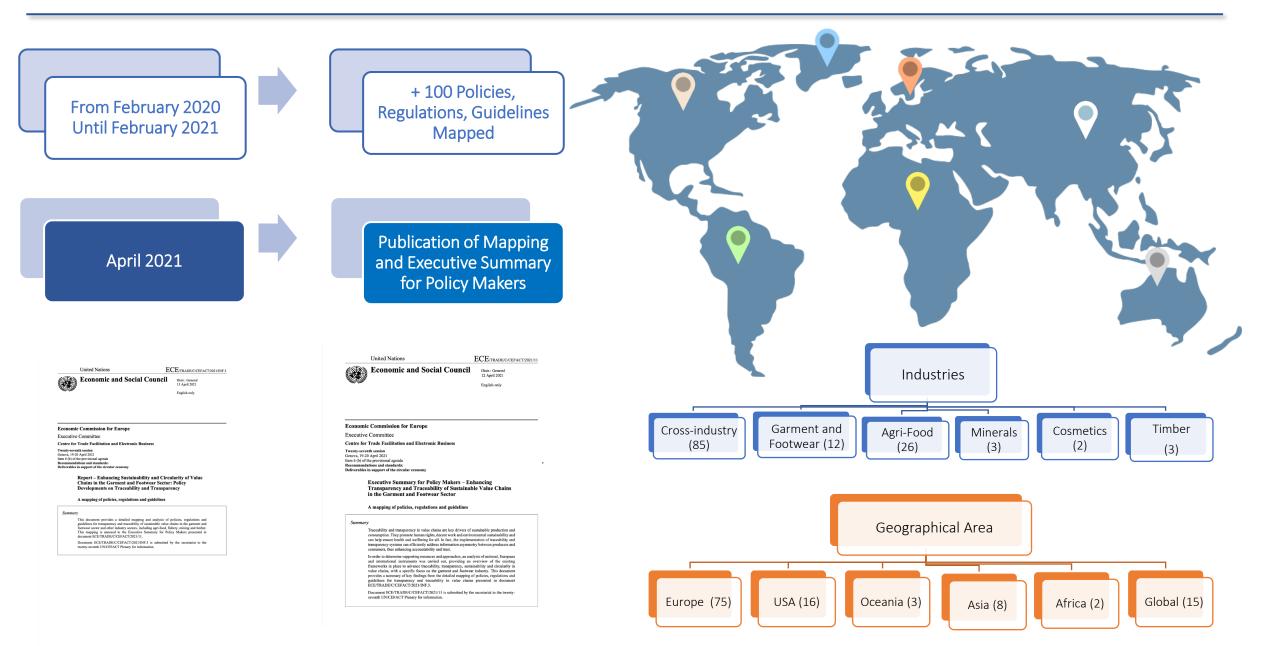


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Mapping of policies, regulations and guidelines – Desk research

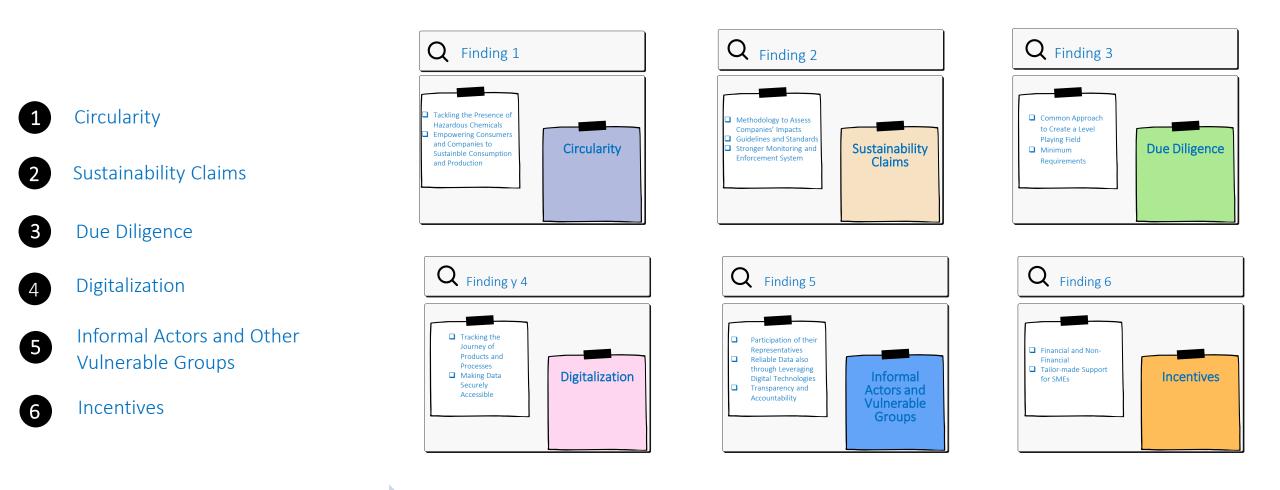


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Mapping of policies, regulations and guidelines – Key findings



To Be Published

Report on Policy Developments on Traceability and Transparency





A Traceability and Transparency Knowledge Platform on Regulations, Policies and Guidelines

Monitoring of Policy and Regulatory Frameworks

- Continuous Inputs from UNECE Experts
- ✓ Digital Mapping Update
- 🛎 Open Stakeholders Forum
- Interactive Platform
- Reports on Policy and Regulatory Developments



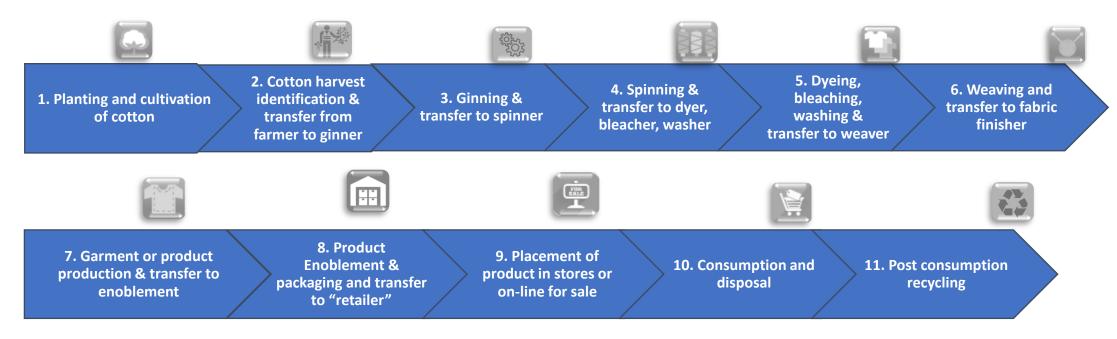
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Policy Brief - Harnessing the Potential of Blockchain Technology for Due Diligence and Sustainability in Cotton Value Chains







Policy Brief - Harnessing the Potential of Blockchain Technology for Due Diligence and Sustainability in Cotton Value Chains

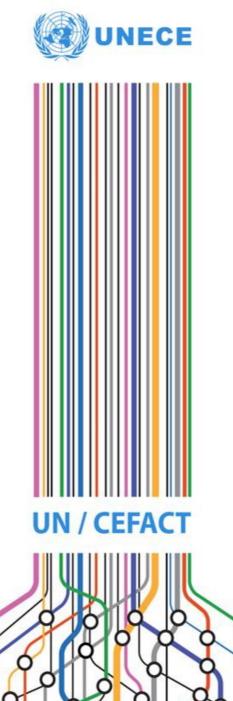
Preliminary considerations and recommendations on the way forward

Commitment and collaboration of all the stakeholders in the value chain is a requirement for traceability	The benefits of digital technology outweigh the costs for consumers, regulators, companies, investors
Ensuring interoperability with other evolving technologies (AI, IoT, machine learning, etc.) is key	Regulators and policy makers to sp coordinated action for open sourc inclusive solutions and capacity building for scaling up

Table 2

Benefits of a blockchain-based solution in support of traceability and due diligence

	Stakeholders	Benefits
	Consumers	 Increased trust in sustainability claims for products and materials
can	Businesses	 Cost efficiency led by digital archiving, reduced auditing, facilitated documents sharing
		 Enhanced trust and communication with business partners and customers
		Immutable and trustworthy data storage with distributed access
		 Interoperability with existing data management systems (based on APIs)
e,	Investors, financial operators	 Enhanced visibility and accountability for impact investment decisions
	Regulators	 Improved visibility/access to reliable information on compliance with policy and regulatory requirements for sustainability and due diligence

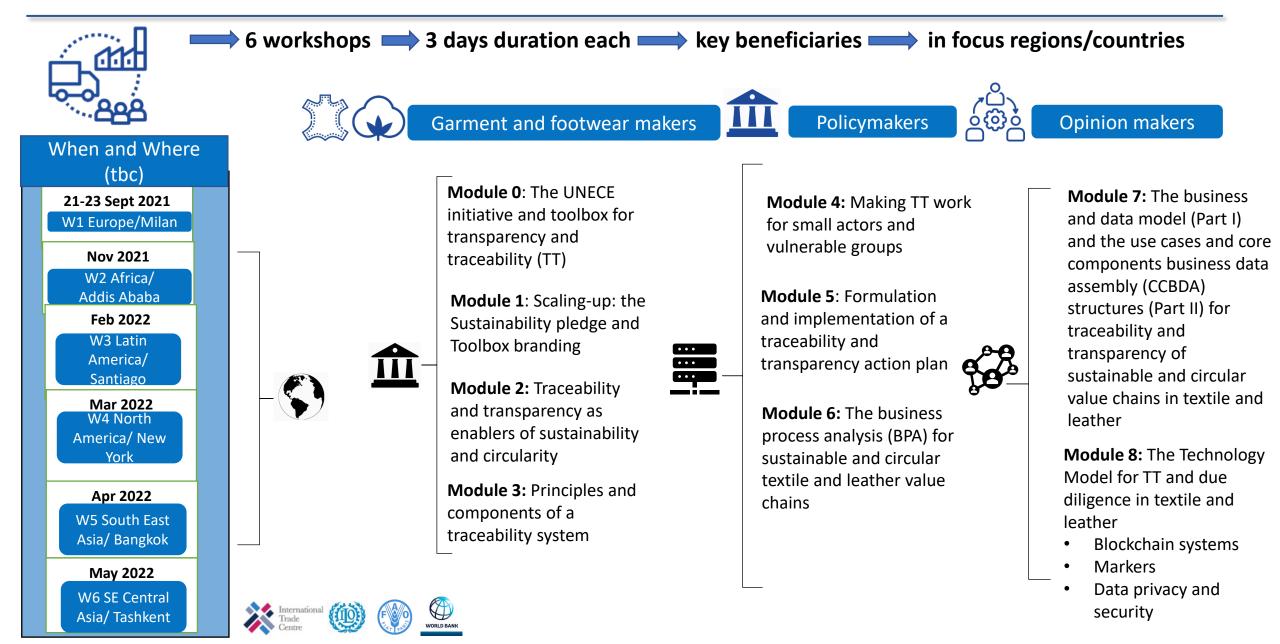


II. Next steps 2021 and 2022

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Training plan, capacity-building



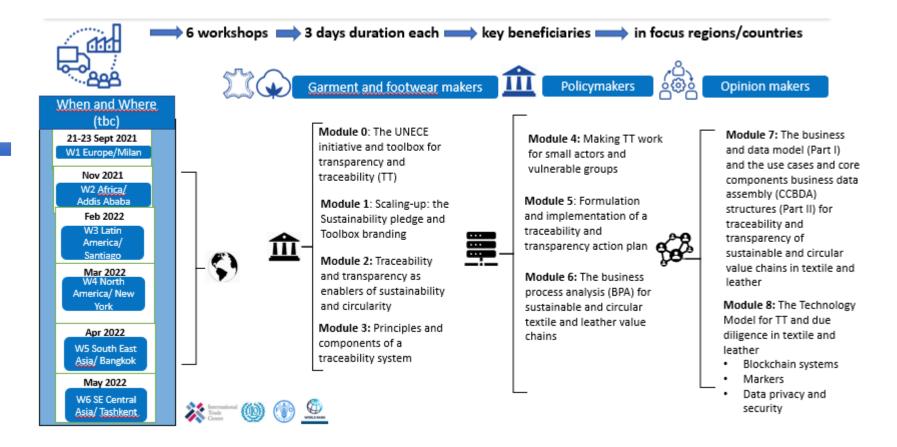


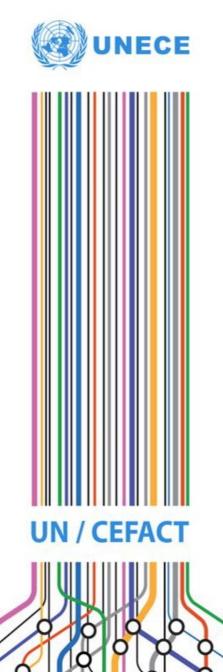
First workshop

When: September 21-22-23 Where: SDA Bocconi School of Management, Milan - Italy



September 21 st 2021		
h9-9.30	Registration	
h9.30-10	Institutional intro	
h10-10.45	UNECE Policy Recommendation +	
	Call to Action	
h10.45-11.15	Coffee break	
h11.15-11.45	Circular Fashion Manifesto	
h11.45-12.15	Monitor for Circular Fashion 2021:	
	research findings	
h12.15-13	Round tables with companies of the	
	Monitor for Circular Fashion	
h13-14.30	Lunch	
h14.30-18	UNECE workshop day 1	
September 22	nd 2021	
h9-18	UNECE workshop day 2	
September 23	rd 2021	
h9-18	UNECE workshop day 3	





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Communication actions





Where are we now?

• Cittadellarte

An Italian NGO with credentials in the sector contracted for creative input and design work, including website and logo

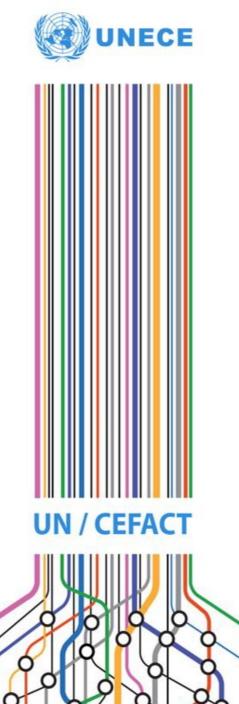
• Consultations with stakeholders on-going





What's next?

- A Press Release is currently scheduled for 11 May
 - Update on member State endorsement
 - Opening of Call to Action, and submissions
 - Consultation and launch of The Sustainability Pledge
- Commitments to be gathered ready for Multi-Stakeholder Dialogue
 21-23 September in Milan, Italy.
 - Coincides with Milan Fashion Week
 - Opportunity for Press Conference and outreach



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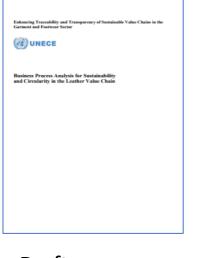


Business Process Analysis for Sustainability and Circularity in the Leather Value Chain

Leather Value Chain



Contents



Draft: https://unece.org/sites/def ault/files/2021-04/E320_BPA-SVCleather.pdf

Part I. BPA for implementation of traceability and transparency

- 1. What is a BPA?
- 2. BPA traceability and transparency objectives
- 3. The generic traceability and transparency BPA model
- 4. Using BPA to identify where and when to collect TT information

Part II. The Leather Value Chain BPA

1. Processes and actors

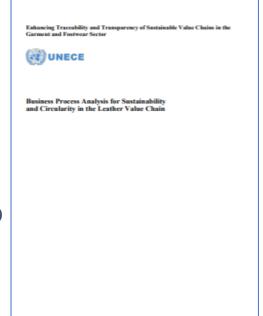
- 2. Sustainability risks and risk reduction
- 3. Data points for collection of traceability and transparency information



Creating the Value Chain BPAs

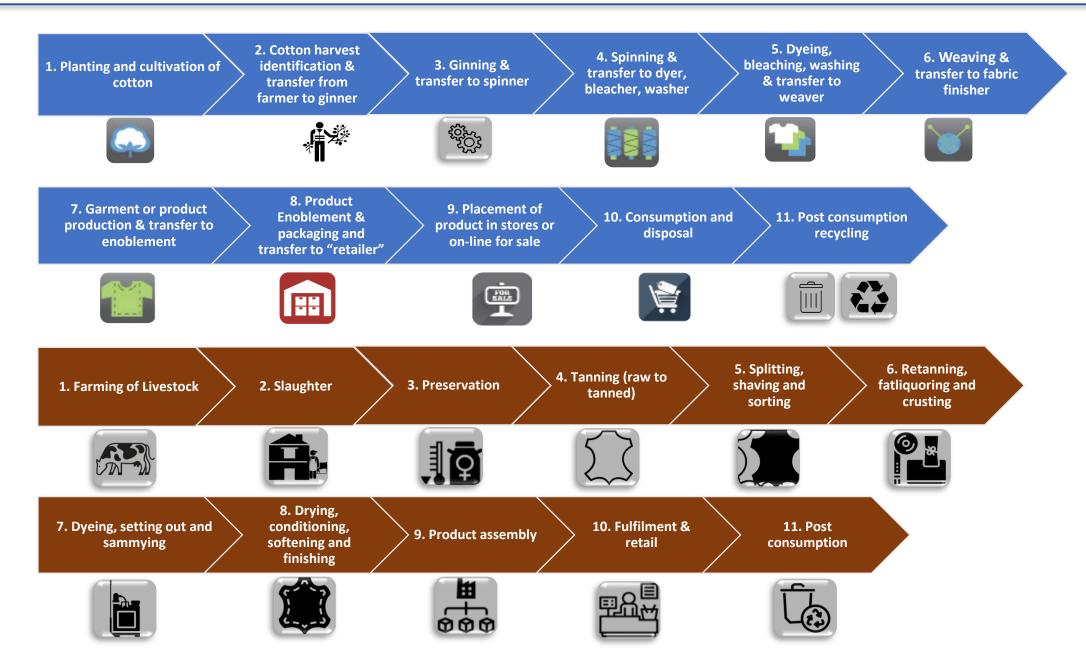
- Both textile and leather BPAs use the same methodology, just applying it to different processes which use different materials:
 - 1. Identify the processes and actors
 - 2. Identify the risks
 - 3. Identify the data and information exchanges required for traceability and transparency
- All 3 steps in the methodology look at what exists now and seek to identify gaps which need to be filled in order to fully support traceability and transparency

Textile Value Chains Draft: <u>https://unece.org/sites/default/files/2021-01/E320_BPA-SVC-textile.pdf</u> Leather Value Chains Draft: https://unece.org/sites/default/files/2021-04/E320_BPA-SVC-leather.pdf





Processes and Actors



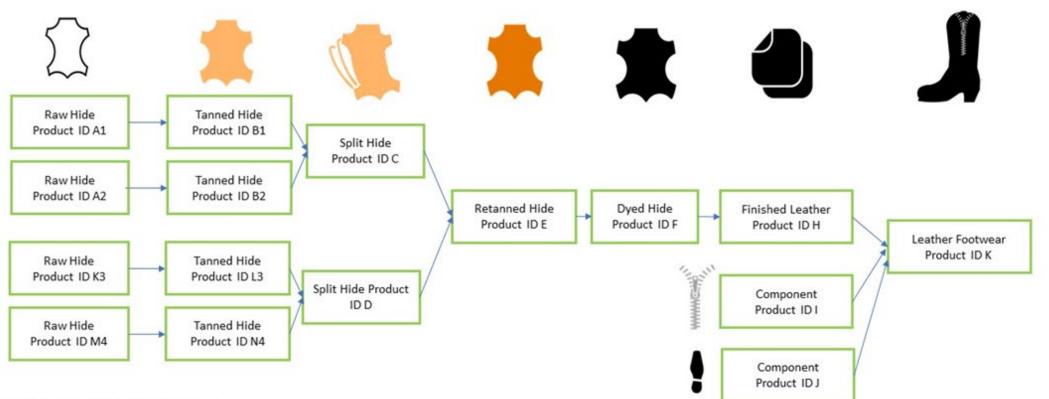


Sustainability risks





Traceable Assets Transformations and IDs



Tracing back IDs to the Raw Hide: K-H-F-E-C-B1-A1 or K-H-F-E-C-B2-A2 or K-H-F-E-D-L3-K3 or K-H-F-E-D-N4-M4

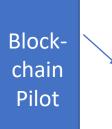


• Later in the agenda, the connection of how the work of the BPAs is used practically within the blockchain pilot system to create the traceability and transparency of the value chain will be demonstrated.

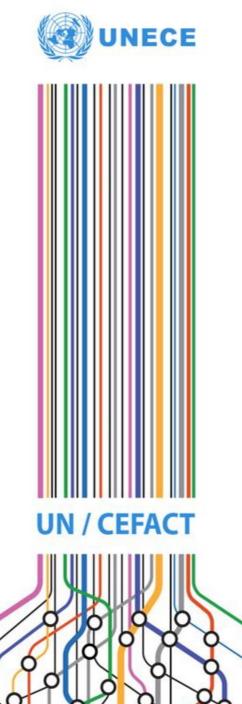


1. Establish value chain processes and actors ✓

3. Establish information and data required



Use the above within a system of traceability & transparency to provide a more sustainable value chain

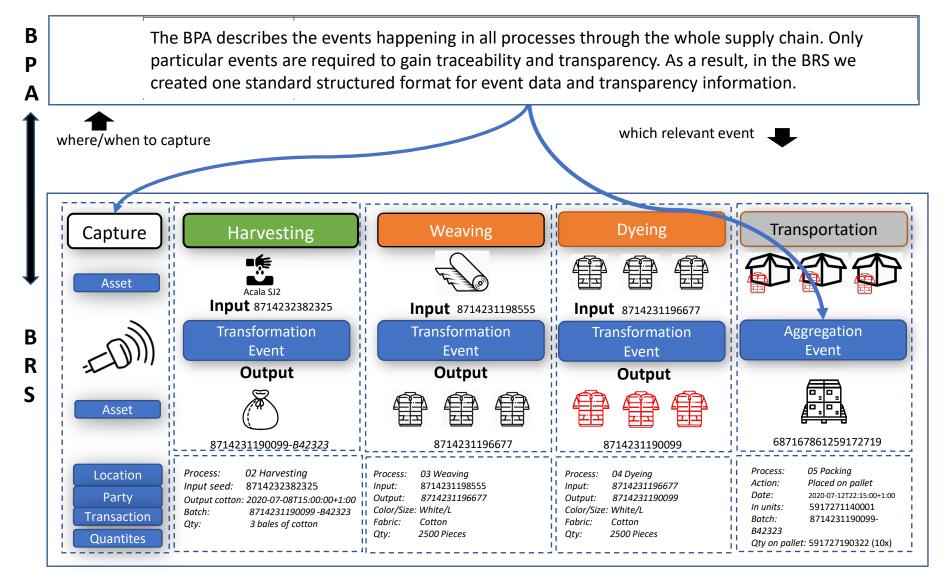


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The BPA report helps to identify the processes, conditions and data, which are reflected in the BRS

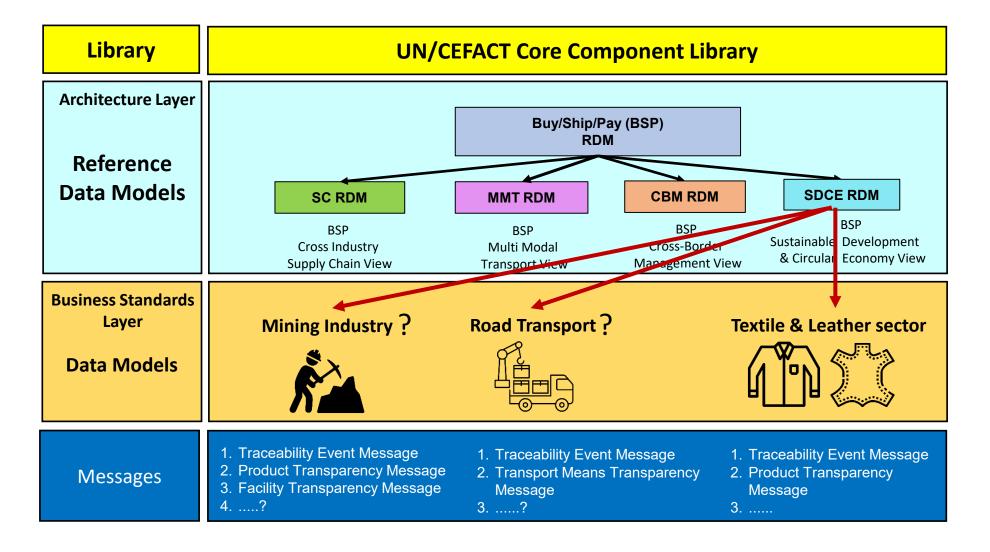




Able to exchange	Shared	Reduce costs	BC Pilot	Sector needs
what's in ERP	what's in ERP		shows need	standards & tools

- information for traceability / transparancey and sustainability already exists and is stored in many different proprietary system in ERP's of the supply chain partners or in the many sustainability platforms and organisations
- due to missing data exchange standards and tools for automatized information exchange the data are not shared e.g. slaughterhouses pass all information to the meat industry but not to the leather sector due to high work for a low value product
- automated data exchange is required to reduce additional costs for transparency / traceability especially for a sector in which the high volumes of products are manufactored in low cost or developing countries. Enter the data once and use it multiple
- the pilot shows that especially the manufactoring part also in Europe cannot support a manual data input and document upload
- the pilot partners expressed clear concerns that the many systems for sustainability claims are already today too costly and no additional costs for transparency / traceability can be supported and therefore standards and toolboxes for the whole textile and leather sector need to put in place







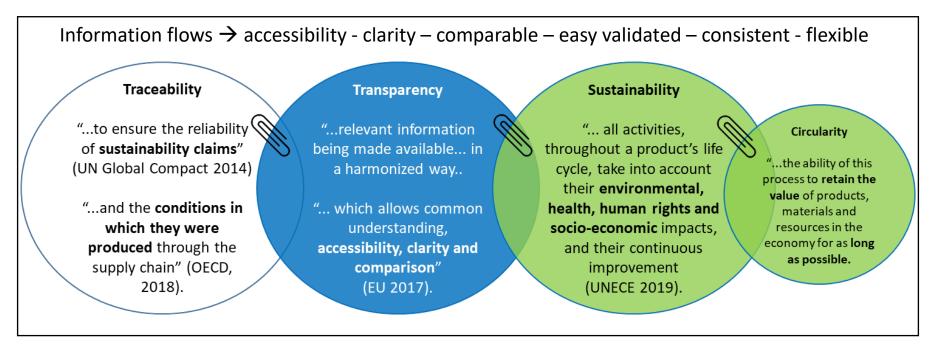
Moving towards a selective business message context – profiling to what is needed

eneric content		→ Specific content
SP context	TL Data Model context	Message context
 C Trade Product * A, ID * A, Global ID * A, Seller Assigned ID * A, Buyer Assigned ID * A, Buyer Assigned ID * A, Manufacturer Assigned ID ** A, Industry Assigned ID ** A, Model ID ** A, Nodel ID ** A, Trade Name ** A, Trade Name ** A, Type Code ** A, Net Weight ** A, Genetic Modification Extent Code * A, Global Extension ID * K, Seller Assigned Extension ID ** K, Suger Assigned Extension ID ** K, NSN ID K, NIN ID A, Status Code A, Net Volume 	 C Trade Product * A_r ID A_r Global ID A_r Seller Assigned ID A_r Buyer Assigned ID A_r Manufacturer Assigned ID A_r Industry Assigned ID A_r Model ID A_r Name A_r Trade Name A_r Description A_r Type Code A_r Gross Weight A_r Gross Weight X_r Genetic Modification Extent Code ** X_r Global Extension ID X_r Seller Assigned Extension ID X_r Status Code A_r Nith ND A_r Status Code A_r Net Volume 	 C Trade Product Ar, ID Ar, Global ID X Seller Assigned ID X Buyer Assigned ID X Buyer Assigned ID X Manufacturer Assigned ID X Industry Assigned Extension ID X Global Extension ID X Seller Assigned Extension ID X INSN ID X Status Code X Product Group ID X Net Volume

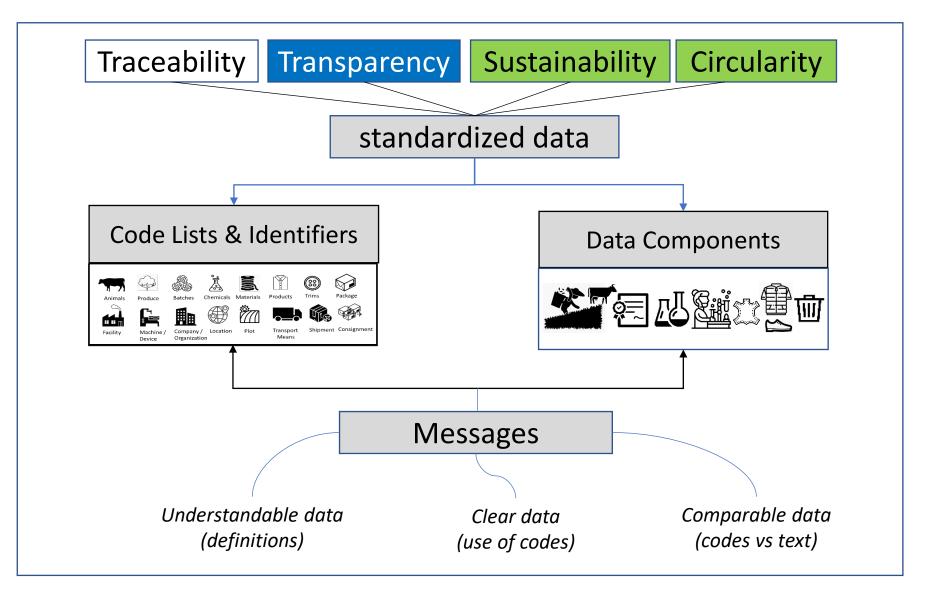
* Same principle can be applied for code list values



Codes and identifiers are an essential component of any Machine-To-Machine information flow. They have been developed over time to facilitate the flow of standardized data that can be easily validated for correctness to ensure consistent semantics, being relieved from any ambiguity and inconsistency. It enhances accessability and findability of information much more efficient (data resources).







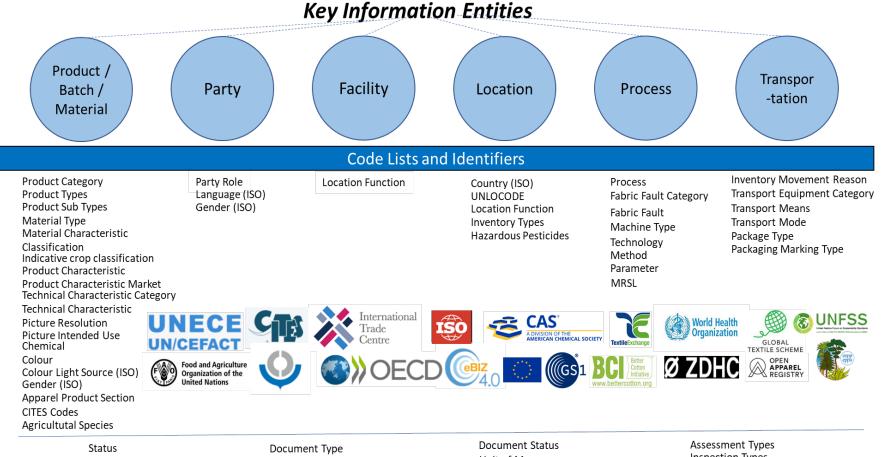


	Draft April 2021
	April 2022
	UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE
	UNITED NATIONS CENTRE FOR TRADE FACILITATION AND ELECTRONIC BUSINESS (UN/CEFACI)
	AND ELECTRONIC BUSINESS (INCLUSION)
R	ecommendation on Code Lists and
	Identifiers
	for the
	Textile and Leather Sector
	DRAFT
	Approved: UN/CEFACT Bureau on
	Version: 1.0

- A reference guide to code lists and identifiers for the textile & leather sector
- Includes a reference to the information entities in the data model
- Is based on desk research and still needs to be reviewed, updated and completed
- The accessability, processability of codes and identifiers differs strongly. A hyperlink to the source in this document can be a webpage, pdf etc. or a reference.



Grouped on key information entities



Sustainability Standard Sustainability Criteria (metric characteristic) Document Type Sustainability Themes (characteristic category) Sustainability Sub-Area (Sub-Chapter) (characteristic type) Document Status Unit of Measure Date/Time Formats Code List Responsible Agency Assessment Types Inspection Types Action



Weaving

Party Role Code	Location Function	Status Code	Assesment Type	Inspection Type
Brand Owner	Effluent Treatment Plant	Defected	Self Declared	Organizational Inspection
Consumer	Farm	Recycled	Self Asssessed	Process Inspection
Farmer	Manufacturing facility	Reused	Peer Reviewed	Product Batch Inspection
Recycler	Animal farm	Registered	Verified by second party	Product Inspection
, Retailer	Tannery	Returned	Certified by third party	Inventory Inspection
Second Party	Textile mill			Labelling inspection
Trader	Dyeing mill			Quality inspection
Waste Disposal Provider	Forrest Management Unit			Animal Inspection
Tanner				Packaging inspection
Service Provider				
Ginner				1
Spinner				
Weaver				
Drocoss Typo Codo	Inventory Type (Codo		
Process Type Code	Inventory Type (LOUE		
Setting Out	Finished goods Maintenance, repair & opera	ations (NARO)		$\langle \rangle$
Shaving (hides)			Thosa d	
Shearing (animals)	Packing materials Raw materials			ata maintenance
Reeling (silk)	Unfinished Products.		•	will be processed
Softening	Work in progress (WIP)		duri	ng this forum
Sorting	work in progress (wir)			
Spinning				
Splitting				
Tanning (leather)				
Thermo Mech. Recycling				
Warehousing				



Grouped by organization/agency

Agency/Organization	Code List reference	Related Information Entity
BC	Pesticides Classification	Toxicological Hazardous Material
CAS'	CAS Chemical Compound	Distinct Chemical
CIES	CITES Endangered Species of Wild Fauna and Flora	Species
10000	Agricultural Produce (plants)	Crop Produce Batch
1. J. C.	Agricultural Species	Species
	Leather classification	Product Classification
	Gez 4.0	
	Raw Material Production	
	Fibre Types	Trade Product
	Raw Material	Product Characteristic
	Raw Material Process	Production Process
	Yarn Production	
	Yarn Category	Trade Product Category
	Yarn Characteristics	Product Characteristic
	Yarn (kind)	Trade Product
	Yarn (ply)	Product Characteristic
	Yarn Process	Specified Production Process
	Yarn Technology	Technology
	Yarn Operation Parameters	Specified Parameter
	Yarn Quality Parameters	Specified Parameter
	Yarn Machine	Production Machine
	Fabric Production	
	Fabric Category	Trade Product Category
	Fabric Fault Type	Specified Fault
	Fabric Faults Category	Specified Fault
	Fabric Technical Category	Technical Characteristic
	Fabric Technical Characteristic	Technical Characteristic
	Fabric Process	Specified Production Process
	Fabric Technology	Technology
	Fabric Operation Parameters	Specified Parameter
	Fabric Machine	Production Machine
	Weave Type	Product Characteristic
	Colour Type	Product Colour



Pre/Finishing treatments & Dyeing	
/Printing	
Chemical Elements	Distinct Chemical
Print Material	Specified Material
Print Process	Specified Production Process
Print Parameter	Specified Parameter
Printing Technology	Technology
Fast Test	Specified Method
<u>Colour Test</u>	Specified Method
Apparel Production, transportation	
Additional Attributes	Product Characteristics
Garment Attributes	Product Characteristics
Apparel Section	Product Characteristics
Market Segment	Target Market
Darning Process	Specified Product Process
Knitting/Clothing Process	Specified Product Process
Knitting/clothing Machine	Production Machine
Value Base System (for size)	Product Characteristics
Intended Use Codes	Photographic Picture
Resolution Type	Photographic Picture
Reason for Transportation	Specified Inventory



Grouped by organization/agency





Food and Agriculture Organization of the United Nations	Indicative Crop	Product Classification		Assessment	Product/Process/Organizational Certification Type
	Product Classification	Product Classification		Code List Responsible Agencies	Agency
and the second				Contact Type	Trade Contact
GLOBAL TEXTILE SCHEME				Date Time Format	Date Time
(GS1	GPC Clothing (67), Footwear (63)	Product Classification		Document Status	Status
				Document Type	Exchanged Document / Referenced
ISO	Colour Fastness Test (yarn)	Specified Method			Document
	Colour Light Source	Product Colour		Inspection Type	Specified/Sustainability Inspection
	Country Code/Identifier	Trade Country		Inventory Movement Reason	Specified Supply Chain Inventory
	Language Name Code (ISO 639-1) Leather Chemical Tests	Language ID Specified Method		Inventory Type	Specified Supply Chain Inventory
	Leather for Apparel (excluding furs)	Trade Products		Leather Glossary	Definitions
	Leather Tests (Quality Standards)	Specified Method		Location Function	Referenced Location/
	Man-made Fibre - Generic names	Trade Product		<u>Location randition</u>	Production Facility
	Natural Fibres - Generic names and	Trade Product		Note Subject	Specified Note
	definitions			Package Marking	Logistics Package
	Representation of human sexes	Trade Product Consumer Gender		Packages	Logistics Package
	ISO 26000, Sustainability Standards	Sustainability Characteristics		Party Function (Role)	Trade Party
	Other			Party Type	Trade Party
	Leather glossary	Leather products		Process Description Type	Specified Production Process
	Sustainability Standards	Sustainability Characteristic		Status	Status
	Sustainability Criteria	Metric Characteristic			
• •	Sustainability Areas (Themes)	Sustainability Characteristic		Transport Equipment	Logistics Transport Equipment
		Category		Transport Means	Logistics Transport Means
	Sustainability Sub Areas (Sub Chapters)	Sustainability Characteristic Type		Transport Mode	Logistics Transport Mode
	Health Effects	Sustainability Inspection		UN Location Code (UNLOCODE)	Referenced Location
	Effects on Biotic Systems	Sustainability Inspection		Unit of Measure	Measure
	Environmental Fate and Behaviour	Sustainability Inspection	\odot	HS Codes Raw hides and skins, leather etc	Product Classification
	Textile process	Specified Production Process	$\mathbf{\Psi}$	HS Codes Textiles and textiles articles	Product Classification
	Product	Trade Product	World Health	Pesticides by Hazard	Toxicological Hazardous Material
TextileExchange	Product Category	Trade Product Category	World Health Organization		
-	Raw Material	Specified Material			
	Final Product Technical Quality Parameter	Specified Parameter	Ø ZDHC	Manufacturing Restricted Substance List	Specified Material

* GRI and SASB standards could be added as additional indicators for sustainability data



Grouped by subject

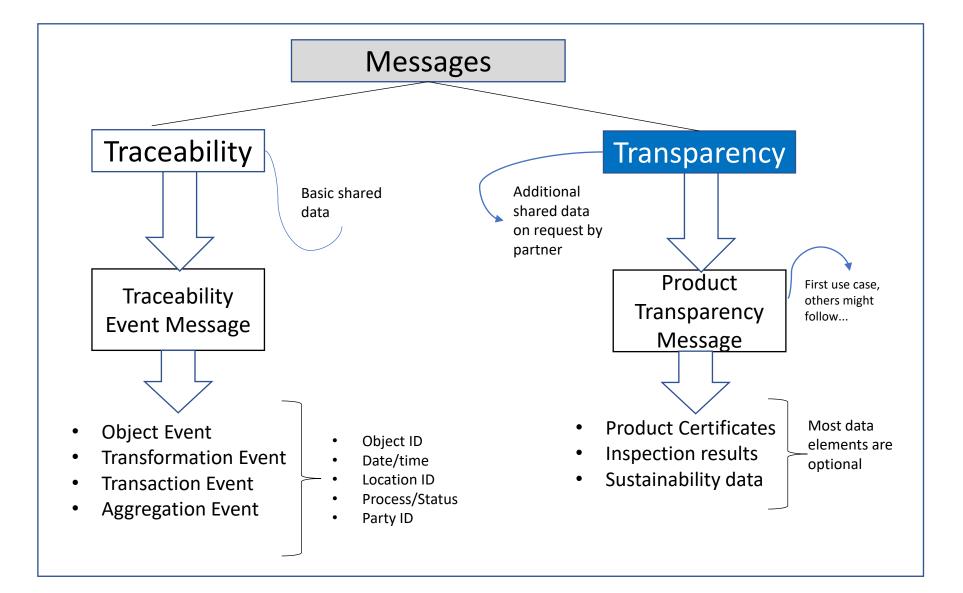
	ification					
4.4.1 Cro	-	Agency	Code List	URL		
Indicative Crop Classification for the agricultural		Food and Agriculture Organization of the United Nations	FAO 1.1 (World Programme for the census of Agriculture 2020)	PDF		
Code TAG	Code Name					
9.02.01.01	Cotton					
9.02.01.02	Jute, kenaf, and o	ther similar crops				
9.02.01.04	Flax					
9.02.01.05	Hemp					
9.02.01.90	Other temporary fibre crops					
	ETC					
Code List #2	22	Agency	Code List	URL		
Product (Ca	tegory)	TextileExchange	Textile Exchange ASR-213- <u>V1.0</u>	PDF		
Code TAG	Code Name					
PC0001	Men's apparel					
PC0002	Women's apparel					
PC0003	Babies' apparel					
	ETC					



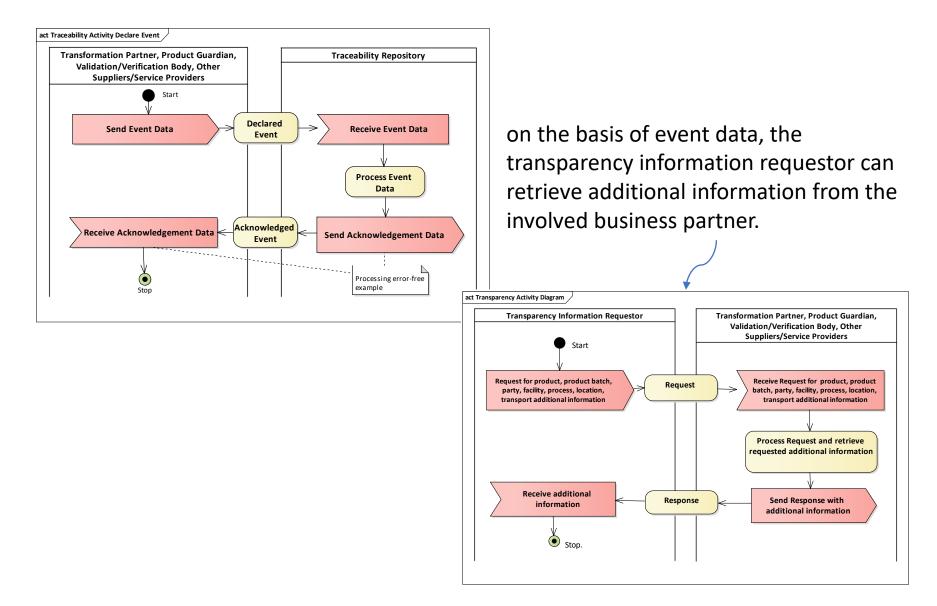
Key Identifiers

ldentifier	#	Global Identification Schemes				
Animal ID	#1	- ICAR, NAIS (USDA)				
Product ID / Material ID	#2	 GTIN (Global Trade Item Number) The GSMP General Merchandise Work Team validated the original Global Trade Item Number (GTIN) allocation rules and concluded that they are applicable to the apparel and home fashions product category (GS1 General Specifications 21.0.1, Ratified, Jan 2021). 		(main)		
Batch ID	#3	- GTIN + batch/lot no, serial no	Animals	Produce	Batches	Chemicals
Chemical ID	#4	- CASRN (CAS Registry Number)	\sim	C -:		A
Consignment	#5	 WCO Unique Consignment Reference (UCR) 		• •		
Delivery (shipment)	#6	- GSIN (Global Shipment Reference Number)		ů – I		
Device ID / Machine ID	#7	- GMN (Global Model Number)	Facility	Machine	/ Compan Organiza	
Location ID / Sub-Location ID / Production Unit / Plot ID / Facility ID	#8 #9 #10	 GLN / SGLN (Global Location Number, Sub-GLN) Global G A P GLN OAR ID (Open Apparel Registry ID for facility) 	9	Device		
Organization ID	#11	- LEI (Legal Entity Identifier)			$\left(\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	
Logistics unit (logistics package)	#12	- SSCC (Serial Shipping Container Code)	Materials	Products	Trims	Package
Package ID (product package)	#13	- GIIN	waterials	FIDUUCIS	•	
Party ID	#14 #15 #16	- GLN - OAR ID - VAT ID			L.	
Produce ID	#17	 GTIN (IEPS Product Identification – Fresh Produce) 	Plot	Transport	Shipment	Consignment
Product Instance ID	#18	- SGTIN (Serialized GTIN)	1100	Means		
Raw Material ID	#19	- GIIN				
Transport Equipment ID	#20	- GIAI (Global Individual Asset Identifier)				
Transport Means ID	#21 #22	 IMO (International Maritime Organization, SOLAS) VIN (vehicle identification number, ISO 3779) 				



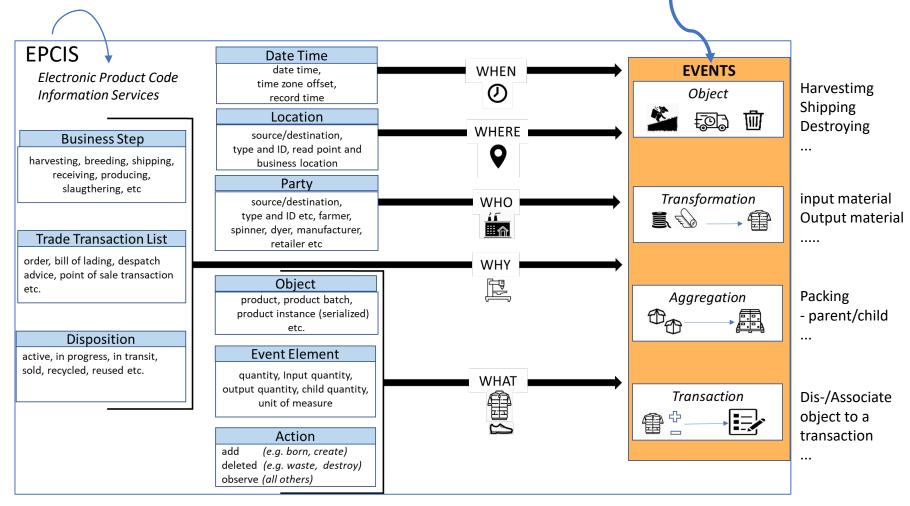








Traceability Event Message can contain different types of events





A small flow of events – shipping/receiving

	Data Element	Event 01		Data Element	Event 02		Data Element	Event 03
	Event Type	Object Event		Event Type	Object Event		Event Type	Object Event
	Action	OBSERVE		Action	OBSERVE		Action	OBSERVE
What	Object (asset)	Shipment Reference AB1	What	Object (asset)	Shipment Reference AB1	What	Object (asset)	Shipment Reference BC1
	(Content)	Product 1 / Batch 1		(Content)	Product 1 / Batch 1		(Content)	Product 1 / Batch 1
		10 PCS			10 PCS			3 PCS
When	Date Time	14-01-2021 12:00:00	When	Date Time	16-01-2021 12:00:00	When	Date Time	19-01-2021 12:00:00
Where	Read Point	Facility A - Loc 2	Where	Read Point	Facility B - Loc 3	Where	Read Point	Facility B - Loc 4
	Business Location	Facility A		Business Location	Facility B		Business Location	Facility B
Why	Business Step	Shipping	Why	Business Step	Receiving	Why	Business Step	Shipping
	Disposition	Active		Disposition	Active		Disposition	Active
	Business	Invoice Facility_A-01		Business	P.Order Facility_B-P0.01		Business	P.Order Facility_B-P0.01
	Transaction List			Transaction List			Transaction List	
					Invoice Facility_A-01			Invoice Facility_C-01
Who	Source List	Facility A	Who	Source List	Facility A	Who	Source List	Facility B
	Destination List	Facility B		Destination List	Facility B		Destination List	Facility C

* Simplified view



- Certificate(s) details
- Certification details
- Sustainability characteristic(s)
 - Type Code
 - Value Text
 - Inspection results
 - Referenced Standard
- Sustainability Inspection details
 - Event details
 - Executing party
 - Status
 - Inspection results
 - Sustainability characteristic(s)
 - See above
 - Preventive Actions
 - Attachment
- Sustainability assertion (claim) details
- Related trade transaction(s)

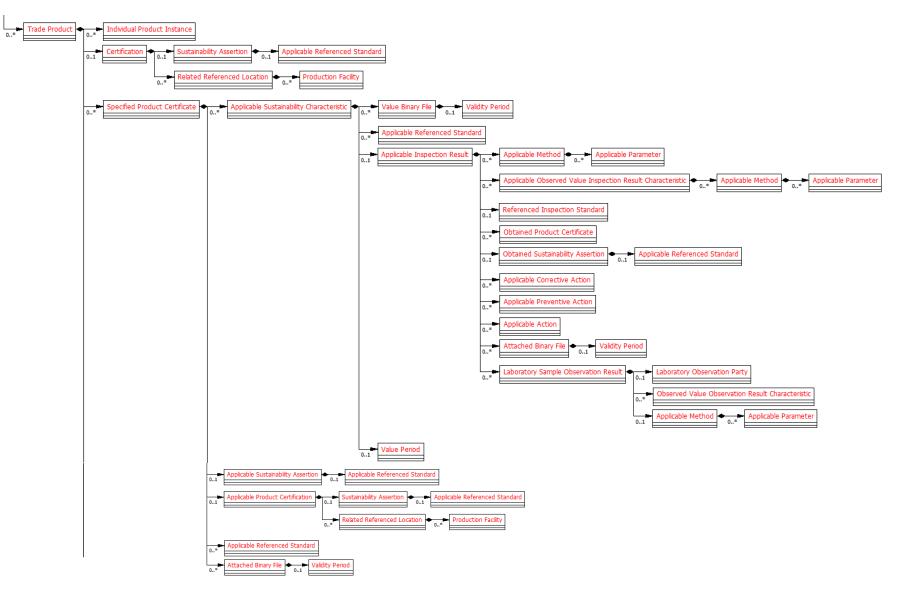
Certificate

Sustainability Data

Inspection Results

Much is optional in the message by this supporting levels of complexity: from simple to complex







The XML example, only exchanging certificate details

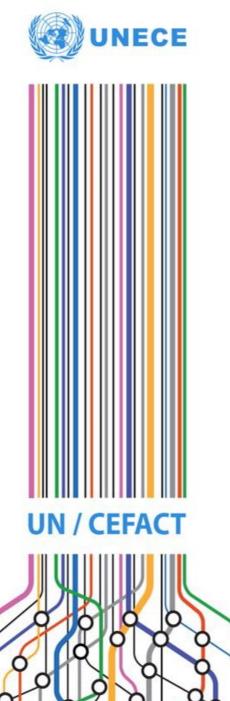
1		?xml version="1.0" encoding="UTF-8"?>
2		rsm:ProductTransparencyMessage xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:rsm="urn:un:une m:un:unece:uncefact:data:standard:ReusableAggregateBusinessInformationEntity:21A" xsi:schemal.ocation="urn:un:une Certificate
	u	
3	0	<rsm:exchangeddocument></rsm:exchangeddocument>
4		<ram:id>289771982</ram:id>
5	0	<ram:lssuedatetime></ram:lssuedatetime>
6		<udt:datetimestring>2021-04-11T12:37:38.7041375+01:00</udt:datetimestring>
7		
8	0	<ram:sendertradeparty></ram:sendertradeparty>
9		<ram:id>12809831029</ram:id>
10		
11	0	<ram:recipienttradeparty></ram:recipienttradeparty>
12	11	<pre><ram:id>1</ram:id></pre>
13		
14		
15	0	<pre><rsm:tradeproduct> Product ID</rsm:tradeproduct></pre>
16		<ram:globalid>8735667213218789</ram:globalid>
17	0	<ram:specifiedproductcertificate></ram:specifiedproductcertificate>
18		<ram:id>21312321321</ram:id>
19	0	<ram:lssuedatetime> Certificate ID</ram:lssuedatetime>
20		<udt:datetimestring>>2021-04-11T12:37:38.7041375+01:00</udt:datetimestring>
21		
22	0	<ram:expirydatetime></ram:expirydatetime>
23		<udt:datetimestring>2021-04-11T12:37:38.7041375+01:00</udt:datetimestring> // Standard Reference
24		
25		<ram:typecode>753</ram:typecode>
26		<ram:description>Certificate of sustainability</ram:description>
27		<ram:lssuingpartyid>2197983798</ram:lssuingpartyid>
28	9	<ram:applicablereferencedstandard></ram:applicablereferencedstandard>
29		<pre><ram:versionid>6.0</ram:versionid></pre> //ram:VersionID> <ram:name>GOTS ORGANIC Attachment</ram:name>
30		stant tames do to otto and tant tames
31	Lt.	
32	9	<ram:attachedspecifiedbinaryfile></ram:attachedspecifiedbinaryfile>
33		<ram:filename>MyCertificate.PDF</ram:filename>
34		<ram:uriid>https://Certificates/MyCertificate.PDF</ram:uriid>
35		<ram:includedbinaryobject>UjBsR09EbGhjZ0dTQUxNQUFBUUNBRU1tQ1p0dU1GUXhEUzhi</ram:includedbinaryobject>
36	1	
37	t.	
38	9	<ram:relatedsupplychaintradetransaction></ram:relatedsupplychaintradetransaction>
39		<ram:id>2132132132</ram:id>
40		<ram:typecode>105</ram:typecode>
41	Θ	<ram:associatedreferenceddocument></ram:associatedreferenceddocument>



The Textile & Leather data model contains rich structures around key information entities:



Product **Product Batch** Party Facility **Production Process Resources for Resources of** new message Location information profiles Consignment Shipment **Trade Transaction Transport Movement**



II. Next steps 2021 and 2022

- a) Training plan, capacity-building Maria Teresa Pisani
- b) The Sustainability pledge: communication actions, visual identity Sarah Harris
- **c)** Business Process Analysis for textile and leather Virginia Cram Martos and Deborah Taylor
- d) Business Requirement Specifications for textile and leather Gerhard Heemskerk
 - Code Lists and Identifiers
 - XML messages
- e) Project's blockchain applications in cotton and leather Andrea Redaelli, Giacomo Poretti, Claudia di Bernardino, Deborah Taylor

e. Project's blockchain applications in cotton and leather

- Implementation status: dry run, pilot run and training, Andrea Redaelli
- Blockchain system update, Giacomo Poretti
- Overview and Next Steps on Sustainability Claims and Data Management and Disclosure, Claudia di Bernardino
- Pilot#2 Leather value chain, Deborah Taylor

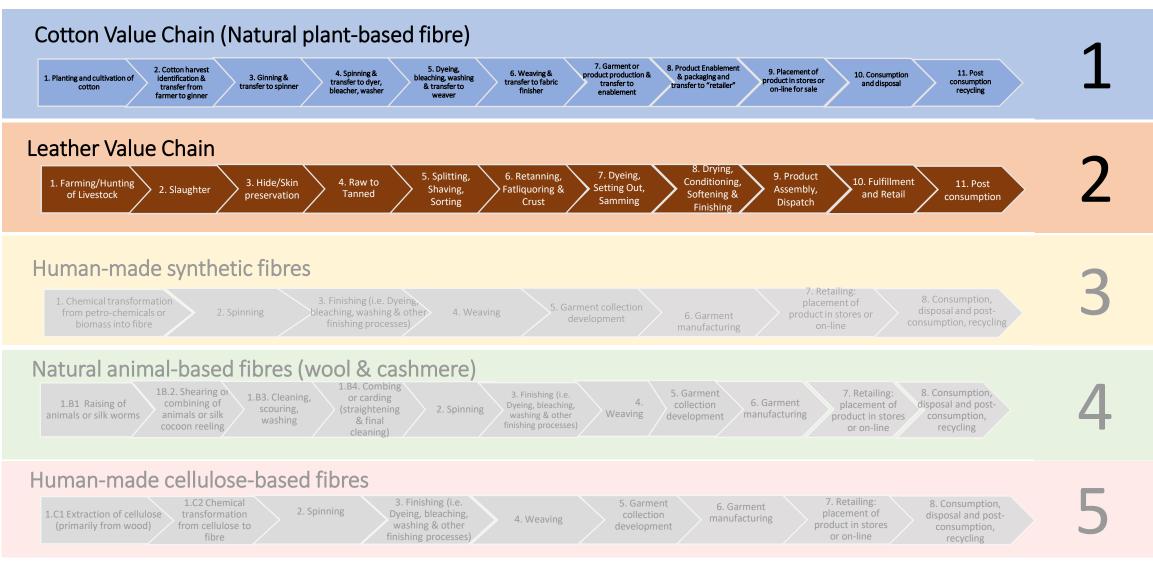


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Blockchain Pilots: background

The Pilots - blockchain technology in the garment and leather value chain

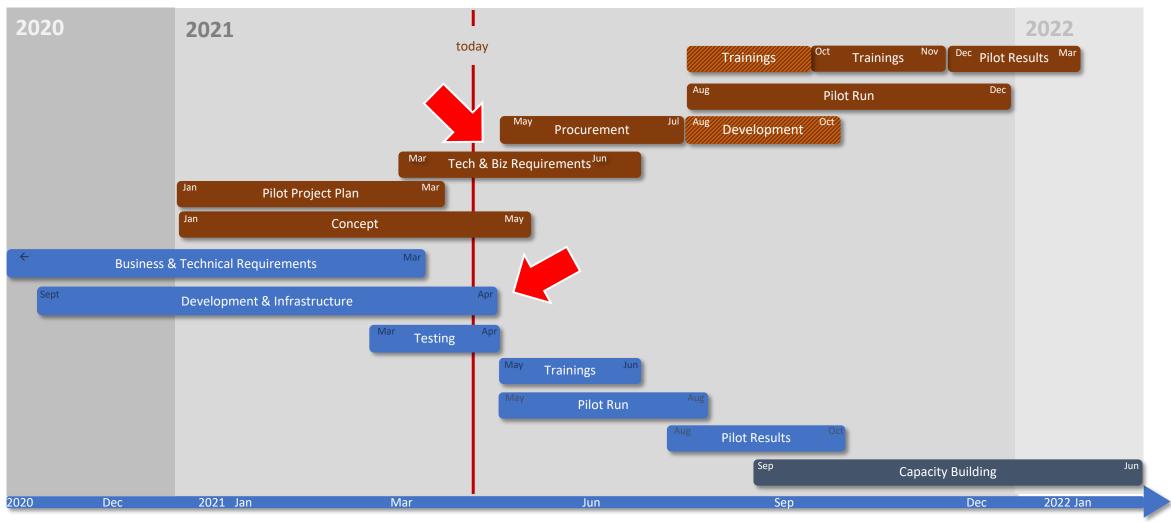


Linear Value Chains are the starting point, Circular Value Chains could be also considered



Blockchain Pilots: timeline and milestones

The Pilots - blockchain technology in the garment and leather value chain

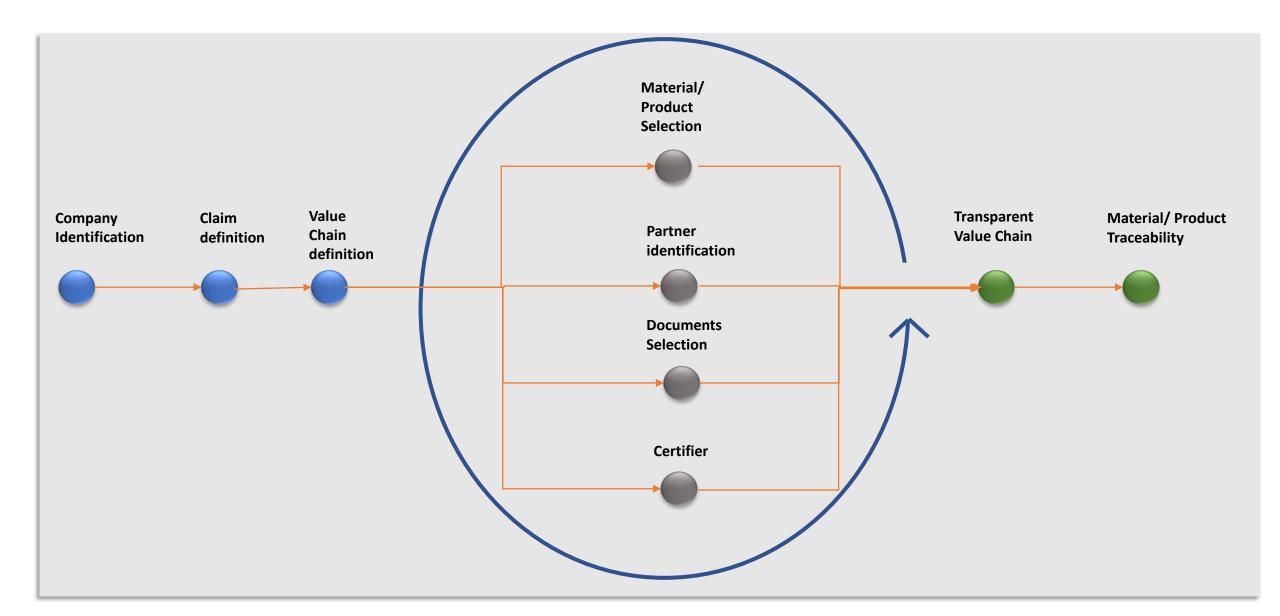


Pilot #1 – COTTON Pilot #2 – LEATHER



Cotton blockchain pilot

The Pilots - blockchain technology in the garment and leather value chain



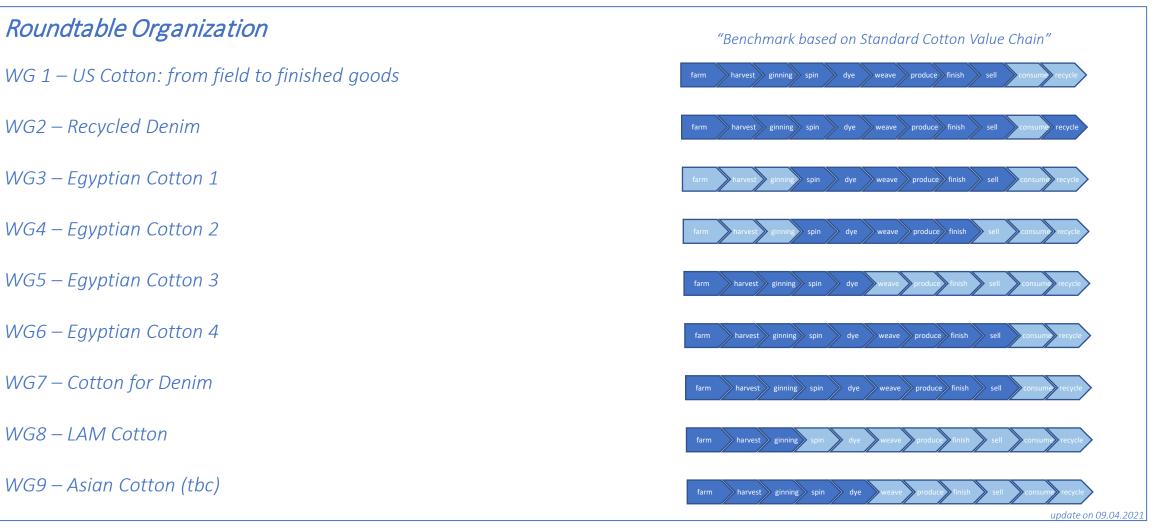


Cotton blockchain pilot

The Pilots - blockchain technology in the garment and leather value chain

Pilot Scenario(s) preparation: Working Groups

weekly update roundtable

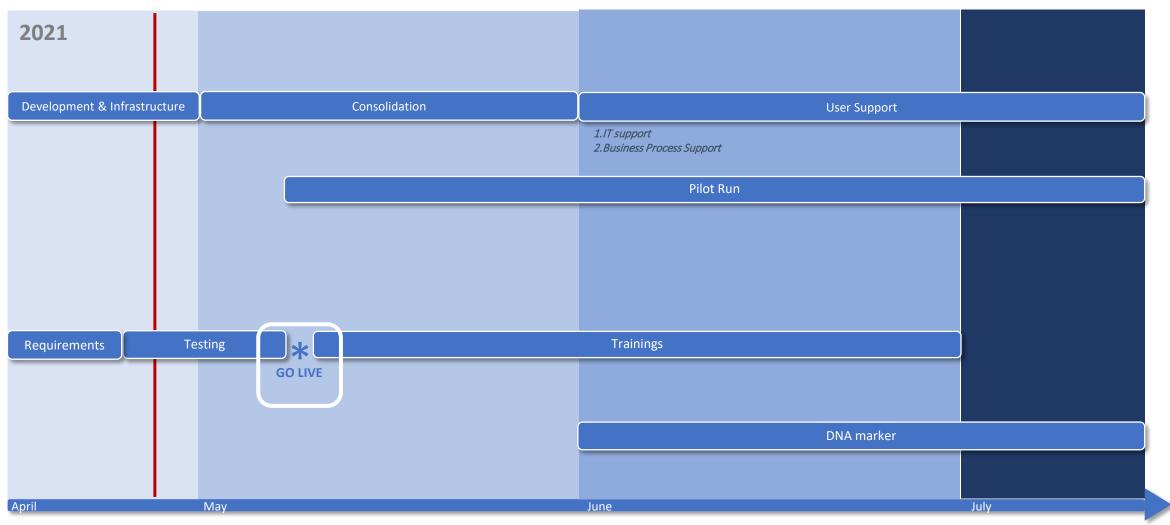




Cotton blockchain pilot

The Pilots - blockchain technology in the garment and leather value chain

Zoom in: ongoing activities



e. Project's blockchain applications in cotton and leather

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The BC pilot EPCIS 1.2 + EPCIS 2.0 (not yet ratified)



EPC Information Services (EPCIS) Standard enables disparate applications to **create and share visibility event data**, both within and across enterprises.

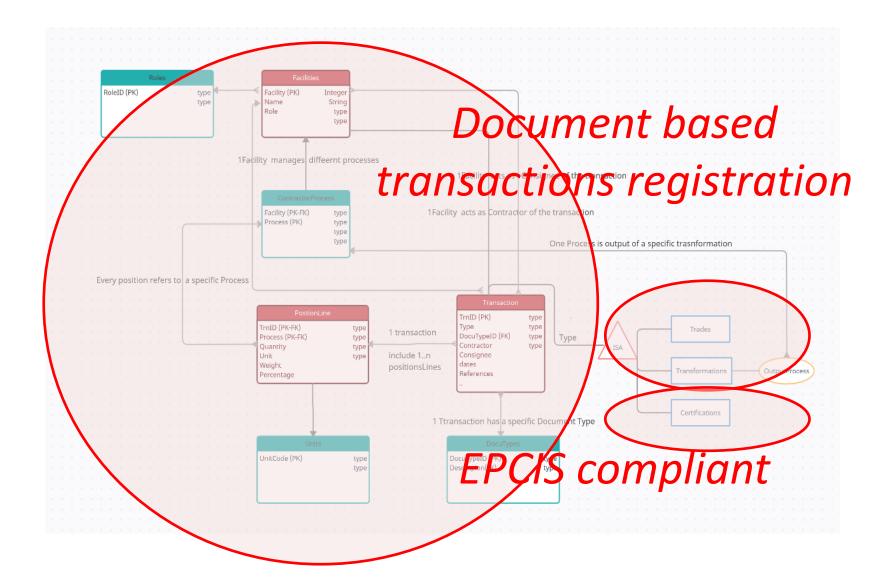
The BC pilot provides **a document based** product traceability and transparency using Blockchain technology



- **1. BC client Web App** for manual data entry
- **2. BC client backend Google Cloud** *MySQL off chain Database MS*
- **3. Blockchain architecture Ethereum** *public permission less* **Testnet**
- Smart contracts data structures and automations

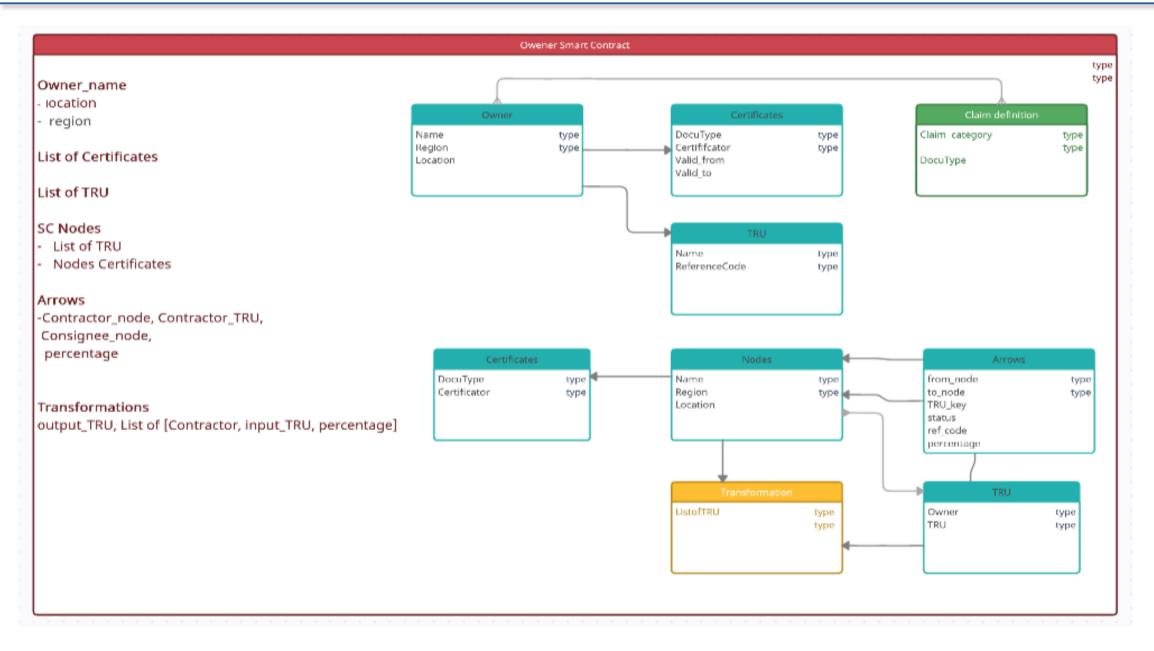
public-private key cryptography protected privacy & confidentiality





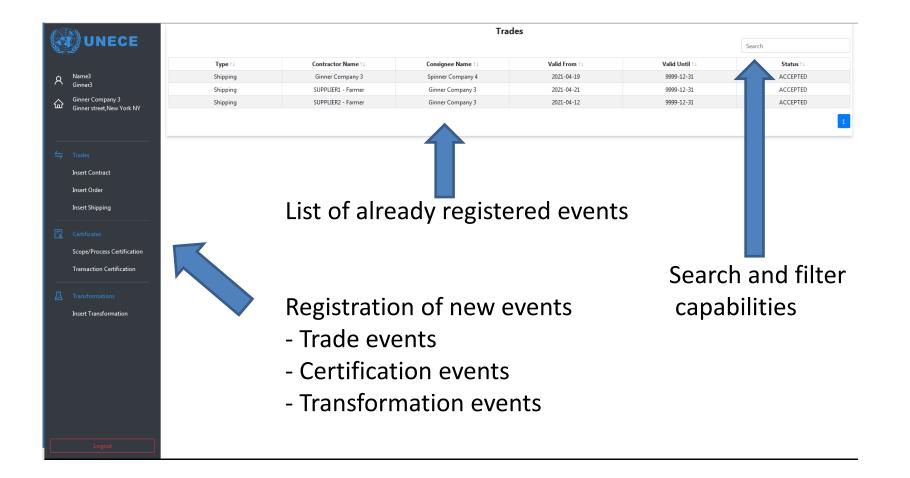


On-chain Data Model



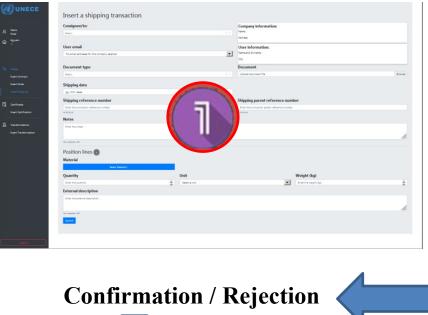


BC Pilot Home Page





Contractor Insert trade transaction (shipping)





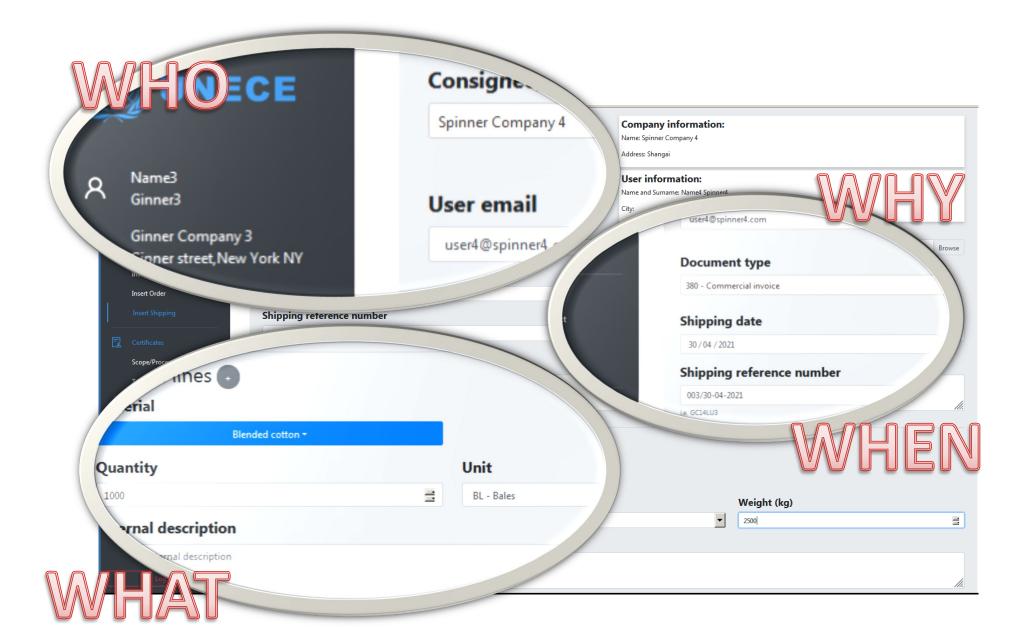
Consignee



Transaction verification /rejection









1. Contractor insert information

Consignee, Document Type, Upload document Shipping date, material and quantities

- 2. Email sent to Consignee
- 3. Consignee confirm / reject registered event
- 4. If confirm data are sent to the blockchain

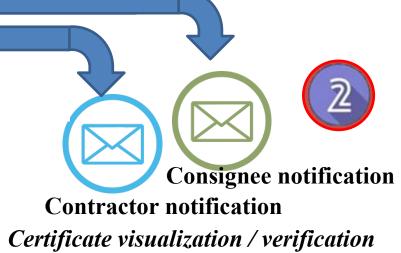


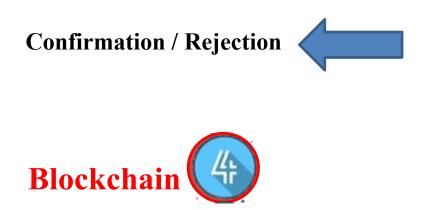
Certifier

Contractor

Offline : The company send to the certifier the list of transaction he wants to certificate **The certifier insert the certificate with the list of transactions**







IECE		
	Insert a new Scope Certificatio	оп стания клиж
i i		Certificate of Compliance
	Company	G0T5 2014-018 Institute for Ethical and Environmental Certificat
noli 15,40122	Ginner Company 3	V Adventer
		inter factor
		Naziere impetited end maximal assuranting to the criter impetited or chants
	User email	GLOBAL ORGANIC TEXTILE STANDARD (GOTS) · Version 6.0:2020 ·
act	user3@ginner3.com	and that products of this subagents as mentioned below just further quantitative that among is with the canadratic event product appendixed also program whether an another the subactive events and the subactive that another the subactive to the subactive
		Product categories Concern & product Variant - Falser
	Certification type	Terrs - soon Processing stage carried aut under representativy of the above maintened company for maintened analysis
19		Spitning, Dyring, Warehousing, Trading – Jöhnur, Franz, Inneugapionenk, Centraviolation
	2 - Certificate of conformity	Address, Tetran, Managenesseeds, California and Sales Discontinues and and Apr 97, 2015 Output continues with the of
		🔹 Para and data at inclusions
s Certification	Processing standard	Assessment type
s certification	Global Organic Textile Standard - Scope	Certified (Third Party)
rtification	Product category	Process type
ns	Undyed fibres ×	Ginning ×
rmation	Valid from	Valid until
	gg/mm/aaaa	gg/mm/aaaa



1. Certification party insert information

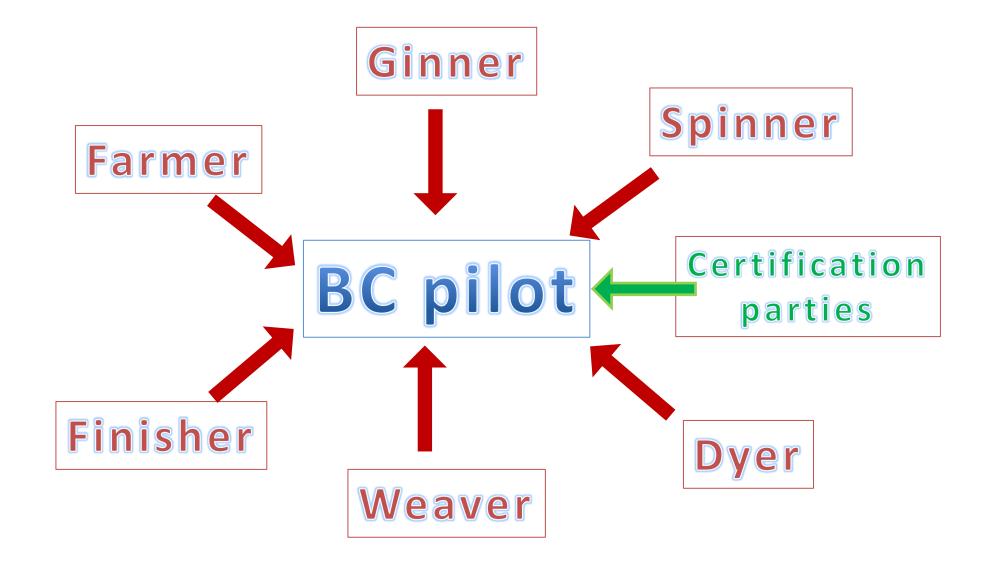
Company, Document Type, Upload certificate Issue date, processing standard, assessment mode

Certification reference object : company, process, transaction

- 2. Email sent to Company
- 3. Company confirm / reject reception
- 4. Data are sent to the blockchain



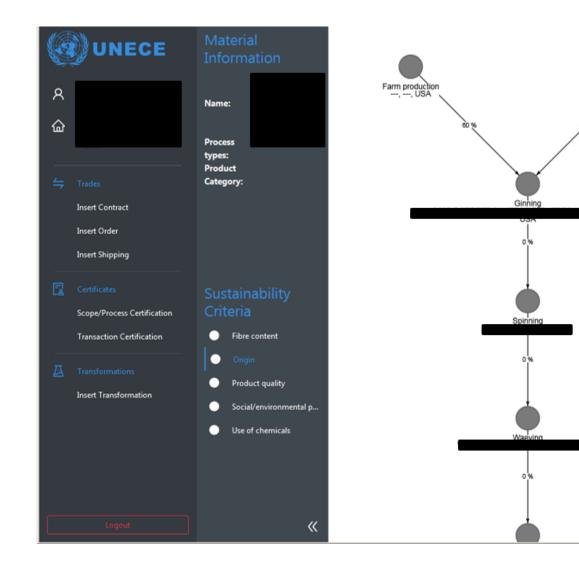


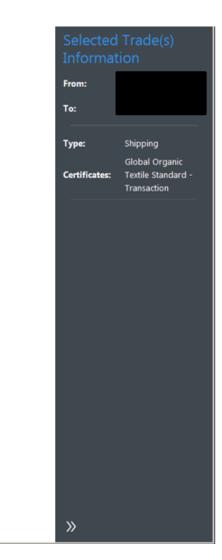




Farm production

Traceability & Transparency against different predefined claims



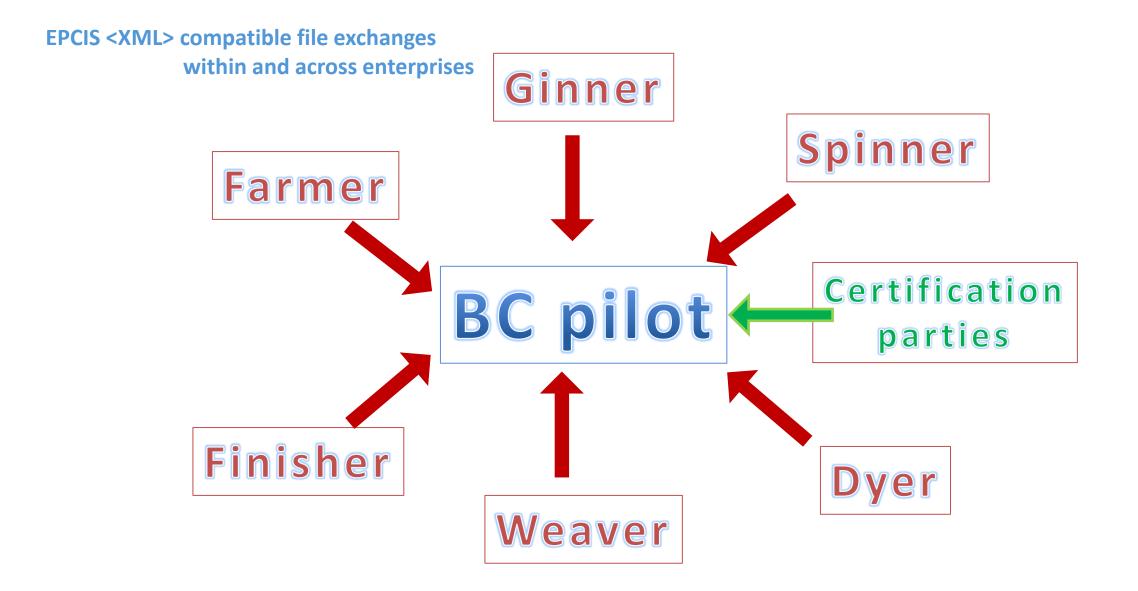




Traceability & Transparency against different predefined claims







e. Project's blockchain applications in cotton and leather

- Implementation status: dry run, pilot run and training, Andrea Redaelli
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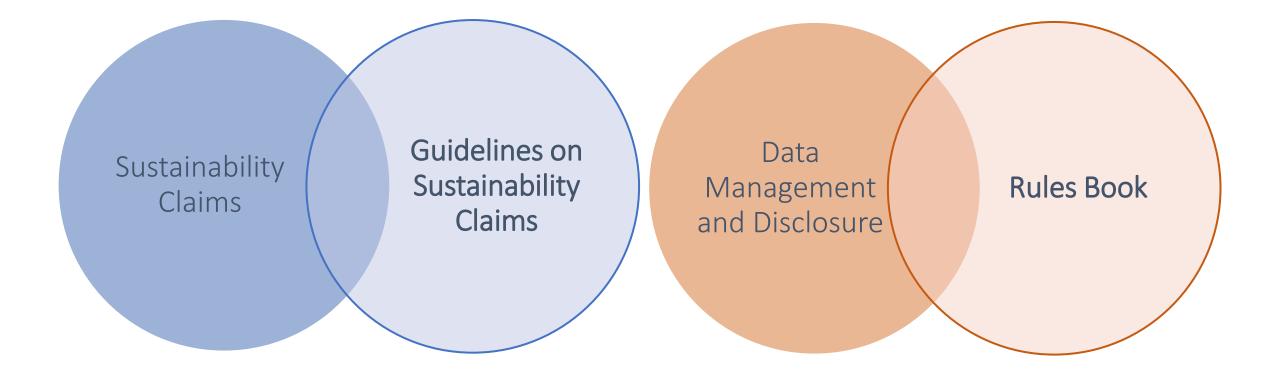
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The Pilots - blockchain technology in the garment and leather value chain

Overview and Next Steps on Sustainability Claims and Data Management and Disclosure

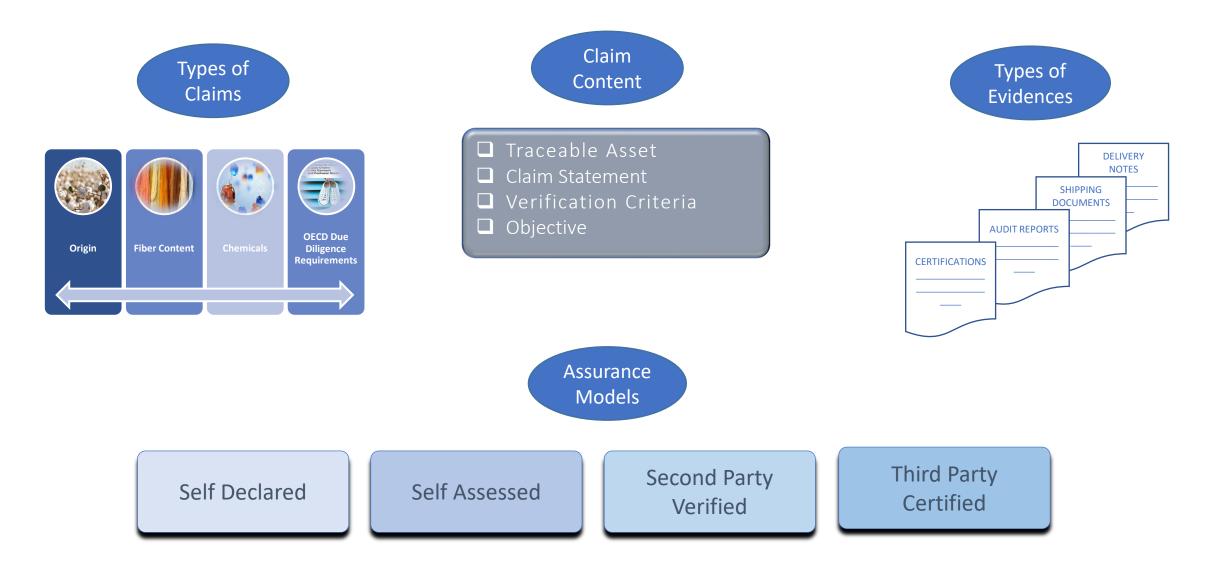




The Pilot(s) – Sustainability claims

The Pilots - blockchain technology in the garment and leather value chain

What Have Been Done: Methodology for the Partners' Use Cases

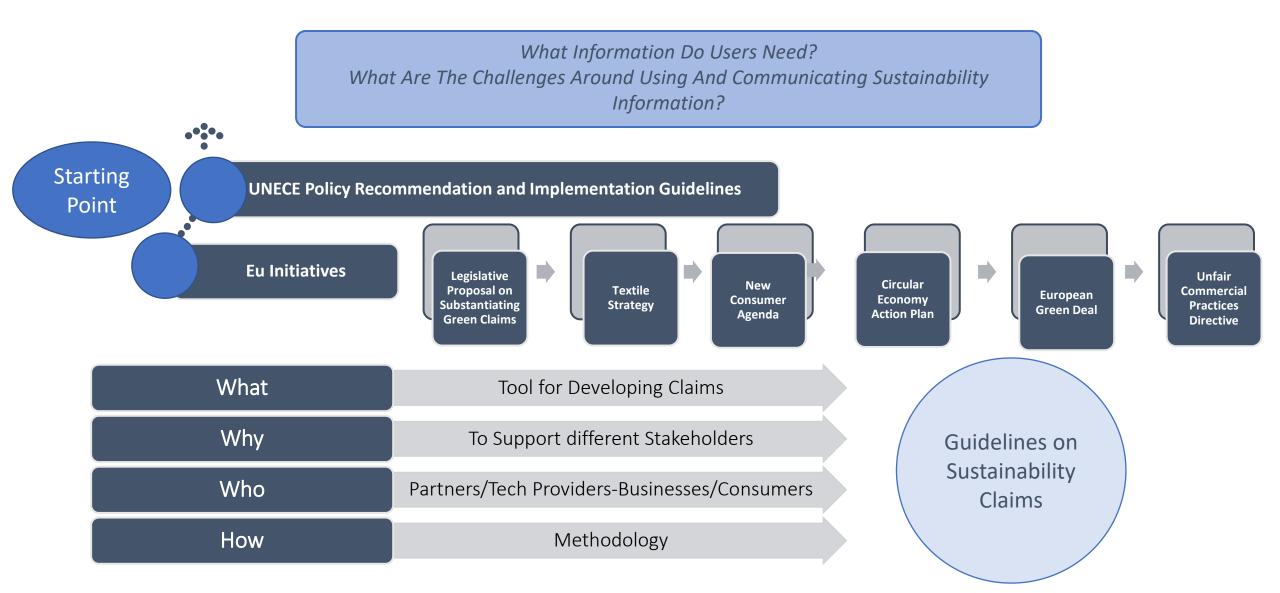




The Pilot(s) – Sustainability claims

The Pilots - blockchain technology in the garment and leather value chain

What Next: Guidelines on Sustainability Claims

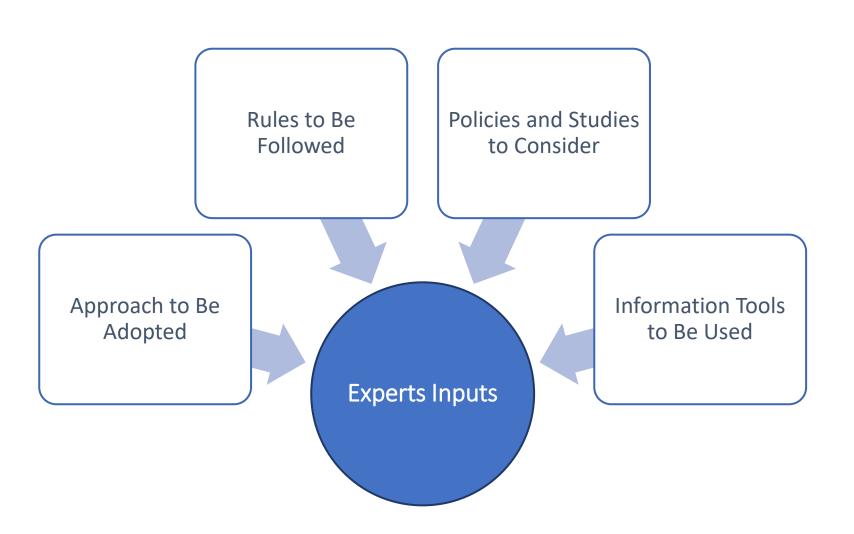




The Pilot(s) – Sustainability claims

The Pilots - blockchain technology in the garment and leather value chain

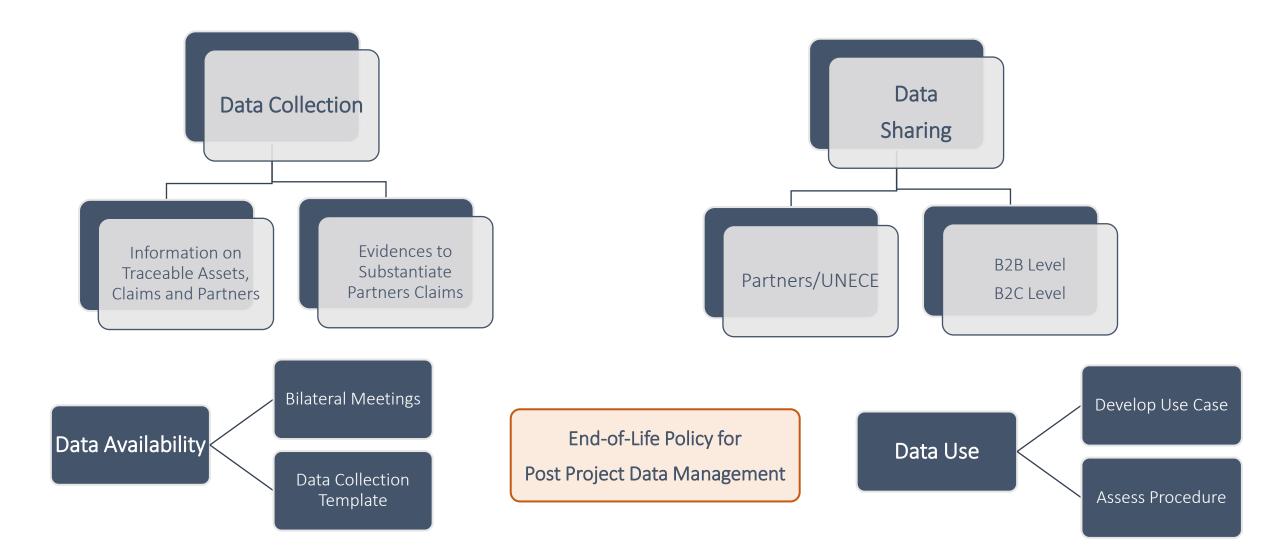
What We Need From You





The Pilots - blockchain technology in the garment and leather value chain

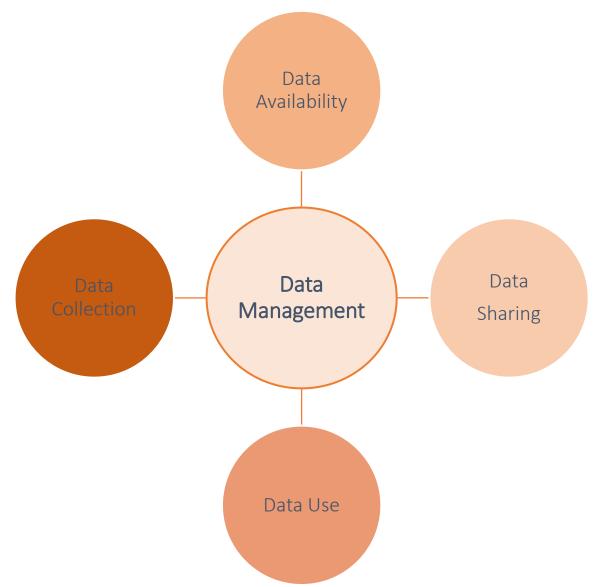
What Have Been Done: Methodology for the Collection, Sharing, Availability and Use of Data





The Pilots - blockchain technology in the garment and leather value chain

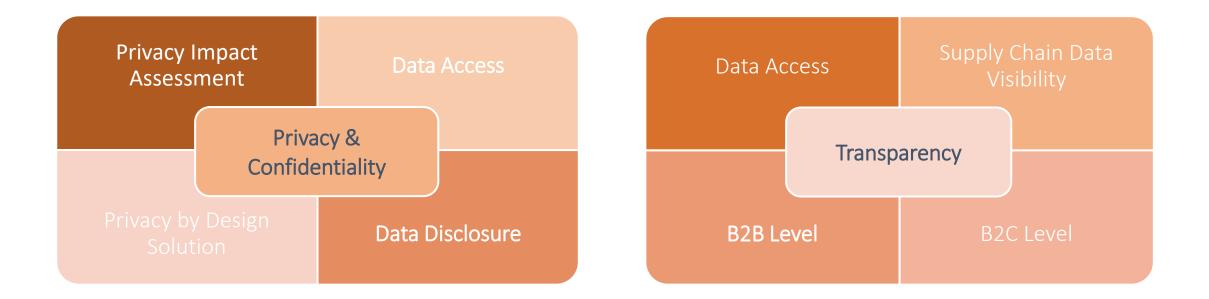
What Next: Rules Book on Data Management and Disclosure





The Pilots - blockchain technology in the garment and leather value chain

What Have Been Done: Analysis of Privacy & Confidentiality and Transparency Issues



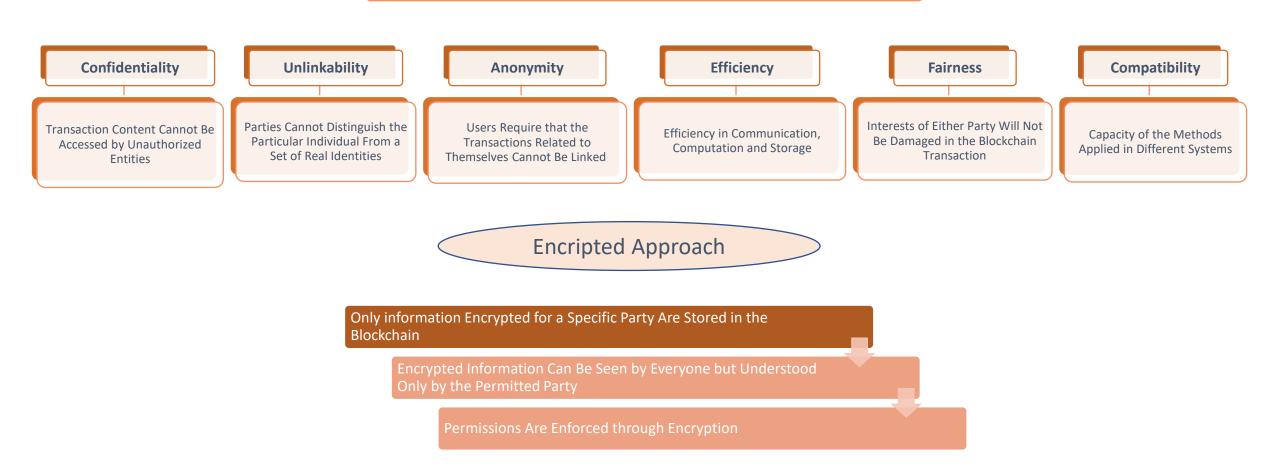
Trade-Off between Privacy & Confidentiality and Transparency



The Pilots - blockchain technology in the garment and leather value chain

What Next : Implementation of the Privacy by Design Solution

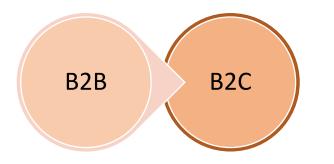
Requirements of Blockchain Privacy Preservation





The Pilots - blockchain technology in the garment and leather value chain

What Next: Identification of Transparency Layers



Availability of Different Supply Chain Data Visibility

Definition by the Partners of the Data Disclosure

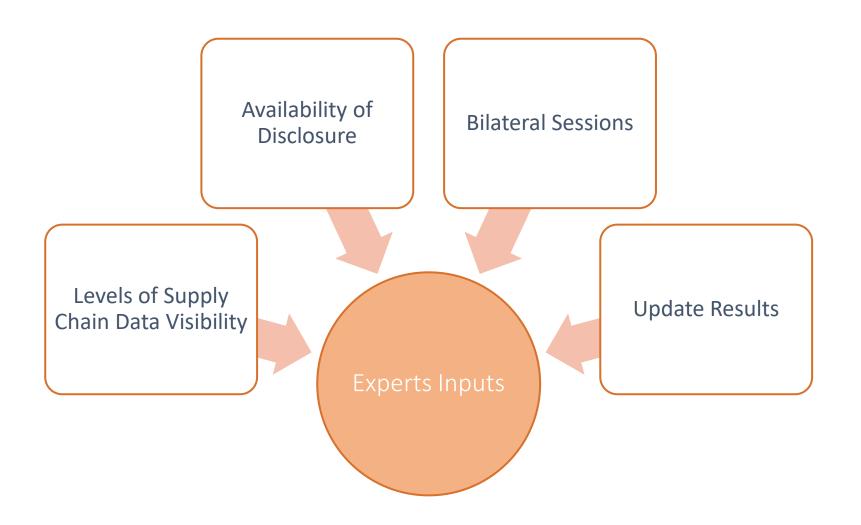


01	02	03	04	05
Certificates	+ Country	+ Region	+ Company or Subsidiary	+ Name of Subsidiary



The Pilots - blockchain technology in the garment and leather value chain

What We Need From You



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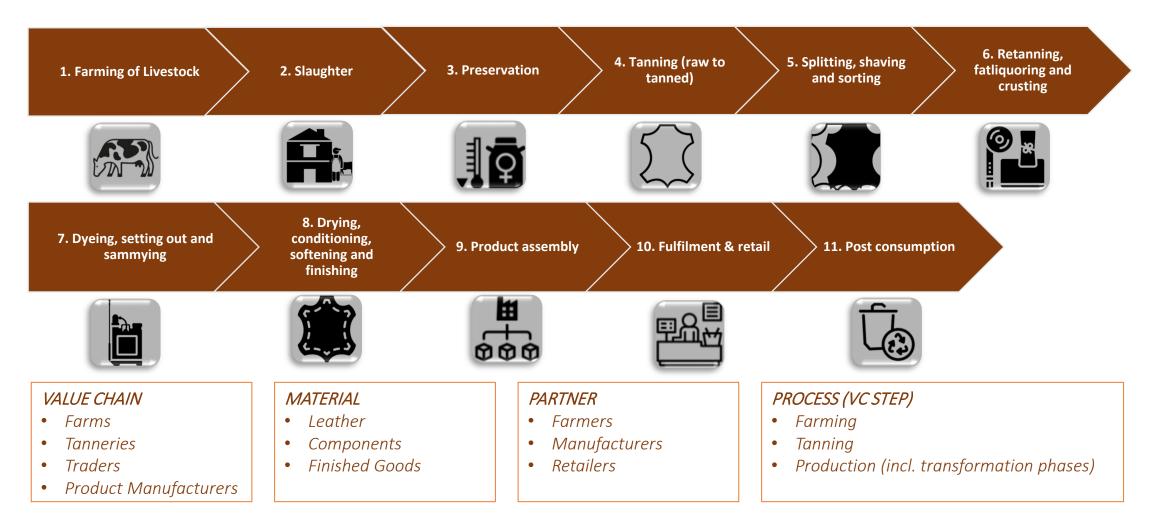
Leather Blockchain Pilot

- Early stages of development
- Benefit of learning from the Cotton Blockchain Pilot
- Participating in the dry runs / testing of the cotton to aid understanding and progress for the leather pilot
- Established a group of project partners and held a welcome meeting



Step 1: Value Chain(s) Selection: Materials, Partners and Processes

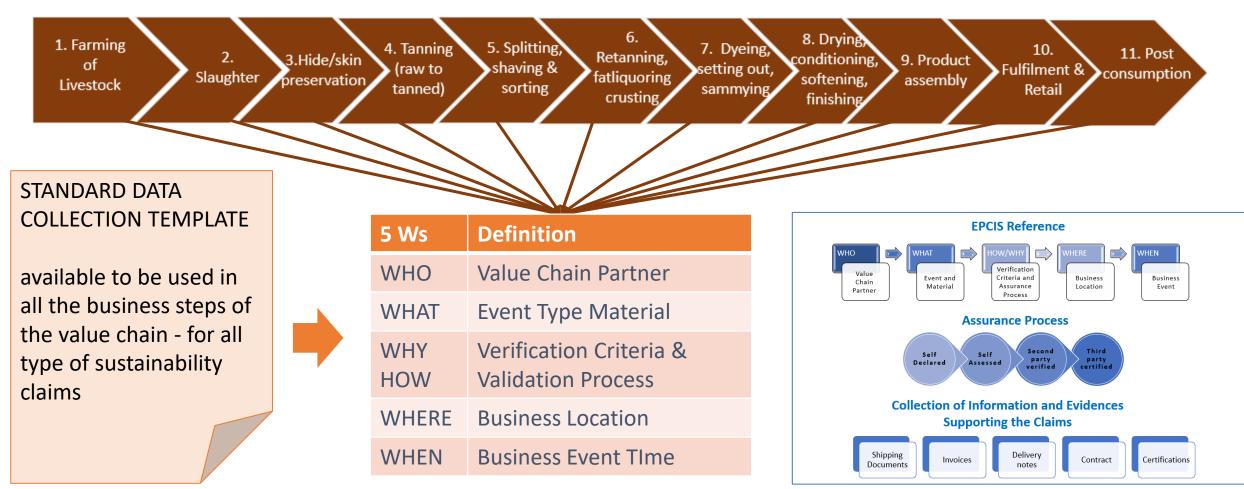
Standard Leather value Chain





Step 2: Identify the information exchanges / data within the Value Chain(s) Selection

Standard Leather Value Chain

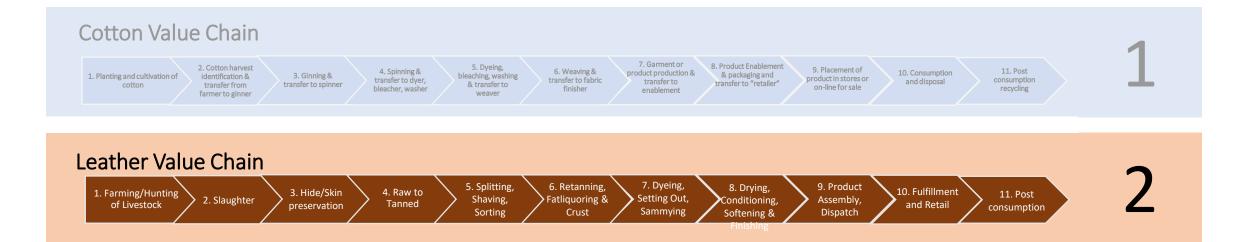




Pilot process

Step 3: Identify the User Story – What do you want to achieve?

Pilot #1 - blockchain technology in the cotton value chain



What is your core business? How does it impact the leather value chain?

Where do you position your user story in the leather value chain ? Who are the most relevant business partners in your value chain?



Pilot process

How to build the User Story - Example

Pilot #1 - blockchain technology in the cotton value chain

User story #10 –					
AS A		I WANT TO		SO THAT	
Spinning mill	Ş	Upload the organic cotton certificates I receive from agricultural partners and certification entities		I can show the traceable origin of the cotton fibers I use	ж Ц
Spinner	Ş	Upload the GOTS Transaction certificate issued by the certification body in the blockchain		I can demonstrate that the fabric maker receives GOTS certified yarns matching with GOTS certificate approved on-site by the third-party certification body.	کر ۲
User Story LVC: Complete		1			
AS A		I WANT TO		SO THAT	
Leather Manufacturer		Ensure that leather manufactured in my tannery does not contain hazardous chemistry by buying chemicals from suppliers who are compliant with REACH regulations		No adverse health effects are suffered by people who use or wear products manufactured with leather produced at my tannery. Testing of the leather will be conducted by 3 rd party verif companies to demonstrate this con test reports will be uploaded to the platform in order to create transpa	mpliance and e blockchain

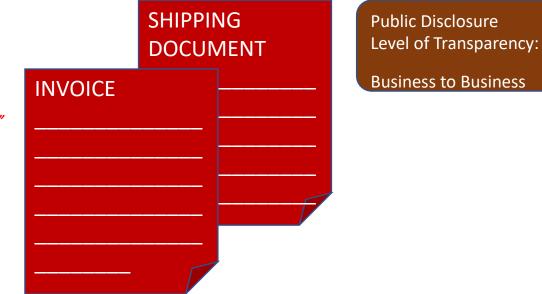


Piloting UNECE traceability framework in a blockchain environment

Step 5. To enable your user story – select your claim and validation method (this example is origin) *Leather Value Chain*



- Value Chain Step: Tanning
- User Story: In order to prove the transfer of ownership of the wet-blue tannery to the finishing tannery, the wet-blue tannery issues an invoice and a shipping list that confirms the transaction. Assurance Process: Second Party verified.
- WHO:
 - From Tannery Name "ABC"
 - To Tannery Name "XYZ"
- WHAT:
 - Event (transformation): Tanning
 - Material: Bovine Wet-Blue "A" grade, full substance
 - Verification Criteria (Evidence/Standard): Invoice from Tannery "ABC" to Tannery "XYZ"
- WHERE
 - Operation Location Tannery Location "ABC" address
- WHEN
 - Event Date and Time: Date and Time
- WHY
 - Business Operation: Continuation of process to complete leather manufacture





Piloting UNECE traceability framework in a blockchain environment

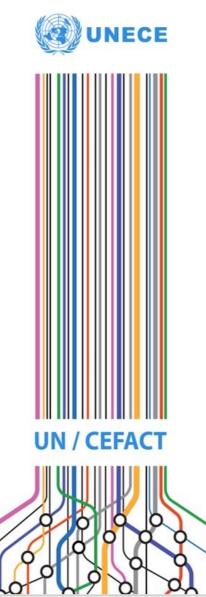
Pilot Scenario(s) preparation: Working Groups

Roundtable Organization: a phased-in expanding series of working groups as the pilot develops

Gap Analysis	Pilot Scoping	Support	Validation	
Working group to undertake a gap analysis for cotton vs leather, and	Working Group for scoping the pilot objectives and desired outcomes:	Working Group to assist with gaps in value chains and expert input	Working Group to provide physical pilot run and validation	
investigation on physical markers (PRO and CONs analysis, tender(?):	Made up of Direct Project Partners plus	Made up of Direct Project Partners,	Direct Project Partners, Support Project Partners,	
Team to be determined from cotton and leather pilots	Secretariat and Consultant Team	Support Project Partners, plus Secretariat and Consultant Team	Validation Partners, plus Secretariat and Consultant Team	



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



- Consultation: training plan, communication strategy, outreach plan
 - Press Release 11 May

In partnership with

- Update on member State endorsement
- Opening of Call to Action, and submissions
- Launch of The Sustainability Pledge
- Multi-Stakeholder Dialogue 21-23 September, Milan (hybrid format)







IV. Q&A and wrap-up

Maria Teresa Pisani





POLICY

UNECE Policy Recommendation and implementation Guidelines N°46 (April 2021)

<u>The Call to Action / Sustainability Pledge</u> - <u>FR version</u> – <u>RU version</u> (April 2021)

STANDARD

The Business Requirements Specifications (BRSs) for Traceability and Transparency for Textile and Leather (April 2021)

Part I High Level Process and Data Model

Part II Use cases and CCBDA

The Business Process Analysis for Textile (ongoing)

Business Process Analysis for Sustainability and Circularity in the Leather Value Chain

Code Lists and Identifiers Recommendation for Leather and Textile (ongoing)

PILOT

Policy brief – Harnessing the potential of blockchain technology for due diligence and sustainability in cotton value chains (April 2021)

GUIDELINES AND STUDIES

<u>Mapping of policies, regulations and guidelines: Report, Policy developments on traceability and</u> <u>transparency</u> and <u>its Executive summary for policymakers</u> (April 2021)

Webpage CUE SPACE https://unece.org/trade/traceability-sustainable-garment-and-footwear Connexion - UN/CEFACT Collaboration Environment (unece.org)