GreenTrack™

An end-to-end fashion traceability solution powered by
Blockchain Technology By

Birla Cellulose
Fibres from nature

ADITYA BIRLA GROUP

Brands Requirement – Need for Traceability

Consumer is Increasingly environment conscious & sustainability credentials becoming a key ask

Brands & Retail

Brands shifting their portfolio to fibres with established sustainability credentials

valuechain

Value chain needs to source as per brand's garment tagging requirement

THIS IS THE BLIND SPOT

Birla Cellulose
Fibres From Nature

BC leadership provides solution for Brands to verify the '**chain of custody' of sustainable fibre** across value chain

The expectations are –

1. **End Consumers**: Demonstrable sustainability credentials of garments they buy, preferably on their fingertips.
2. **Brands**: Verification of sustainability credentials across the chain for all their products

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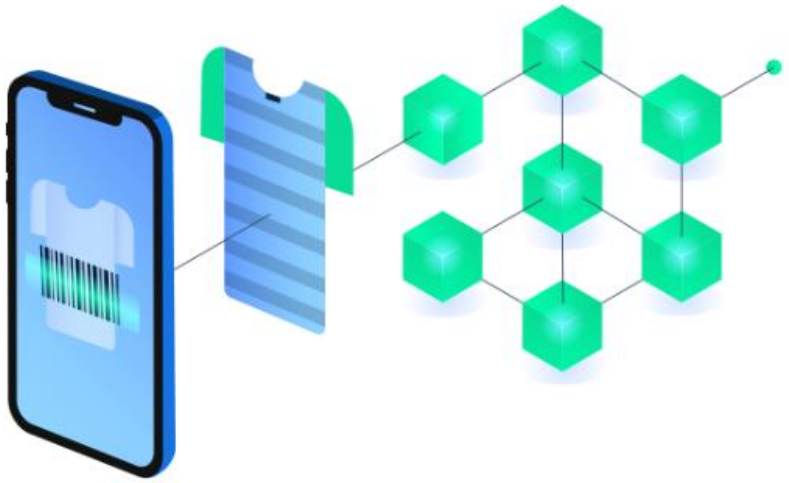
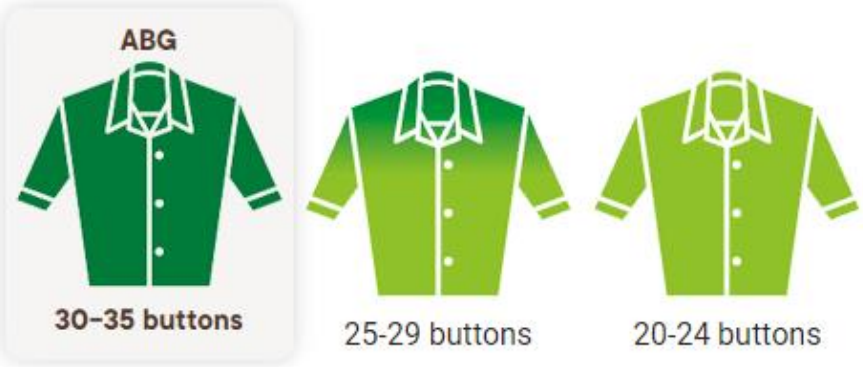
GreenTrack™ – pioneering blockchain based traceability





- **1st of its kind blockchain based traceability solution in the textile industry**
- More than 1500 global supply chain partners onboarded, tracking millions of 'live' transactions on the platform per year
- Mapping the journey of cellulosic content from forest all the way to brand stores
- Major global brands/retailers on the platform – Marks and Spencer, H&M, Tesco, Walmart, ABFRL, Varner, Bestseller, Benetton, etc.
- 1st global viscose producer to receive "Dark Green Shirt" Ranking in Canopy Hot Button report and ranked #1 in the world – major contribution of Traceability with full marks in that pillar.

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GreenTrack™ - Awards & Recognition

1. NASSCOM CoE Excellence Award – Dec 2021
2. IMC Digital Technology Award for Excellence in Digital Implementation – June 2021: Green Track (Blockchain based Forest to Fashion Traceability)
3. SKOCH Order of Merit – Feb 2021
4. Forbes Top 50 Blockchain based solutions in the world – Feb 2021
5. ABG Bizlabs Award - 2020

Sappi

Johannesburg, South Africa

The South African pulp producer has partnered with Indian eco-friendly fabric maker Birla Cellulose on GreenTrack, a blockchain that tracks fabric products from sustainable forests to pulp to manufacturing plants. More than 250 supply chain partners, including Walmart and Marks & Spencer, now use GreenTrack to verify the sustainability of the apparel they sell.

Blockchain platforms: GreenTrack, Hyperledger Fabric

Key leader: Krelyne Andrew, general manager sustainability, dissolving wood pulp

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GreenTrack™ ADVANTAGE

- Raw-Material traceability from Forest to Fashion
- Transparency across the supply chain
- Strengthen sustainability credentials
- Strengthen brand and consumer connect
- Supports sustainable sourcing

OUR TRACEABLE FIBERS

liva eco | liva reviva | liva eco modal | Birla Excel | spunshades by Birla Cellulose**

** Eco-enhanced spunshades

GreenTrack™

HOW DOES IT WORK

Value Chain Traceability GreenTrack

Live mapping of the material journey from forest to fashion through every supply chain node

Source Verification through Molecular Tracer

Unique molecular additive inside the fibre for source verification at any stage – fibre, yarn, fabric & garment removes any possibility of counterfeit or dilution.

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GreenTrack™: Value Chain Traceability

GreenTrack™: Forest to Fashion Traceability

Solution offers **2-fold provenance tracking** based on **'live' linking**

1 **PO tracking up the value chain: unique QR code created Brand to intermediaries to Birla Cellulose**

Chain-of-custody of FSC certified material flow from **Wood to Fibre** is internally maintained and certified

2 **Material delivery and invoice tracking down the value chain – BC to intermediaries to Brand**

1 **Order Initiation from Brand/Buying-House** – Block requirements start building during this track, basis data on quantity requirements, delivery dates and partner selections

2 **Shipment Initiation from Birla Cellulose** – Block fulfilment and blockchain formation, basis mass balancing at each node of the material flow across transparent value chain

Real Time Mapping

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How To get started on GreenTrack™ C-o-C Solution.....

Steps to start Traceability on this Solution…

- **Brand** to agree to work on BC platform. Then register and initiate order on a garment supplier on the platform.
- **Garment supplier** to register on the platform and receive the requirement from brand and then place the requirement with the finished fabric supplier.
- **Finished Fabric supplier** to register on platform, receive order from Garmenter and place order of grey fabric
- **Grey fabric manufacturer** to register on platform, receive requirement from processor and place order for yarn
- **Spinner** to register on platform, receive the requirement of yarn from grey fabricator and place order for Fibre with Birla Cellulose.
- **Birla Cellulose** to receive the order for Liva Eco & other tracer enabled fibres, supply, while linking the invoice with the order.
- Supply trail continues till the garments are dispatched to the Brand's warehouse.
- A Unique QR Code is generated, visible real time once brand places the order on garmenter

BC Team would support on-boarding each value chain partner in this journey

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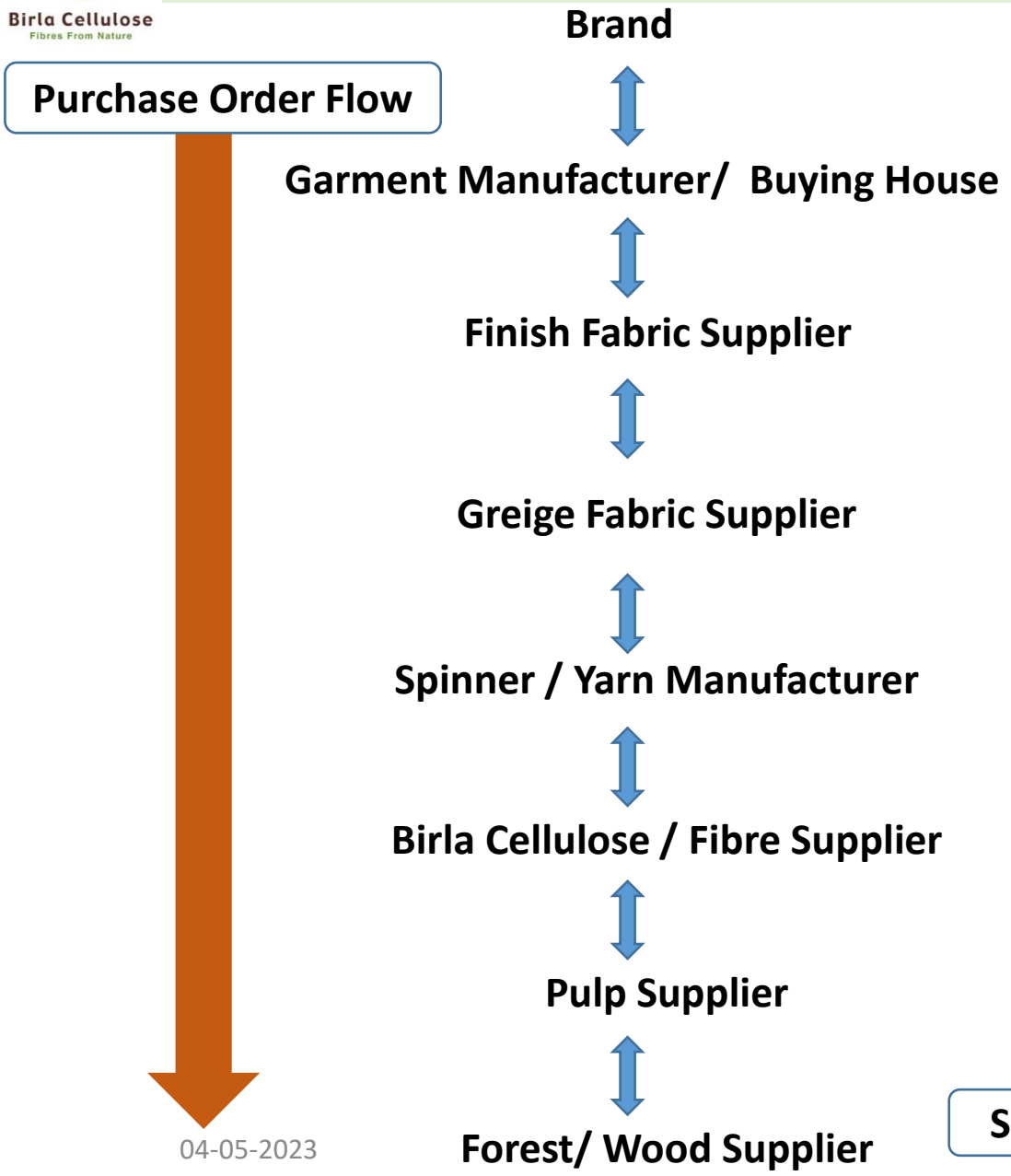
How GreenTrack™ Traceability tool works.



Brand gets COMPLETE traceability ***of entire Value Chain*** *from Forest to Fashion on GreenTrack™*

Transaction certificate generated at each Buyer & Seller level for every shipment

Basic Principle of GreenTrack™ Traceability Tool

1. PO tracking up the value chain: a unique QR code created:

Brand to intermediaries to Birla Cellulose to Forest

2. Material delivery and invoice tracking down the value chain:

Forest to Birla Cellulose to intermediaries to Brand

3. Mass balancing at each node of the material flow across transparent value chain.

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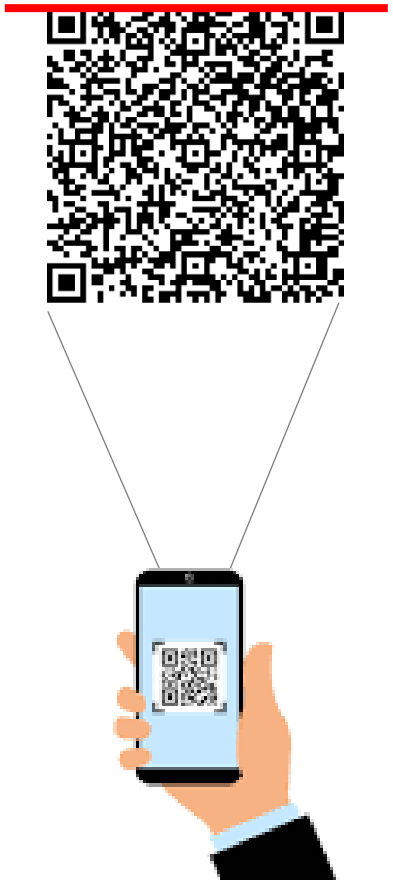
Unique QR code scan:
Instant visibility to End Consumers of material journey



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GreenTrack™ Visibility of Audit Trail to BRANDS only

Birla Cellulose
Fibres From Nature

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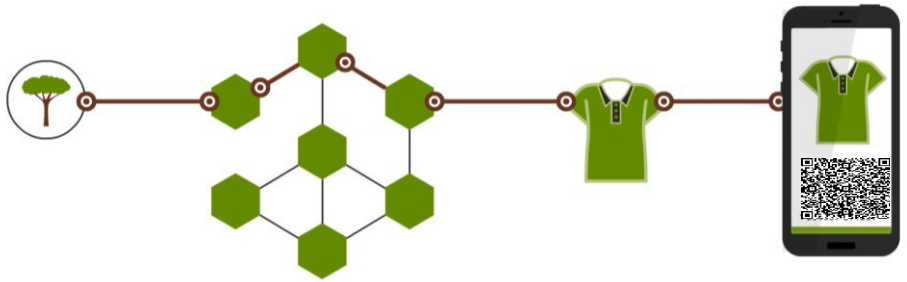
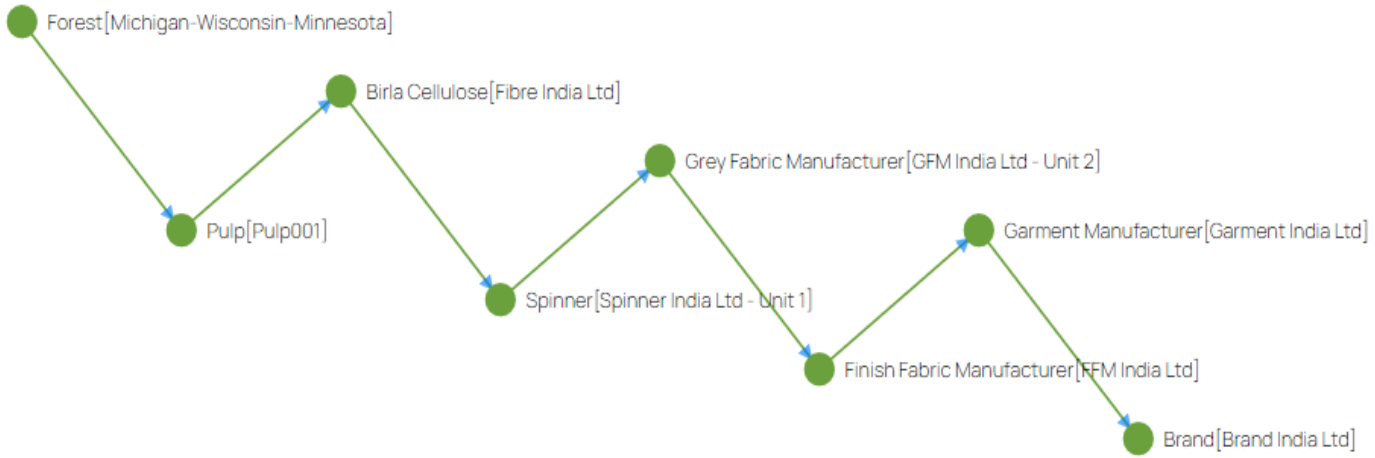
BLOCKCHAIN-POWERED TRACEABILITY PLATFORM



Audit Trail Graph

**Hover on Nodes to see Shipment and Product Details.



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Audit Trail

Audit trail for Blockchain-enabled Traceability Platform

Audit trail for purchase order
#POB

Shipment Refrence Number: REF_SH18431
Seller: Michigan-Wisconsin-Minnesota (Duluth, Minnesota, United States)
Buyer: Pulp001 (BARAGA, Minnesota, United States)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: Aspen, Maple, Mixed Hardwood (<5%)
Invoice number: INV-80504

Shipment Refrence Number: REF_SH18430
Seller: Pulp001 (BARAGA, Minnesota, United States)
Buyer: Fibre India Ltd (Mumbai, Maharashtra, India)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: Hardwood PHK Dissolving Pulp
Invoice number: INB1
Lot quantity consumed to fulfil Product: Aspen, Maple, Mixed Hardwood (<5%) (100 Metric Ton), Aspen, Maple, Mixed Hardwood (<5%) (230 admt)

Shipment Refrence Number: REF_SH18432
Seller: Fibre India Ltd (Mumbai, Maharashtra, India)
Buyer: Spinner India Ltd - Unit 1 (Erode, Tamil Nadu , India)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: Viscose S Fibre (LYOCELL)-1.2X38-EXCEL
Invoice number: INB2
Lot quantity consumed to fulfil Product: Hardwood PHK Dissolving Pulp (100 kg)

Shipment Refrence Number: REF_SH18433
Seller: Spinner India Ltd - Unit 1 (Erode, Tamil Nadu , India)
Buyer: GFM India Ltd - Unit 2 (Nagpur, Maharashtra, India)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: 30s Viscose Ring Yarn
Invoice number: INB4
Lot quantity consumed to fulfil Product: Viscose S Fibre (LYOCELL)-1.2X38-EXCEL (50 kg)

Shipment Refrence Number: REF_SH18434
Seller: GFM India Ltd - Unit 2 (Nagpur, Maharashtra, India)
Buyer: FFM India Ltd (Vapi, Gujrat, India)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: 30s Viscose Ring x 30s Viscose Ring 68x64/48-Plain Shuttle Loom
Invoice number: INB5
Lot quantity consumed to fulfil Product: 30s Viscose Ring Yarn (40 kg)

Shipment Refrence Number: REF_SH18435
Seller: FFM India Ltd (Vapi, Gujrat, India)
Buyer: Garment India Ltd (Ahmedabad, gujrat, India)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: 30s Viscose Ring x 30s Viscose Ring 84x64/42 Plain
Invoice number: INB6
Lot quantity consumed to fulfil Product: 30s Viscose Ring x 30s Viscose Ring 68x64/48-Plain Shuttle Loom (30 kg)

Shipment Refrence Number: REF_SH18436
Seller: Garment India Ltd (Ahmedabad, gujrat, India)
Buyer: Brand India Ltd (delhi, delhi, India)
Shipment Date: 05-04-2022 Received Date: 05-04-2022
Product: Liva Eco Checks Shirt
Invoice number: INB7
Lot quantity consumed to fulfil Product: 30s Viscose Ring x 30s Viscose Ring 84x64/42 Plain (20 kg)

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This document has been generated by GreenTrack™ - a Blockchain traceability solution by Birla Cellulose

2-fold provenance tracking

Transaction mapping via Block chain

GreenTrack™

Transaction Certificate

Date of Invoice: Thu, Apr 14 2022

Transaction Certificate Number: IP -28/04/2022-87740

Invoice Number: 04/00375/22-23

Linked Purchase Order: FPOB-56C22/239

Buyer's Name: Sahu Exports Pvt. Ltd.

Supplier's Name: R.M.P. Fab Sourcing (P) Ltd.

Shipment Description: 30's Liva Eco Kelsey Crepe - Style# 2349

Product Description: 2349-GREEN MIX KELSEY CREPE PRINT

Products: 30s Viscose Ring x 30s Viscose Ring 84x60 Plain

Quantity: 3598 Meter

The blockchain-enabled "Chain of Custody" (CoC) platform - GreenTrack confirms that the aforementioned product is made using below Fibre(s) ** and the material flow from forest till current stage has been mapped and verified for traceability throughout the supply chain

Fibre: VSF 1.2X38-GR-LIVA ECO-FSC Mix Credit

SAMPLE

This document has been generated from GreenTrack™ -a Blockchain traceability solution by Birla Cellulose

Fabric certification via Physical tracer test

GreenTrack™

Test Certificate

Date: 13 June 2022

Test Report No.: India/130622/2494

Client Name: Radnik Exports

Client Address: Gurgaon, India

Fabric Order Number: FBJO/413/22-23/405

Sample Batch Number: #169367, #169503, #169502

Production Date: 2022-06-05

Greige Fabric Manufacturer: VSM Weaves India Limited(Pallavaa Group)

Finished Fabric Manufacturer: R S Printfab Pvt Ltd

Garmenter: Radnik Exports

Spinner: Pallavaa Textile Limited

Brand Name: Scotch & Soda B.V.

Product Details:

Fabric Details (Count, Blend): 60sx60s/ 104x84, 52"

Fabric GSM: 80

SAMPLE

Above sample(s) was/were submitted by the client, Grasim Industries Ltd. quoted the information with no responsibility as to the accuracy,adequacy and/or completeness

Date of Sample recieved: 2022-06-13

Date of Sample Tested: 2022-06-13

Test(s) Requested: Verification of Livaeco Modal by Birla Cellulose ™ fibre in fabric

Test Results(s): Livaeco Modal by Birla Cellulose ™ fibre is Verified in fabric

Tested By (Research Associate)

Verified By: (Research Scientist)

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Eligibility: *>30% Birla Livaeco fibre in sample*

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Unique Advantages of GreenTrack™ C-o-C Solution from BC

Advantages to Brands:

- **Complete traceability** of their orders in the value chain on real time basis..
- Visibility on the complete value chain from **forest to fashion** to ensure right partner selection
- Enables to take corrective actions, in case of delays etc in the process.
- Complete information on the journey from forest to fashion is available through a **unique QR Code** which can be made available to the consumer conveniently

Advantages to the Value Chain Partners:

- Visibility on orders from the buyer and shipments from the supplier on real time basis.
- Visibility to the Brand ensures preference resulting in business growth.
- Preference by brands entering the eco-system for value chain partners who are already on the platform.

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SUSTAINABILITY,

A WAY OF LIFE.

Let us collaborate & win...

ADITYA BIRLA GROUP

CoC Core Team: *Shyamlal Patnaik| Vaishali Kamble| Tiana Quinny*
Biz IT Team: *Jaiprakash Rao*
Brand & Retail: *Sucharu Uppal*

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