



XX OIL PALM
International Conference

THE TRANSFORMATIVE
POWER OF OIL PALM



Traceability in the Palm Oil Supply Chain

UR Unnithan, CEO & Cofounder - DIBIZ



www.dibizglobal.com

MAJOR CHALLENGES

Enterprises are accused of “Green Washing” despite sustainability certification systems.

Lack of granular supply chain data to prove NDPE compliance.

Industry spends millions in managing sustainability certifications yet the premiums are far too little.



Small holders, who produce 40% of palm oil not visible in the supply chain (less than 2% of global supply of sustainable palm oil).

No real-time collaboration in supply chain

Thus, no real-time visibility and traceability to validate sustainability claims

What is the urgency?

1



New Food Safety Regulation by 2023

The Food Safety Modernization Act (FSMA), mandates recordkeeping requirements for clear **tracing of a food products'** source to tackle food safety risks. First major federal food safety legislation since 1938.

2



EU: European Green Deal - Farm to Fork Strategy

This Strategy aims to make food systems fair, healthy and environmentally-friendly. **New technologies and scientific discoveries**, combined with **increasing public awareness** and demand for **sustainable food**, will be mandated. The **EU will implement** transition to **sustainable agri-food systems** through its trade policies and international cooperation instruments.

3



UK: Law to mandate Supply Chain due diligence is being passed at a faster pace

When passed, the law requires companies carrying out commercial activities in the UK with a certain turnover threshold, to:

- ★ only use **'forest risk commodities'**, produced anywhere in the world
- ★ carry out **supply chain due diligence** to check for risks of illegal deforestation in their supply chains; and **publicly report on their due diligence**.



EU regulation on deforestation-free products

- 1 The commission and the EU Parliament needs to agree to the proposal (Or make changes before it can be adopted by both parties)
- 2 If the proposal is adopted without change, businesses will have to comply with all requirements as from 12 months from the entry in to force of the regulation



Wood



Beef



Palm oil



Soy



Coffee



Cocoa

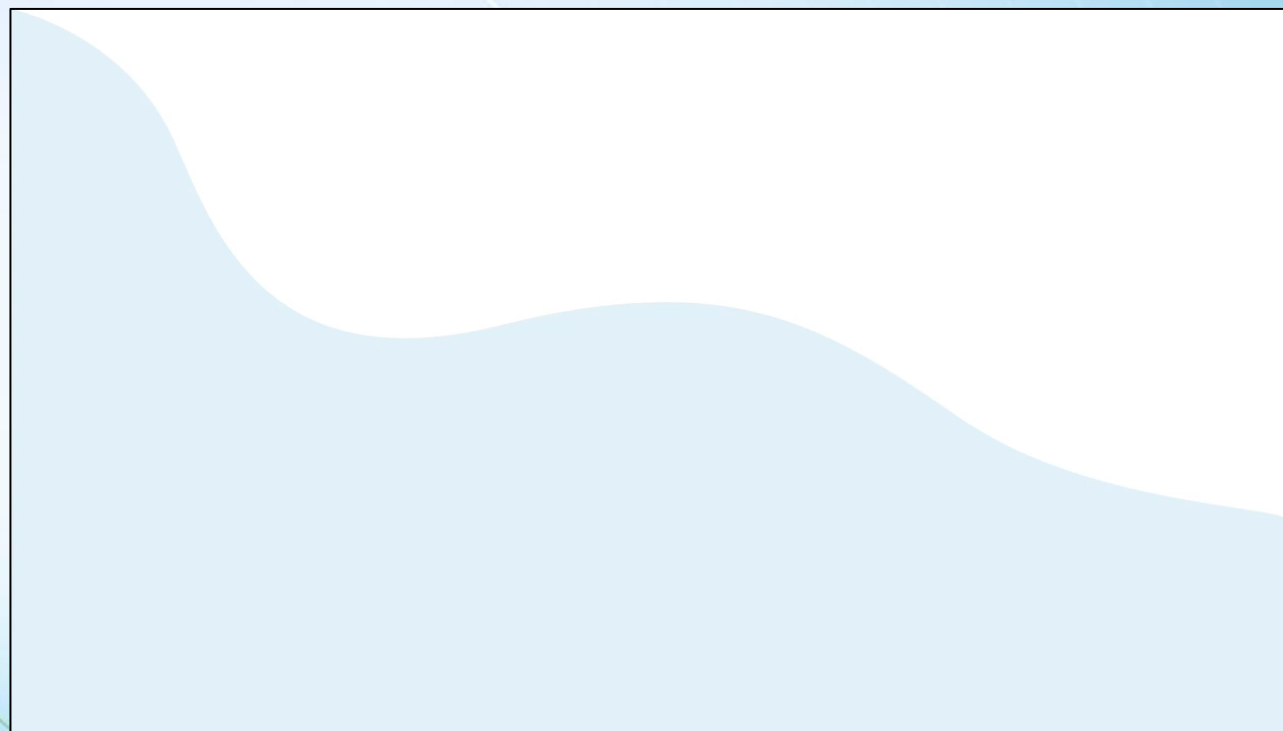


Derived products
Eg. Leather, Chocolate or Furniture

The most comprehensive 'Digital Ecosystem' for the entire Sustainable Palm Oil Industry





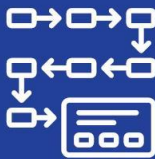
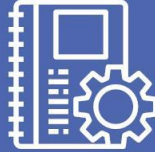






INTRODUCTION TO SaaS Benefits





PREMIUM 'SaaS' MODULES FOR ADDITIONAL VALUE

- ✓ **Improve productivity**
- ✓ **Easily maintain digital documentation of supply chain**
- ✓ **Increase OER/Yield through data analytics**
- ✓ **Communicate with partners**
- ✓ **Blockchain based immutable data to avail benefits**

<p>Traceability (Prove Source, Track Supply Chain)</p> 	<p>Private Blockchain (Immutable Records)</p> 	<p>Digital Workflow (Improve Efficiency)</p> 	<p>Trade Document Management (Digitalization)</p> 	<p>Certificate Management (Verify Certificates)</p> 
<p>Connected ERP (Connected to Trading Partners' System)</p> 	<p>Geo-Spatial Analytics (Optimize Inventory & Reduce Cost)</p> 	<p>Mini ERP For SME/Smallholders (Digital Transformation)</p> 	<p>Marketplace (Expand Sales)</p> 	<p>Secured & Contextual Communication (no more Email/Fax)</p> 



CURRENT MANUAL PROCESS

Receives Targets and harvests FFB's.
Unloads all the FFB's in the common area.



Notes all the FFB's received per harvester
in the logbook and the numbers in loaded
on to the truck



All records noted in the
plantation office (manual)



CURRENT MANUAL PROCESS

TOO MUCH PAPERWORK TO CONFORM TO REGULATIONS & BOOK KEEPING IS TEDIOUS

Plantation Office

Generates a slip with FFB count for the Oil Mill or FFB Dealer

SUPERVISOR'S TICKET	
DATE :	
TICKET NO:	
BLOCK NO:	
HARVEST NO:	BUNCHES :
UNRIPE:	ROTTEN:
LOOSE FRUITS:	

Transport

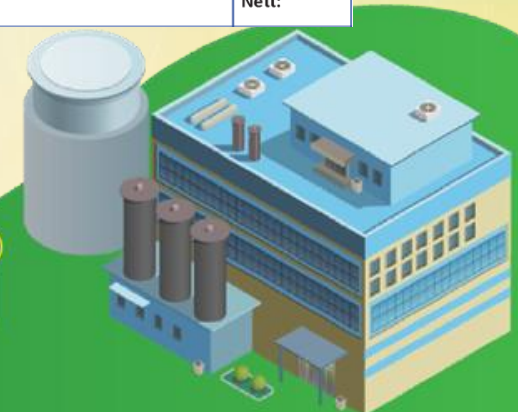
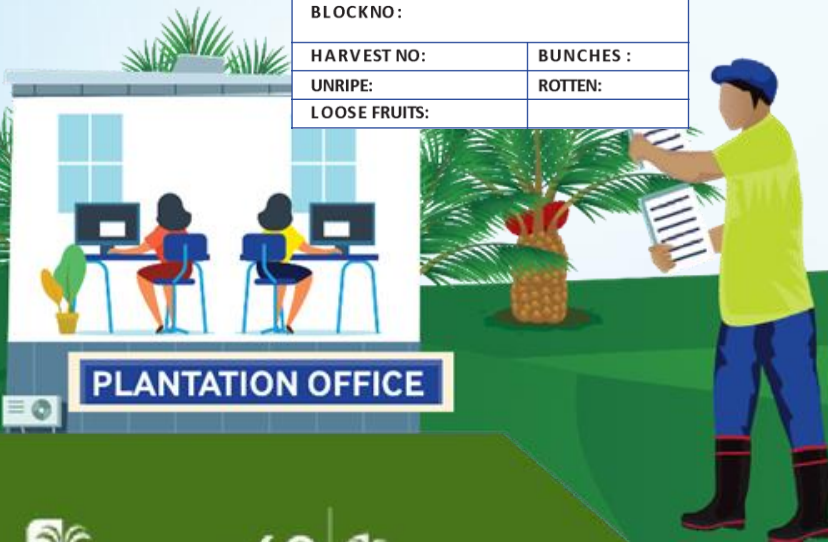
1. Carries a slip to the mill or dealer.
2. Receives the FFB's and based on quality pays the supplier.

FFB DESPATCH NOTE	
ESTATE : _____ DESPATCH TO: _____ DATE: _____	
Year of Planting:	RECEIPT
Ramp/Phase:	Weighb. Ticket No:
Vehicle No:	Net Weight:
Time Despatch:	Time Arrival:
SECURITY CHOP - DESPATCH	SECURITY CHOP - RECEIVING

Oil Mill/ Trader

Generates a slip with FFB count for the Oil Mill or FFB Dealer

MILL WEIGHT BRIDGE TICKET				
VEHICLE NO	GRN NO	MATERIAL	TIME	WEIGHT
				Gross:
				Tare:
				Waste:
				Diff:
				Nett:
Location :				
Transporter :				
Grouping :				
Grade :				
DO Number				





DIBIZ DIGITALPIPE™

All records noted in the plantation office are now digital

Harvester

Mobile app for harvesters where they can view targets and upload harvest count.

Checker/Trucker/Supervisor

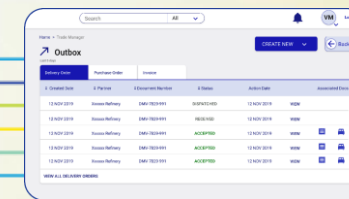
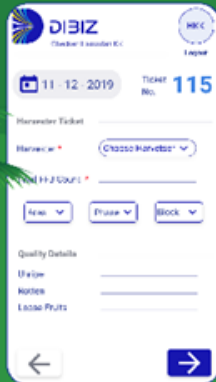
Mobile app for harvesters where they can view targets and upload harvest count.

1. All the logbook details transferred to Plantation dashboard and helps maintain details based on RSPO/ MSPO/ ISPO specifics.

2. Mill or dealer can share the quality report and pricing details through DIBIZ and form a collaborative ecosystem.

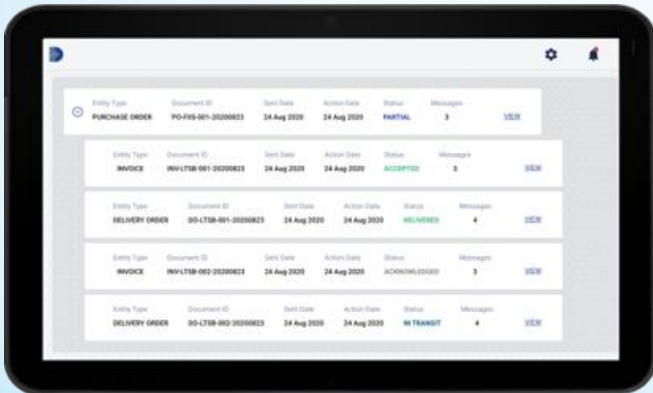
Plantations now can create digital slips where they can track every detail.

Even transporter can carry the detail and track the start and end points.

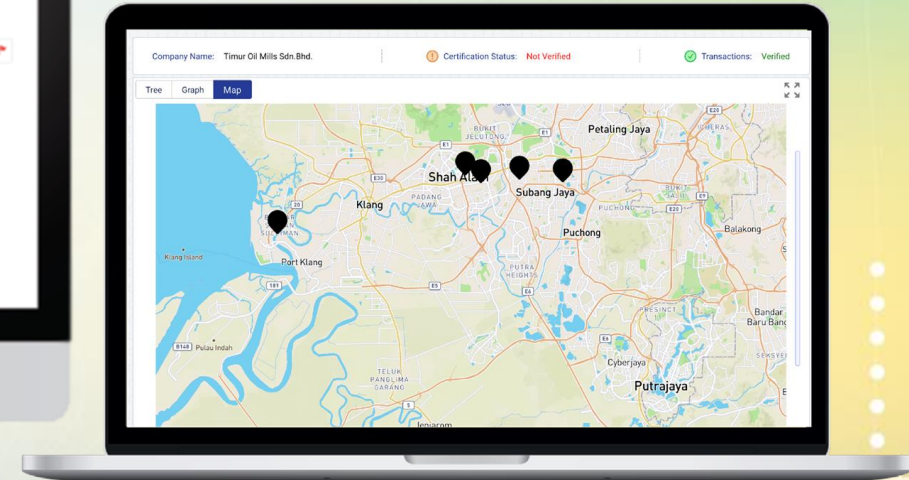





Real Time Traceability



Entry Type	Document ID	Sent Date	Action Date	Status	Messages	VIEW
PURCHASE ORDER	PO-FMS-001-20200823	24 Aug 2020	24 Aug 2020	PARTIAL	3	VIEW
INVOICE	INV-L708-001-20200823	24 Aug 2020	24 Aug 2020	ACCEPTED	3	VIEW
DELIVERY ORDER	DO-L708-001-20200823	24 Aug 2020	24 Aug 2020	DELIVERED	4	VIEW
INVOICE	INV-L708-002-20200823	24 Aug 2020	24 Aug 2020	ACKNOWLEDGED	3	VIEW
DELIVERY ORDER	DO-L708-002-20200823	24 Aug 2020	24 Aug 2020	IN TRANSIT	4	VIEW





Sample Dashboard (Customizable)



EMPOWERING YOUR SUSTAINABILITY GOALS

DIBIZ pledges 1% of its Revenue for Supporting Smallholder Adoption of Sustainability

DIBIZ platform can empower you to accomplish 11 out of 17 UN SD Goals through industry wide collaboration.





NOT just a Traceability platform



Transactions are generated and auto-compiled from day-to-day work activities; no need of manual compilation of data at the end of the month (saving many days of work for the staff)



Value beyond traceability; generate digital records of production and monitor productivity of personnel



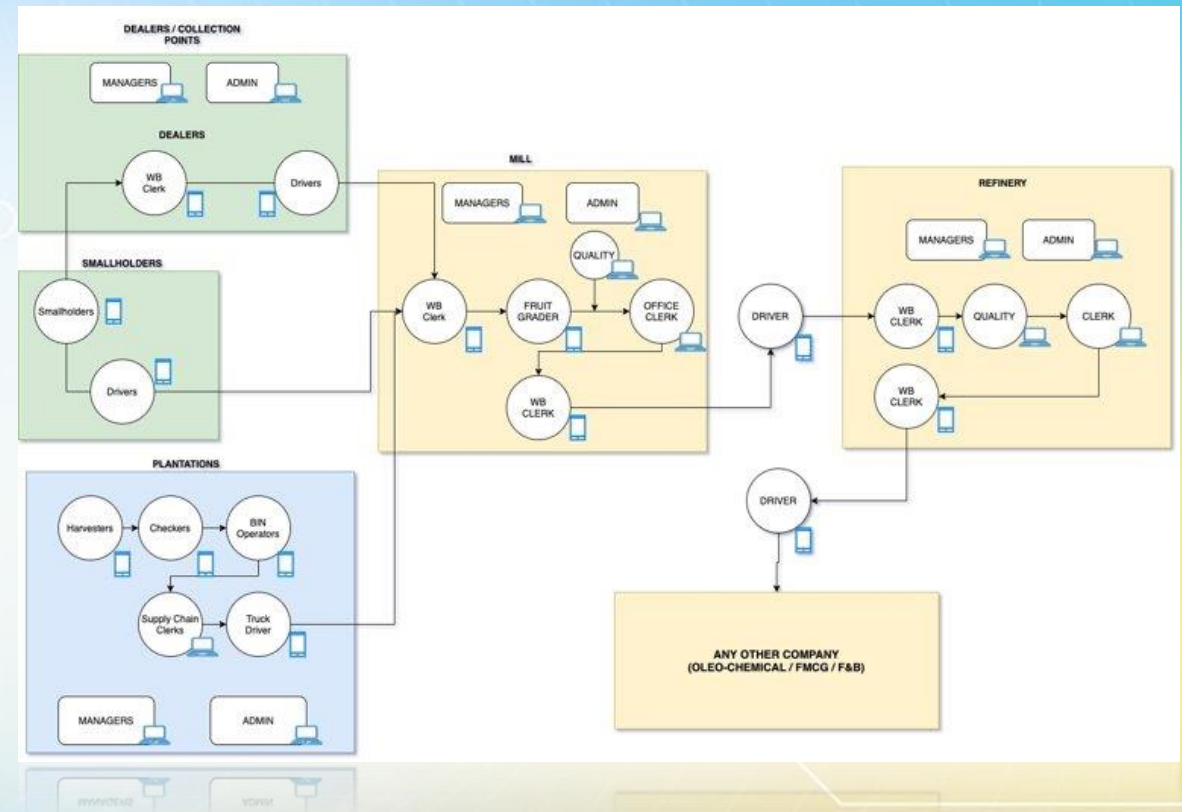
Real-time reconciliation of products – identify pilferages, if any



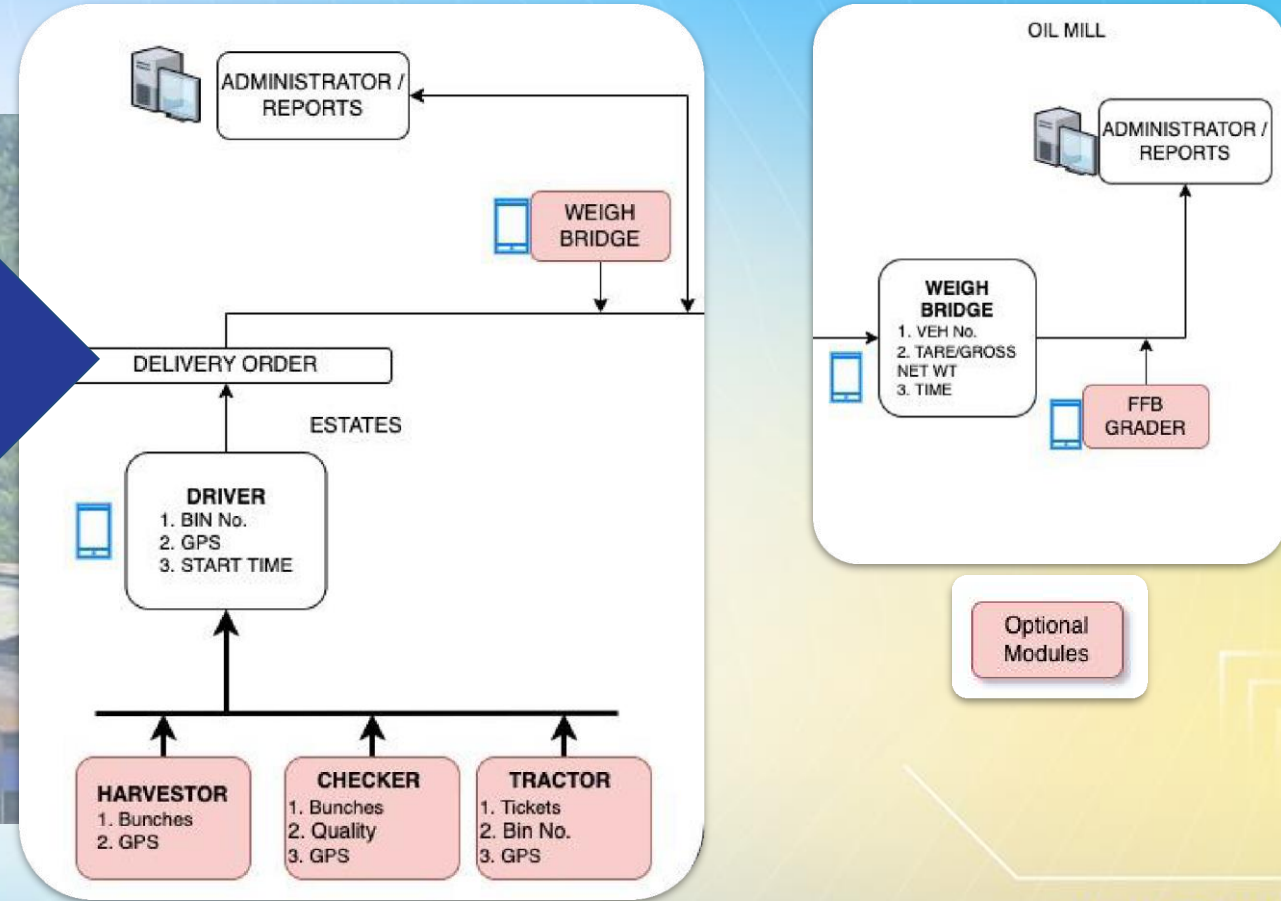
Checks & balances across the supply chain for monitoring fraud and inaccurate data



Improve performance, Yield & OER from Data Analytics thus resulting in ROI of more than 10x



TYPICAL USE CASE: OIL PALM ESTATES TO AN OIL MILL - WORKFLOW





Value for Plantations from SaaS



- ✓ Easy to use mobile apps for all plantation workers (works even without cellular network)
- ✓ Maintain digital records of transactions for regulatory compliance at lowest cost; traceability to the tree/block
- ✓ Digital audits can automatically identify pilferage
- ✓ Monitor yield and productivity of farm



- ✓ Get insights on quality & quantity of fruits harvested by workers
- ✓ Get real-time Traceability with Geo-spatial data and improve sustainability credential for increase in revenue
- ✓ Reconcile Weigh Bridge & Quality grading reports generated by the buyer (typically a Mill) to every delivery order transaction

A mere 1% avoidance in pilferage of FFB for a 1000 ha plantation can result in a ROI of 250% investment on DIBIZ/year

It costs less than half the salary of a Clerk to implement DIBIZ platform



Value for Mills from SaaS



- ✓ Increase profits by improving productivity through collaboration with Planters & Smallholders (harvest high quality agri-products through joint scheduling)
- ✓ Digital records of transactions with Smallholders/Planters can provide insights on quality of agri-products received and effectively manage payments based on quality
- ✓ Get real-time Traceability with Geo-spatial data and improve income from selling CSPO



- ✓ Verify your suppliers' sustainability credential for every trade automatically
- ✓ Reduce manual data entry and avoid errors in record keeping for all users in the system (production information, weighbridge clerk, trade documentation, trace)
- ✓ Digitally attach WB data and Quality inspection report to every transaction automatically

PALM OIL MILL - A 0.1% percentage point increase in OER for a typical Palm Oil Mill can result in a ROI of >10x investment on DIBIZ

It costs less than half the salary of a Clerk to implement DIBIZ platform



Value for Refineries /Oleo from SaaS



- ✓ Instant implementation of Digital Traceability System at Low Cost
- ✓ Real-time traceability to the plantations – purchase with trust
- ✓ Trade documents exchange can improve human efficiency and avoid costly errors
- ✓ Tools to help manage SG and IP supply chain models easily



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It costs less than half the salary of an Officer to implement DIBIZ platform

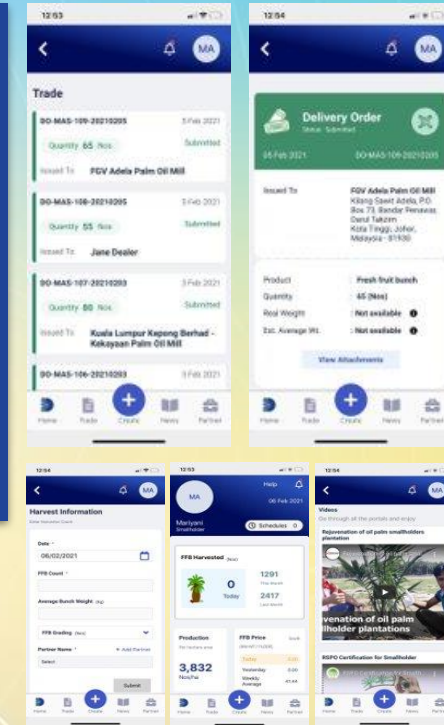


VALUE FOR SMALLHOLDERS

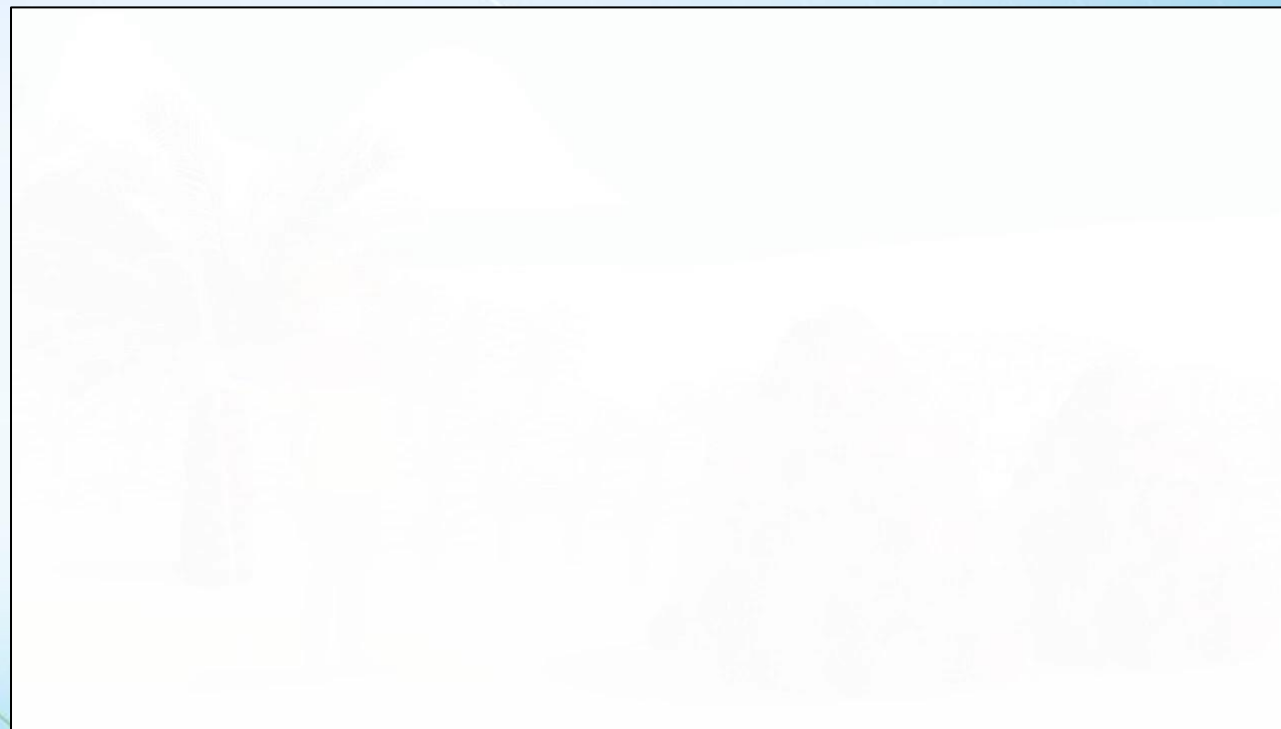
- ✓ **eLearning** - for educating on Sustainable practices
- ✓ **eWork** – for carrying out daily activities through a mobile app; 100% digital workflow
- ✓ **eInsights** - Monitor Yield through digital trade data analytics
- ✓ **eRecords** - of weigh bridge and grading report from Mills instantly available on the phone



- ✓ **eView** - for visibility to daily market pricing for negotiating better rates for their produce
- ✓ Easy access to **low-cost financing** from Govt/Banks/Fintech Possibility of availing direct benefit transfer from Governments, MNCs as incentives for practicing sustainability



DIBIZ - Empowering Smallholders





DIBIZ PILOT TRIAL IN COLOMBIA



Sectoral Traceability Model for Colombian Palm Oil Supply Chain Advances and results





- Easy to handle app and platform
- Doesn't require users with high education levels
- Accessible technology to growers
- Allows sharing and displaying info in real time
- Useful and clear dashboards

Strengths



- Poor access to Internet on rural areas

Weakness



- Aligned to global trends
- Faster and reliable transmission of information
- Growers have access to key information (shipping, weight, quality)
- Individual supplier analysis

Opportunities



- Dependency of QRs to offline operation
- Notification in English, more difficult for users
- Important to easily connect to ERP platforms
- Necessary to make adjustments to quality and weight criteria

Threats



DIBIZ The Most Aligned Platform

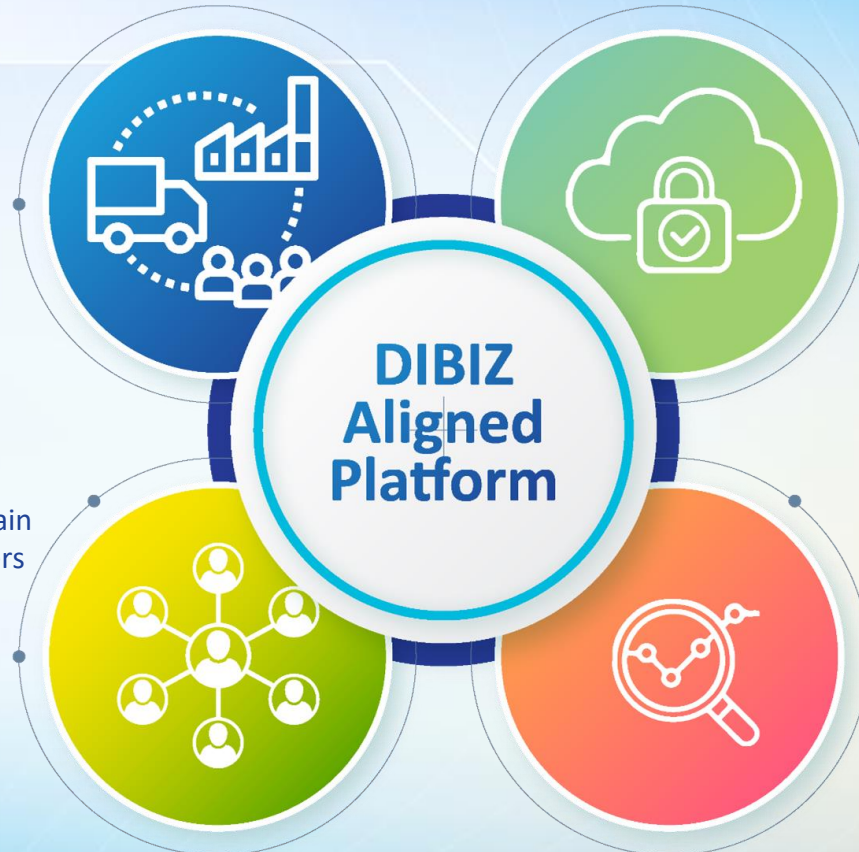


Supply Chain Transparency

- Blockchain technology
- Lower operational risk
- Reliable process
- Alignment to Colombian palm oil supply chain

Connectivity

- Connects all stakeholders of the value chain
- Easy to handle app for all kind of producers
- Promotes collaboration networks (messages, reports, media)



Safety of information

- Encrypted data, high safety level
- Provided data are private
- Access through mobile number, not e-mail
- Authentication of users to grant access

Traceability

- Real time traceability & geolocation to support sustainable supply
- Transparency and clear information along the value chain
- Inclusive technology, accessible & easy to use for small growers
- Clear trade conditions, double-way information (Mills-suppliers)
- Alignment to Colombian palm oil traceability sectoral model (GLN, GTIN, multiple participants).

1

Pilot showed the importance of reliable and robust technologies to support processes and transactions for extraction mills

- Access to real time and digital information
- Higher manageability of fruit suppliers
- Business intelligence and access to markets

2

Field trials allowed:

- Assess the technology adoption of growers-suppliers
- Identify new elements to enrich Colombian sectoral traceability model

3

Results contributed to develop and adjust assessment tools for extraction mills, to:

- Identify gaps and weaknesses of processes related to traceability
- Analyze traceability levels of current platforms and technologies used by the mills
- Create recommendations and improvement plans



Assesment - Plans - Support



Assessment of traceability levels

- GS1 assessment tool adapted to Colombian palm oil chain
- 20 extraction mills engaged
- Individual, regional and aggregated analysis



Define Work Plans

- Recommendations to improve processes, building capacities and adopt technologies
- Prioritized actions-agreed with companies



Support and follow up to develop plans

- Continuous advisory (Fedepalma-Loggyca)
- Key issues (processes, formats, training, change management)
- Introduction to new technologies (DIBIZ as recommended) or improvement of current platforms



Information Analysis

- Sources
- Document
 - Template



IT Capacity Building Platforms

- Platforms (Traceability, ERP, others)
- Collection of Info

Introduction and orientations (DIBIZ)



DIBIZ PILOT TRIAL IN MALAYSIA





DIBIZ FEATURES - SMALLHOLDER

DIBIZ makes it easy to monitor harvest information daily, Scheduling FFB and referring to MPOB prices.

- ✓ **Improve Smallholder performance** to get better daily results.
- ✓ **Easy schedule feature**, view and control the activities of traders such as the harvesting process and transportation.
- ✓ **Easy to use** ✓ **Daily MPOB Pricing**



Today	40.160
Yesterday	40.540
Weekly Average	40.350

Today	289	428
This Month		
Last Month	0	

0.450



DIBIZ FEATURES - SMALLHOLDER

FFB Weighbridge Ticket & FFB Grading

- ✓ DIBIZ provides space to record information on the **quality of FFB harvested**.
- ✓ **Smallholder** can generate delivery orders through **DIBIZ App**.
- ✓ This feature **helps Smallholder to improve the quality** of produce, which gives a **stable income**.

Harvest Information
Enter your harvest information

Date *
16/09/2022

Select Farm *
Mbk

Select Block *
block-1

FFB Count *
100

Average Single Bunch Weight (Kg)
10

FFB Grading (Nos)

Ripe	80
Over Ripe	10
Under Ripe	10
Unripe	
Empty	
Wet	

Dealer/Mill Name * + Add Mill/Dealer
DIBIZ Mill Y

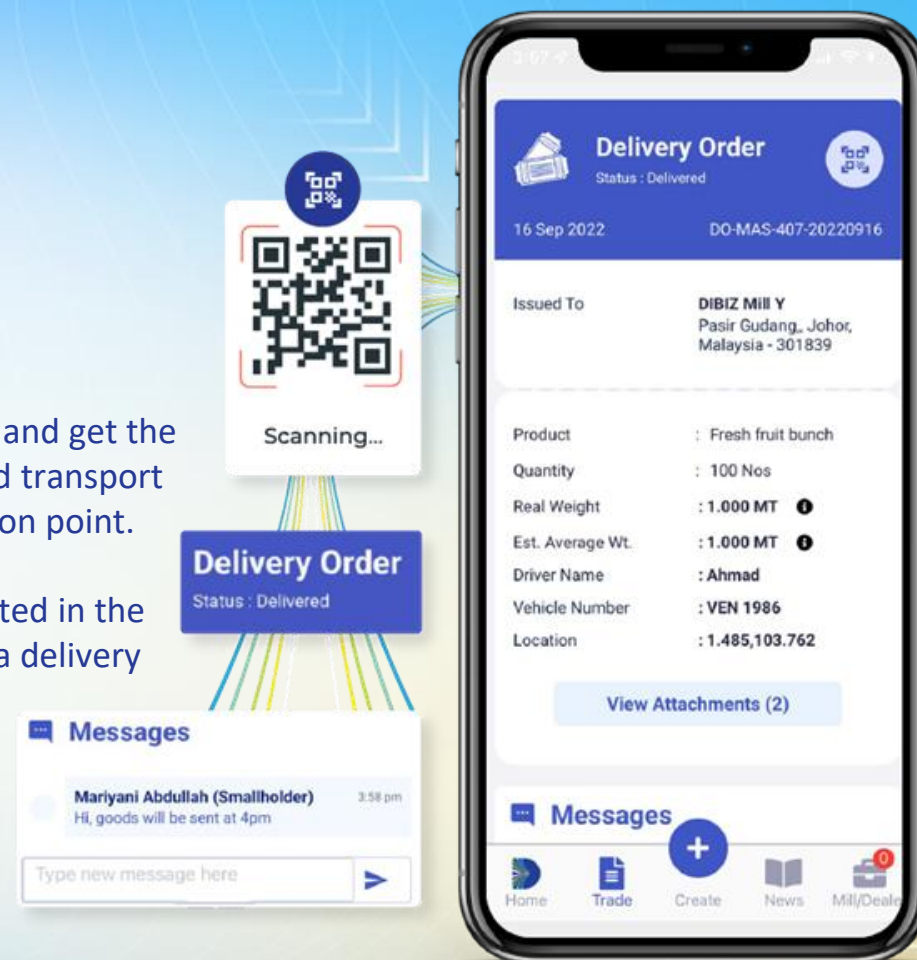




DIBIZ FEATURES - SMALLHOLDER

Works *Offline* & *QR code scanning*

- ✓ DIBIZ functions offline.
- ✓ DIBIZ QR code facility is available for all delivery orders to be shared with the driver.
- ✓ Smallholder shows the QR code to the weighbridge clerk.
- ✓ Easy and effective solution for the information transfer process.
- ✓ Driver can simply scan the QR and get the details in the app instantly and transport the goods to a dealers collection point.
- ✓ GPS coordinates will be indicated in the app when smallholders place a delivery order.



DIBIZ – SMALLHOLDER VIDEO

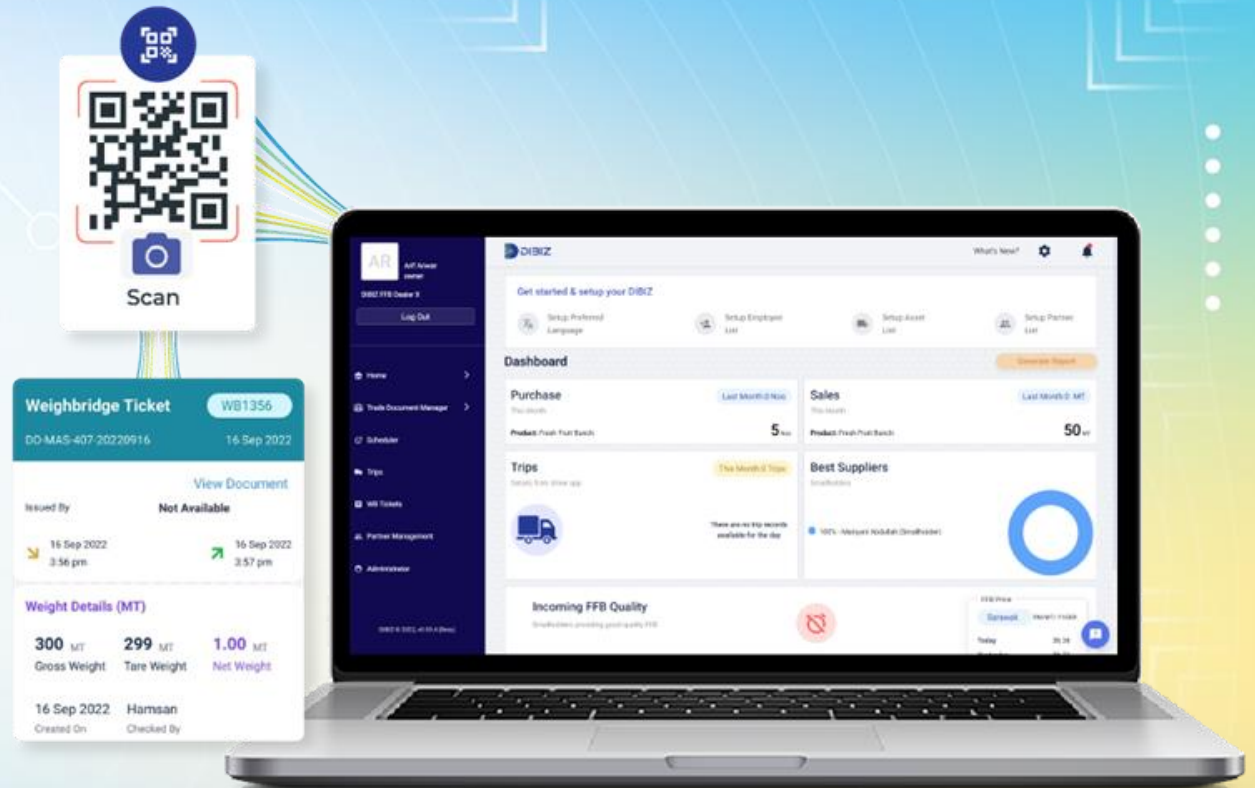




DIBIZ FEATURES – FFB DEALER

Dealer- Weighbridge Ticket

- ✓ The driver shows the QR code to the weighbridge clerk and automatically the FFB delivery order information from smallholders will be updated in the trader's business system.
- ✓ DIBIZ Dealer App facilitate the process of managing the palm fruit business which only requires thorough information and this application will manage everything.
- ✓ DIBIZ provides a feature that facilitates dealers to generate weighbridge tickets for smallholders.

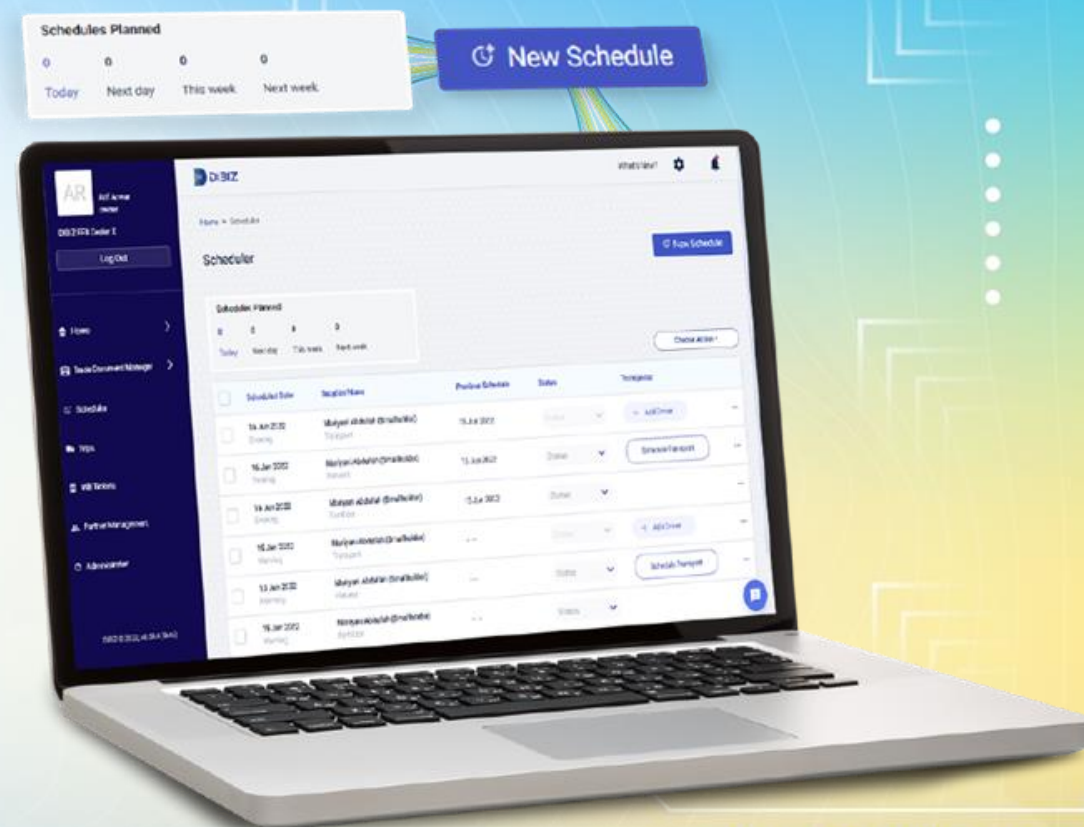




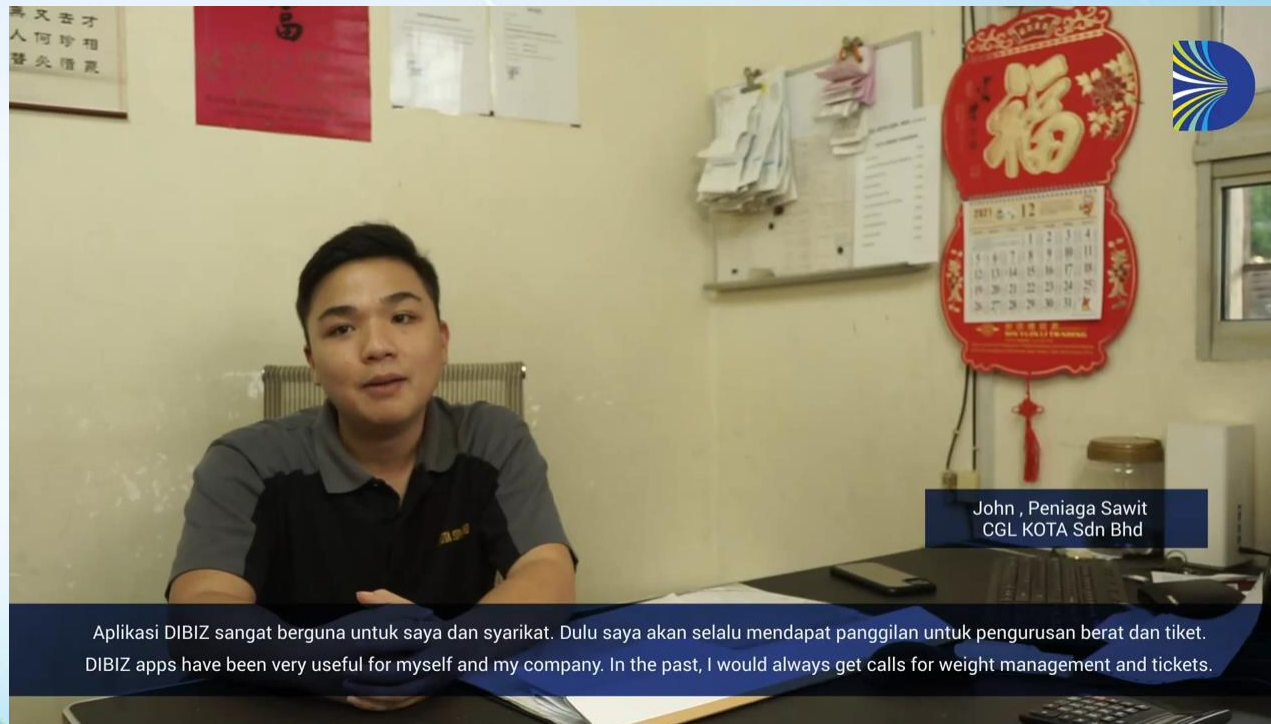
DIBIZ FEATURES – FFB DEALER

ADVANTAGES OF DEALER APP

- ✓ DIBIZ Apps have been very useful for Dealer. In the past, FFB Dealer would always get calls for weight management and tickets. **Now the DIBIZ app has streamlined a lot of these information exchanges.**
- ✓ FFB Dealer can **schedule in the app** and the rest is taken care digitally.
- ✓ DIBIZ App also **auto-creates the next schedules for FFB Dealer.**
- ✓ FFB Dealer can **organize the services to smallholders.**



DIBIZ – DEALER VIDEO



STRATEGIC GLOBAL PARTNERSHIPS



**Descartes
Labs**

USA

Additional Value from our
'Geo-Spatial Analytics for
No Deforestation & No
Peat Compliance'



The Netherlands

'Authentication Partner'
for Sustainable Supply
Chains and 'Sustainability
Index'



Malaysia & Indonesia

Impacting Smallholder
livelihood in partnership
with 'Wild-Asia'



Singapore

Palm Oil market news,
price, commentary and
futures



CONCLUSION

- ✓ Legislations around the world on traceability and sustainability needs urgent attention from the Palm Oil industry.
- ✓ The DIBIZ Blockchain platform & TRSPARENT MARKETPLACE provides the best Sustainability Authentic tool for the Palm oil industry with excellent ROI to all stakeholders.
- ✓ The DIBIZ-DESCARTES LABS partnership brings Satellite Imaging for NDP conformance.
- ✓ The DIBIZ-CONTROL UNION partnership brings in an internationally credible Sustainability Authentication of data on the DIBIZ Platform.
- ✓ Digital transformation of Palm Oil Supply chain with immutable data on Blockchain provides credibility and improves efficiency
- ✓ DIBIZ-WILD ASIA partnership empowers smallholders who produce 40% of palm oil get rewarded for their contribution towards sustainability.
- ✓ The successful pilots in Colombia & Malaysia proves the efficacy, user-friendliness and cost-effectiveness of the DIBIZ blockchain Platform and readily meets all the emerging EU & US new regulations for Palm Oil supply chains





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DIBIZ

Fostering Collaborative Success

THANK YOU

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