

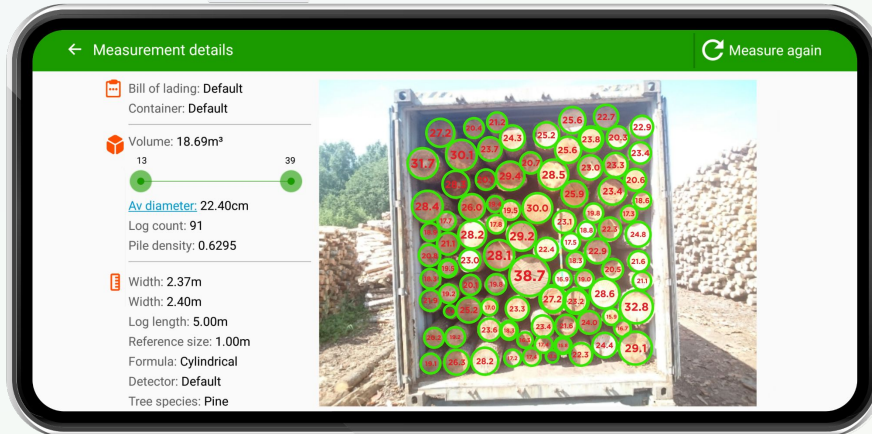


**End-to-end digital platform for
sustainable forest management**



Timbeter Container

Digital solution to accurately measure timber logs in containers, using machine learning technology, leaving no room for error



Features include:

- Diameter measurement
- Log counting
- Air-filling factor calculation
- QR code detection
- Adding truck tickets/seal numbers

How Timbeter Container captures the data

Take a photo of the logs loaded into **container** with your smartphone or tablet



Timbeter Container does the number crunching (GPS, log count, volume, diameter etc)

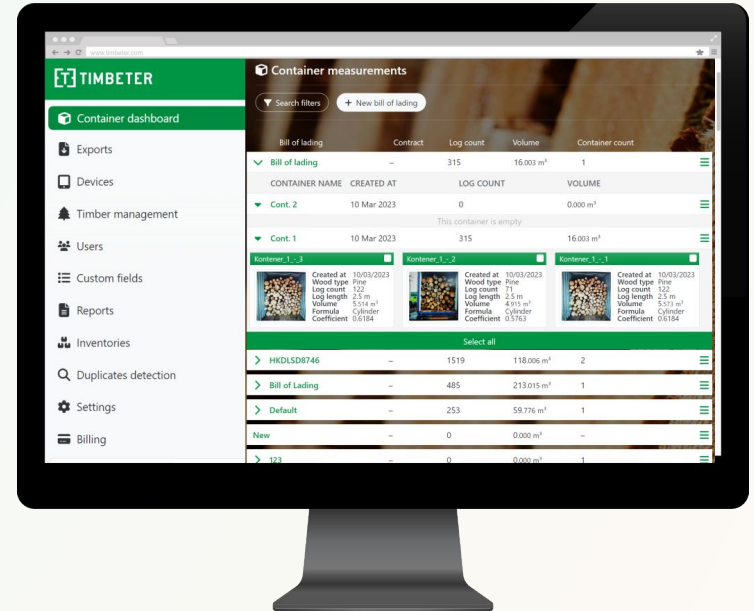
Measurements are connected to specific bookings and containers, data being real-time cloud accessible



Shipment can be traced precisely by digital data and QR code tags

Timbeter Container Dashboard

- Dashboard of bookings/containers/measurements
- Measurements available in real-time
- Create custom assortments
- Option to edit measurements
- Downloadable excel reports
- Bookings easily shareable with clients via URL
- All devices connected to one account



All measurements stored in the cloud



TIMBETER

- 🏠
Container dashboard
- 📄 Exports
- 📱 Devices
- 🌲 Timber management
- 👤 Users
- ☰ Custom fields
- 📄 Reports
- 📦 Inventories
- 🔍 Duplicates detection
- ⚙️ Settings
- 📄 Billing

📦
Container measurements

Search filters

+ New bill of lading

Bill of lading	Contract	Log count	Volume	Container count
✓ Bill of lading	-	315	16.003 m ³	1
CONTAINER NAME	CREATED AT	LOG COUNT	VOLUME	
▼ Cont. 2	10 Mar 2023	0	0.000 m ³	☰
This container is empty				
▼ Cont. 1	10 Mar 2023	315	16.003 m ³	☰

Created at 10/03/2023

Wood type Pine

Log count 122

Log length 2,5 m

Volume 5,514 m³

Formula Cylinder

Coefficient 0,6184

Created at 10/03/2023

Wood type Pine

Log count 71

Log length 2,5 m

Volume 4,915 m³

Formula Cylinder

Coefficient 0,5763

Created at 10/03/2023

Wood type Pine

Log count 122

Log length 2,5 m

Volume 5,573 m³

Formula Cylinder

Coefficient 0,6184

Select all

HKDLSDB746	Contract	Log count	Volume	Container count
✓ HKDLSDB746	-	1519	118.006 m ³	2
CONTAINER NAME	CREATED AT	LOG COUNT	VOLUME	
▼ NR789998	18 Jun 2020	1132	84.247 m ³	☰

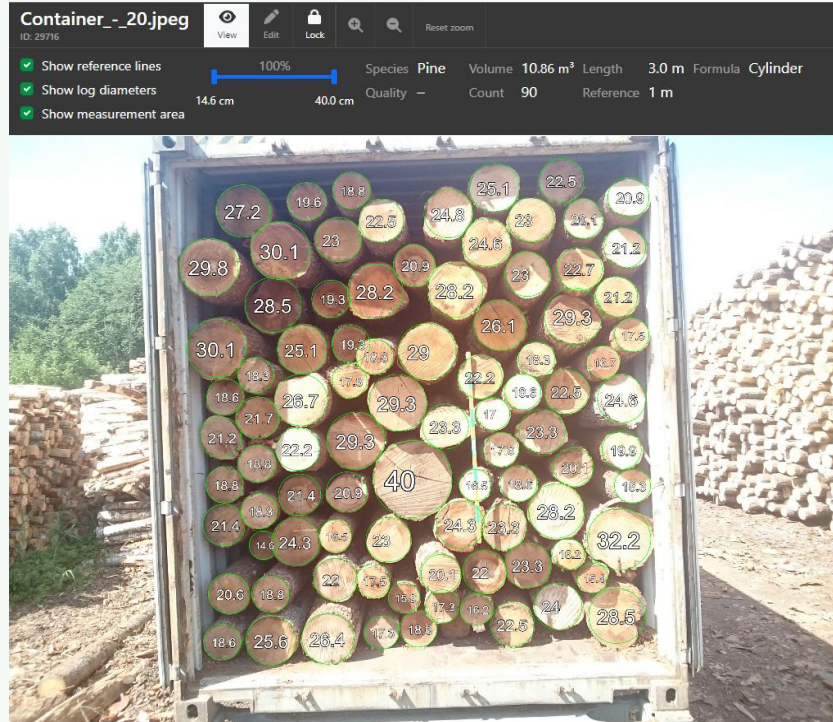
NRZ89998 - 15

NRZ89998 - 14

NRZ89998 - 13

Measurements can be easily edited/corrected on the desktop

- reference size
- add/delete/resize logs
- remove logs without tag



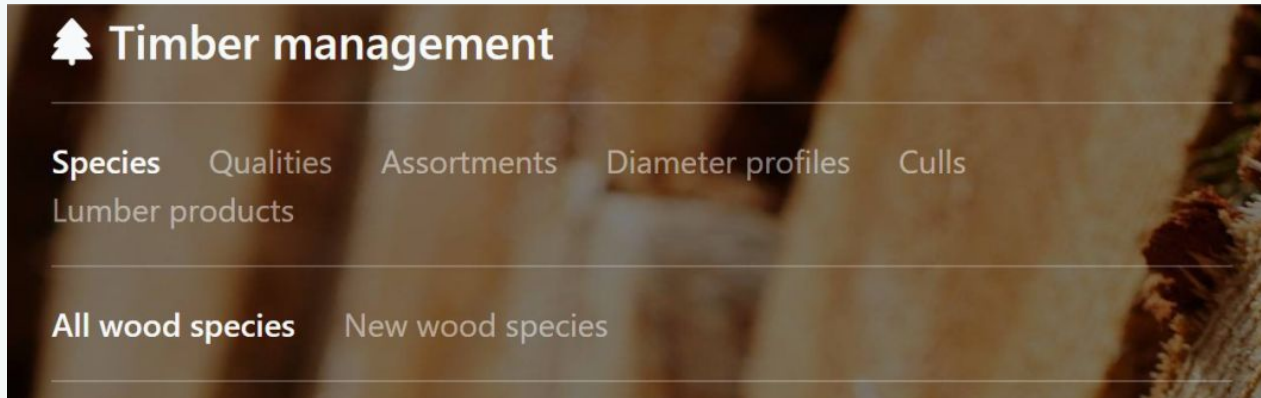
Excel reports

- Log distribution sheet
- Complete list of Bill of Ladings

	A	B
1	Container	Container - 1
2	Volume formulas	JAS
3	Diameter	Count
4		20 12
5		22 15
6		24 22
7		26 10
8		28 15
9		30 10
10		32 3
11		40 4
12	Total	91
13	Average	25,65
14		

	A	B	C	D	E
1	Bill of lading	Bill Of Lading - 1			
2	Container count	3			
3	Log count	252			
4	Volume	83,62 m ³			
5	Wood type	Pine, Spruce			
6	Link	Bill Of Lading - 1			
7					
8	Container	Log count	Volume	Wood type	Link
9	Container - 1	80	27,21	Pine	Container - 1
10	Container - 2	72	26,61	Spruce	Container - 2
11	Container - 3	100	29,8	Pine	Container - 3
12					
13					
14					

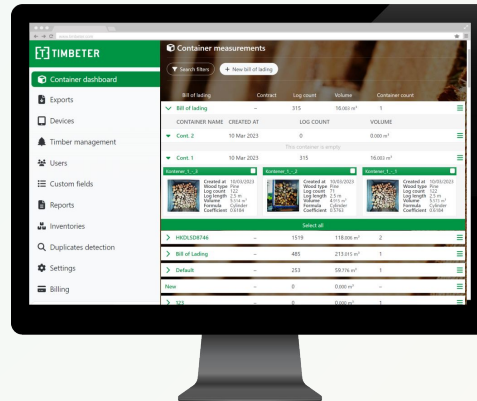
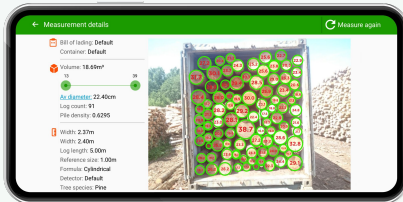
Company-specific data easily added



- Company can easily add storages, species, wood qualities, assortments, reasons of defect;
- Option to add custom fields;
- All account information synchronized with devices;
- Easy users and devices management

Timbeter Container Dashboard: Easy integration via API

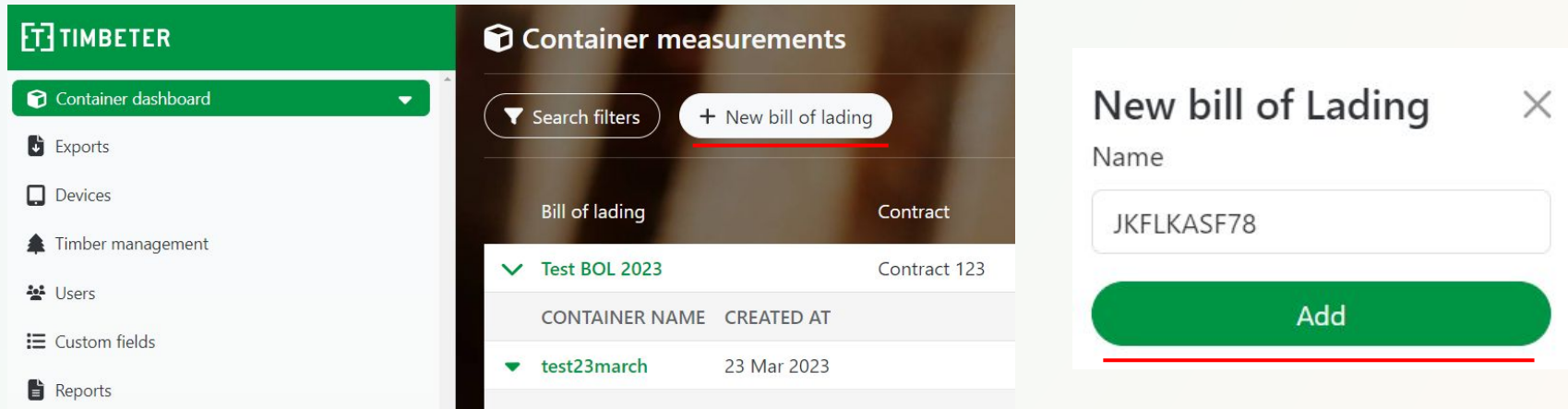
Timbeter can be easily integrated via public API with different accounting/ERP systems



**SAP
1C
AXAPTA**

Measurement process

1. Before taking measurements create Bill of Ladings in desktop Container Module. Press “New bill of lading” from upper menu, enter the name and press add.



The screenshot displays the TIMBETER desktop interface. On the left is a navigation sidebar with the TIMBETER logo and menu items: Container dashboard, Exports, Devices, Timber management, Users, Custom fields, and Reports. The main content area is titled 'Container measurements' and features a 'Search filters' button and a '+ New bill of lading' button. Below these is a table with columns 'Bill of lading' and 'Contract'. The table contains one entry: 'Test BOL 2023' with 'Contract 123'. A modal window titled 'New bill of Lading' is open on the right, showing a 'Name' input field with the value 'JKFLKASF78' and a green 'Add' button.

Bill of lading	Contract
✓ Test BOL 2023	Contract 123

CONTAINER NAME	CREATED AT
▼ test23march	23 Mar 2023

Measurement process

2. Next step is to add containers under these Bill of Ladings. Press the options menu button on the right side of bill of lading and choose “Add containers”.

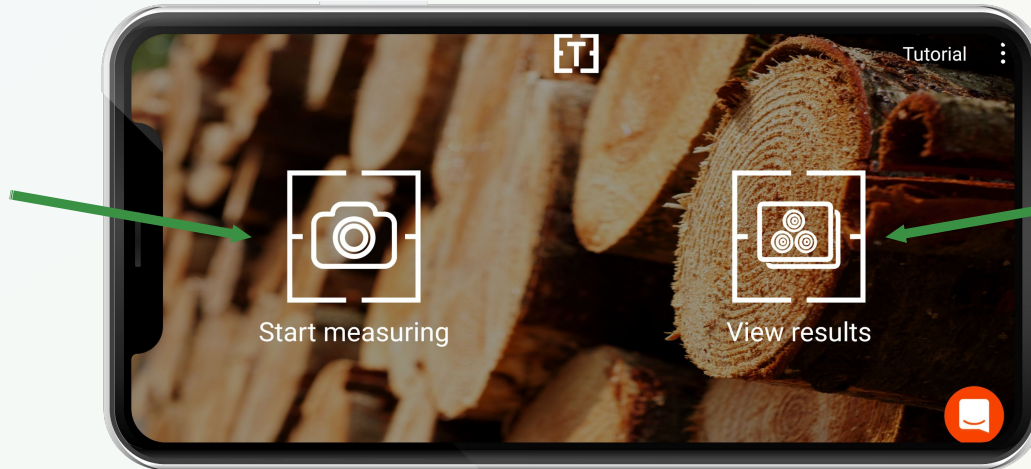
Bill of lading	Contract	Log count	Volume	Container count												
<div style="display: flex; align-items: center;"> ✓ Test BOL 2023 </div>	Contract 123	217	31.59 m ³	1												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">CONTAINER NAME</th> <th style="width: 20%;">CREATED AT</th> <th style="width: 20%;">LOG COUNT</th> <th style="width: 20%;">VOLUME</th> </tr> </thead> <tbody> <tr> <td>▶ test23march</td> <td>23 Mar 2023</td> <td>0</td> <td>0.00 m³</td> </tr> <tr> <td>▶ asdgasdg9346325</td> <td>6 Feb 2023</td> <td>217</td> <td>31.59 m³</td> </tr> </tbody> </table>					CONTAINER NAME	CREATED AT	LOG COUNT	VOLUME	▶ test23march	23 Mar 2023	0	0.00 m ³	▶ asdgasdg9346325	6 Feb 2023	217	31.59 m ³
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▶ asdgasdg9346325	6 Feb 2023	217	31.59 m ³													
<div style="display: flex; align-items: center;"> ✓ 318797211 </div>	–	19473	3062.95 m ³	3												
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CONTAINER NAME	CREATED AT	LOG COUNT	VOLUME													
▼ GKDFD13515	1 Feb 2021	60	5.21 m ³													

- Add containers +
- Edit ✎
- Export 📄
- Share 🔗
- Archive 🗑️
- Generate invoice 📄

Measurement process

3. Once Bill of Ladings and containers are set up, open the Timbeter. Container application and choose “Start Measuring”.

Start a new measurement



View finished measurements

Measurement process

4. Next step is to take a picture of logs pushed into the container.

Angle sensor shows if device is held straight

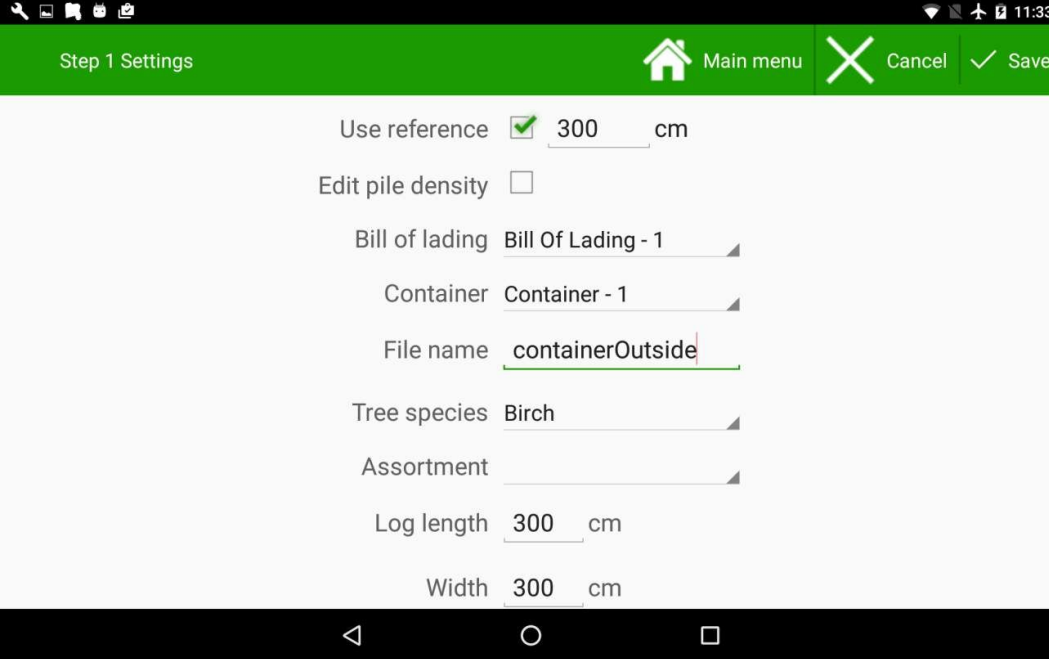


Take a picture

Exposure value for setting suitable light conditions

Measurement process

5. Once picture is taken, enter necessary measurement data.



The screenshot shows the 'Step 1 Settings' screen in the TIMBETER app. The interface includes a green header bar with 'Step 1 Settings', a home icon, 'Main menu', a close icon, 'Cancel', and 'Save'. The main content area contains the following settings:

- Use reference cm
- Edit pile density
- Bill of lading
- Container
- File name
- Tree species
- Assortment
- Log length cm
- Width cm

The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps buttons.

Measurement process

6. After taking picture and entering data, important is to mark the reference, which helps to calibrate the diameters and determines accuracy.

Required reference length is at least 100cm.

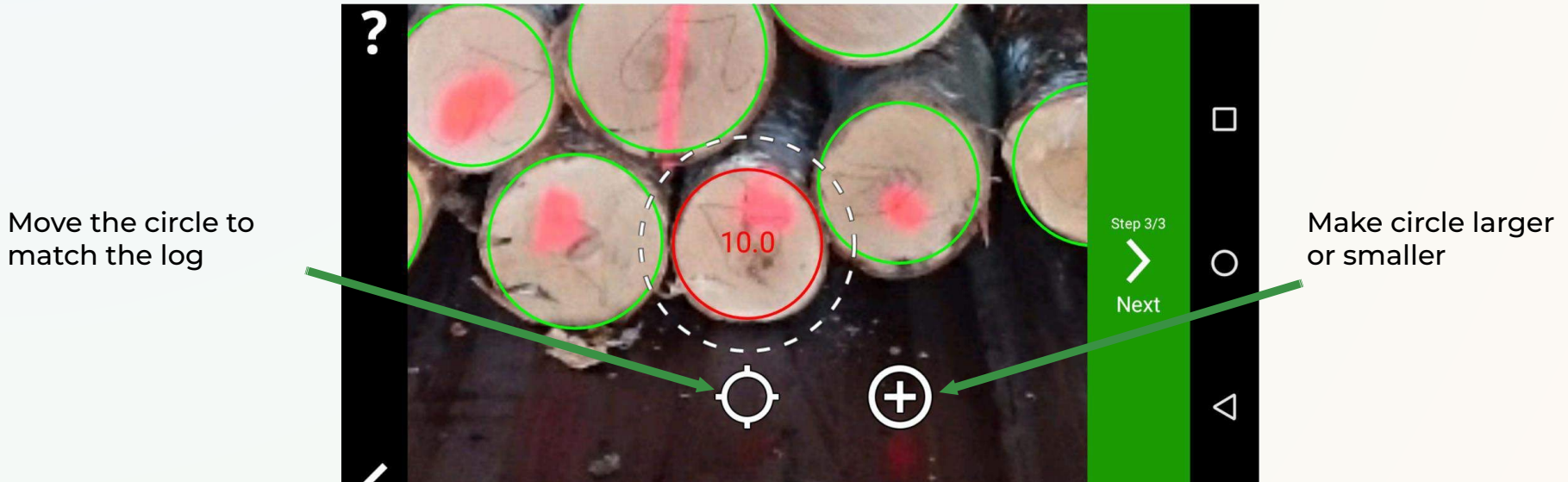
Reference has to be marked on exactly on both ends of the stick with the red line



Measurement process

7. As a final step, in case of a missing log or another circular object detected, add/remove circle by holding finger on the screen.

Edit diameter size if necessary.



Measurement process

- Final result will display diameters, log count, pile density and total volume. View the diameter distribution or use slider to see certain diameter ranges.

Move around the slider to only see certain range of diameters

Press to open diameter distribution

34cm	3
35cm	3
36cm	4
37cm	3
38cm	1
39cm	2
40cm	2
41cm	1
42cm	1
43cm	2

The screenshot shows the application interface with the following data:

- Bill of lading: Bill Of Lading - 1
- Container: Container - 1
- Volume: 15.46m³
- Slider: 19 to 56 (Current value is 35.64cm)
- Av diameter: 35.64cm**
- Log count: 49
- Pile density: 0.6232
- Width: 3.00m
- Height: 2.40m
- Log length: 3.00m

On the right, a photograph shows the back of a container filled with logs. Each log has a numerical diameter value overlaid on its end. A large number '40' is highlighted in the center of the log pile.

QR Code detection

- QR code detection detects the tagged logs, which helps out with measuring with JAS or any other formula that is measured from smaller end diameter
- Press the QR code sign at the top-left corner and tagged logs will be detected and colored distinctly
- Helps tracking the logs throughout the export process
- Can be used as a reference





Large corporate case study








Georgia Exports Company



- Largest independent exporter of yellow pine from South East US to China, operating since 2012
- 7 log yards
- Started using Timbeter in 2017
- Using Timbeter for measuring incoming trucks and Timbeter Container for containers



Since using Timbeter

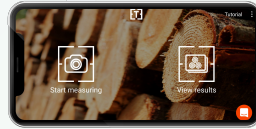
-  Time saving (**15 time quicker** than manual)
-  Saved 2 employees per log yard – in total 14 (yard workers+data processing people)
-  Return of investment from using Timbeter **was 22 times**
-  Less disagreements with buyers
-  Safety of employees
-  Automated reports
-  Increased customer satisfaction

Timbeter forestry management smart solution

Supply chain:

- Forest
- Transportation
- Storages/inventories
- Production
- Transportation / transactions

TIMBETER



Mobile apps for making and processing measurements



Cloud storage with online inventory, reporting and measurement editing features



Control over:

1. Timber origin
2. Transactions
3. Internal & external reporting
4. Logistics and transportation
5. Illegal activities
6. Sustainable forest management
7. Safety and working environment

Benefits



Time efficiency



Digitalization



Transparency



Cost efficiency



Reduction of human error



Prevention of illegal logging



Sustainability



Traceability



Logistics planning



Fair trade



Safety



Waste reduction

More Applications



Timbeter

With Timbeter, the log measuring process can be quicker and more accurate. Timbeter provides tools for measuring log diameters, pile and truck volumes, and pile density coefficient in less than 3 minutes.



Timbeter Log Counter

Log Counter is the most efficient tool for log counting. Specially useful for pole companies or companies who want to measure large amounts of logs with the same diameter and length in a few minutes.



Timbeter Lumber

Timbeter Lumber is the most efficient tool for lumber counting and volume calculation.

Our mission



Global solution for efficient, transparent and data-driven timber supply chain management.

Our mission is to save essential and limited resources in the forestry: trees, labour force and driven miles.



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