Adopting Advanced Mobile Service Asset Management at CENIBRA

SAP for Process Industries and Natural Resources Conference Designed for the metals, paper, packaging, chemicals, building materials and mining industries

18 – 20 June 2024 - Vienna, Austria

Ronaldo Ribeiro | CIO | CENIBRA

The future is present in every action.

01

Our Company

Fonte: Mapa de Biomas do Brasil - IBGE, 2004
Rio de Janeiro - esc. 1:5.000.000

Amazon

1.500 km

State of Minas Gerais

CENIBRA's areas

- (Amazon rainforest)
- (Dry forest)
- (Savanna)
- (Atlantic forest/bush)
- (Prairie)
- (Pantanal)

N

About us

Bleached Eucalyptus Kraft Pulp - ECF

Foundation: Sep 1973   Start up: Mar 1977

Capacity: 1,200,000 tons/year

Privately-held company owned by
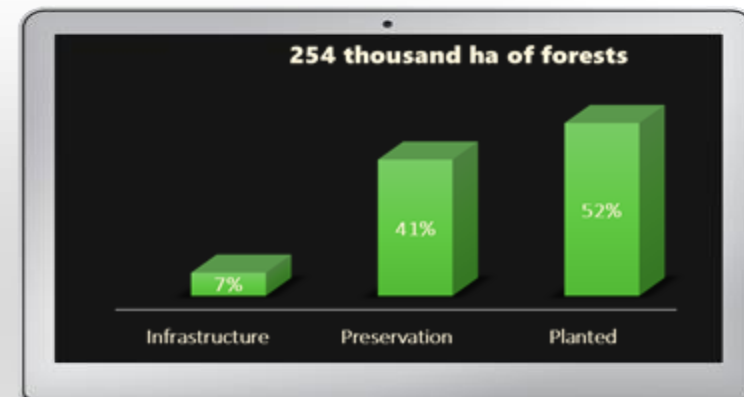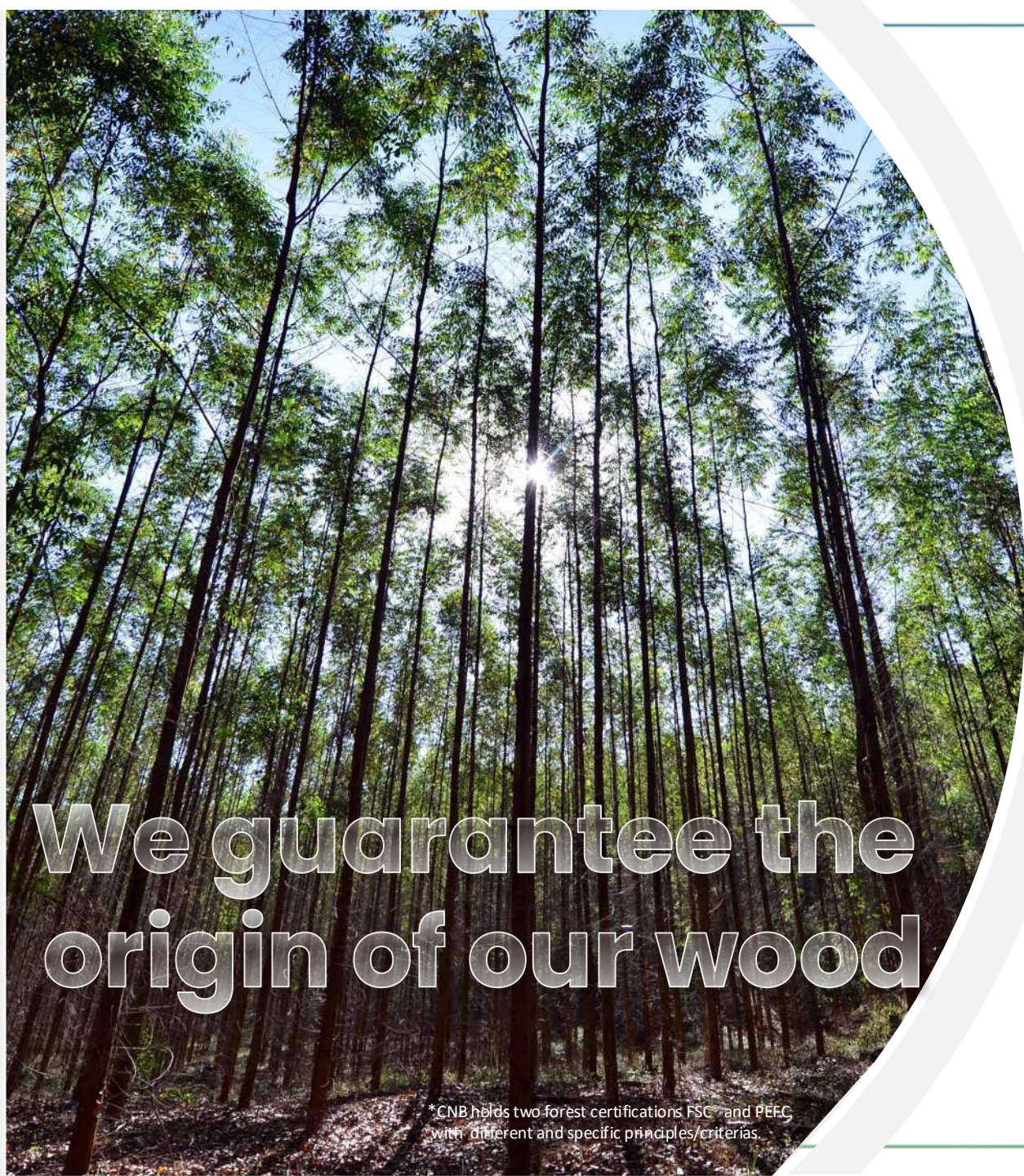
Oji Holdings Corporation

Environmental Aspects

Conscientious use of natural resources

Biodiversity, soil & water conservation practices

Zero Emission Program

Energy recovery from biological sludge

254 thousand ha of forests

7%	41%	52%
Infrastructure	Preservation	Planted

About us

CERTIFICATIONS

Forest Stewardship: **FSC® , PEFC**

Chain of Custody: **FSC® , PEFC**

ISEGA: **FDA, BfR, EC, LFGB**

Quality Management System: **ISO 9001:2015**

Environmental Management System: **ISO 14001:2015**

Lab Quality Management System: **ABNT NBR ISO/IEC 17025**

EU Ecolabel and **Nordic Swan** inspected pulp

CENIBRA earned a Gold level assessment from **EcoVadis**

We are working to comply with the new **EUDR regulation**.
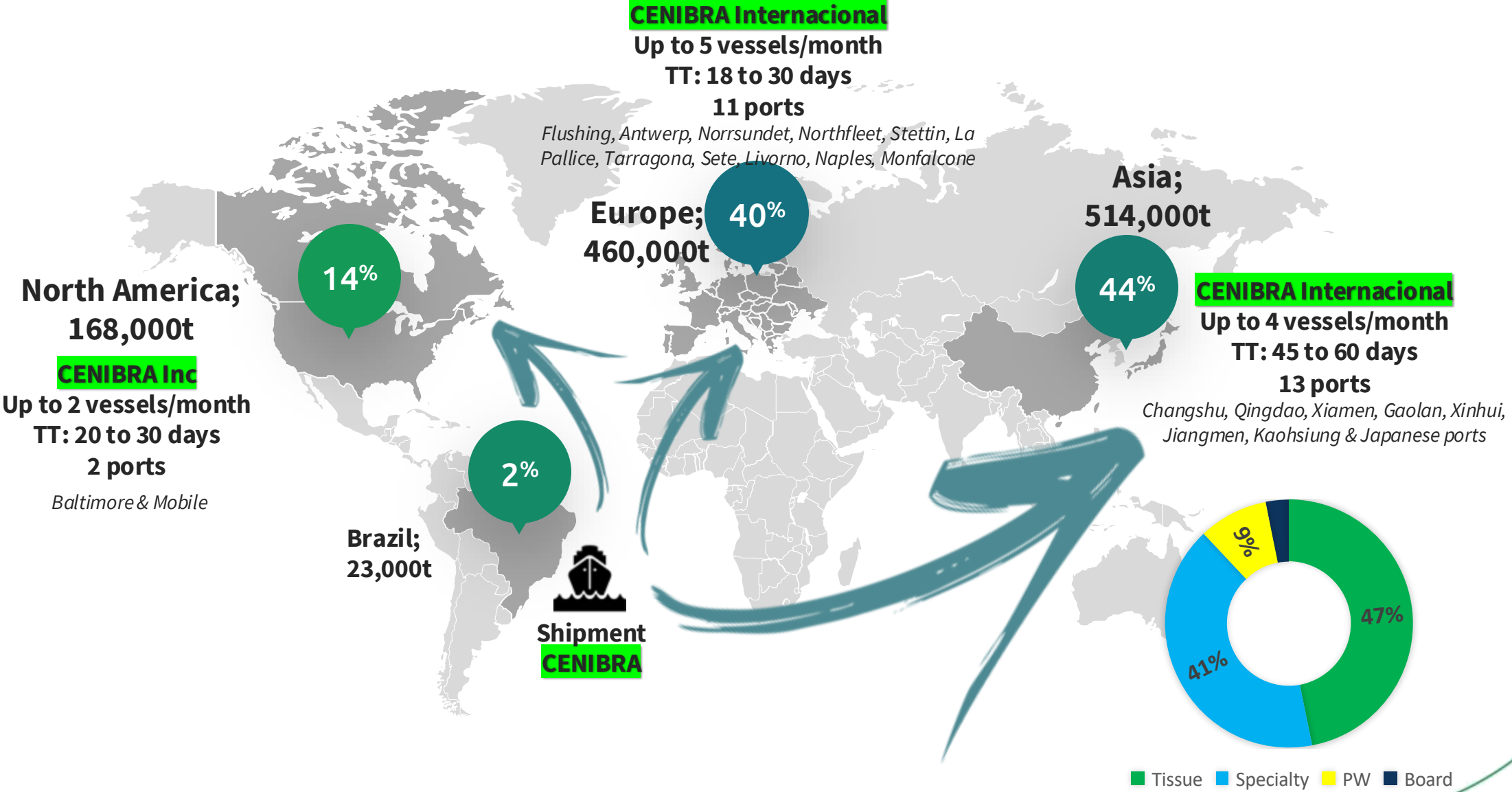
CENIBRA is FSC® and PEFC certified
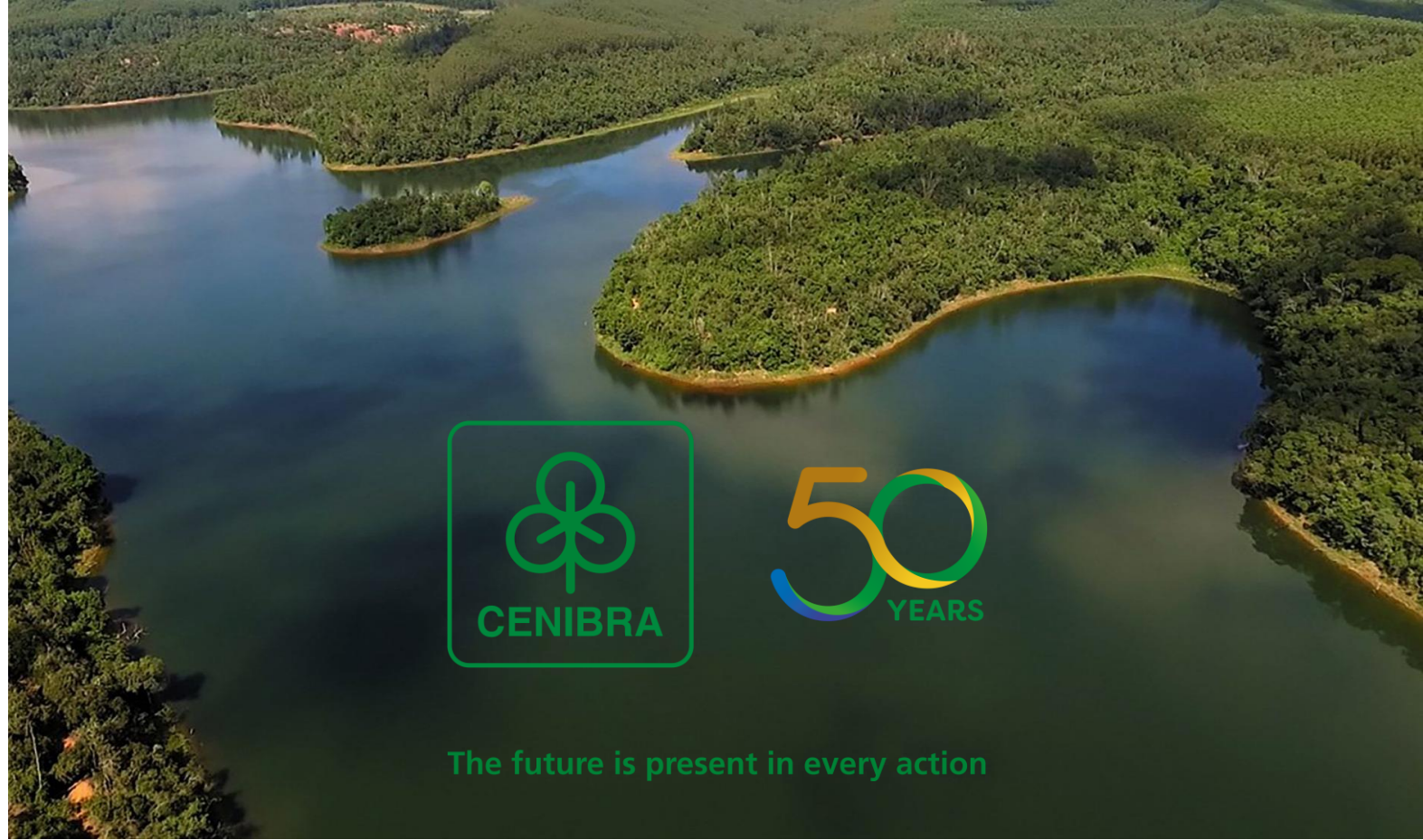
100% Planted Forest

100% Eucalyptus Urograndis

Compliance EUTR & US Lacey Act

We guarantee the origin of our wood

*CNB holds two forest certifications FSC® and PEFC with different and specific principles/criterias.

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About us - 2022 Sales share & Logistics

CENIBRA Internacional
Up to 5 vessels/month
TT: 18 to 30 days
11 ports
Flushing, Antwerp, Norrsundet, Northfleet, Stettin, La Pallice, Tarragona, Sete, Livorno, Naples, Monfalcone

Europe;
460,000t

40%

Asia;
514,000t

44%

North America;
168,000t

14%

CENIBRA Inc
Up to 2 vessels/month
TT: 20 to 30 days
2 ports
Baltimore & Mobile

CENIBRA Internacional
Up to 4 vessels/month
TT: 45 to 60 days
13 ports
Changshu, Qingdao, Xiamen, Gaolan, Xinhui, Jiangmen, Kaohsiung & Japanese ports

2%

Brazil;
23,000t

Shipment
CENIBRA

47%

41%

9%

■ Tissue ■ Specialty ■ PW ■ Board

CENIBRA

50 YEARS

The future is present in every action

02

Mobility Inspection Project SAP SAM

What is SAP Service and Asset Manager?

- Is an intuitive **mobile app** running in the cloud;
- Helps maintain sustainable, risk-resilient operations;
- Enabling **field technicians** to access, capture, and work with **asset and operational data** on their devices.

Source: SAP 2023

How does mobile fit in the Asset Management E2E process?

Identify Work

Plan, Optimize & Orchestrate

Schedule & Dispatch

Execute & Close

Analyze
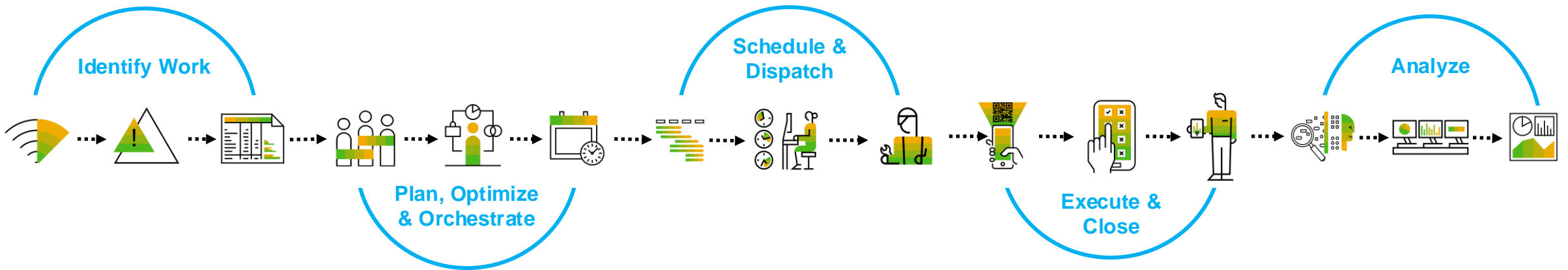
Sustainability

SAP Asset Performance Management
Predictive Maintenance

SAP Asset Management for Resource Scheduling
Long-term work planning

SAP Field Service Management
Schedule & Dispatch

SAP Service and Asset Manager
Mobile Execution

SAP Asset Performance Management
Maintenance Strategies

SAP Service and Asset Manager
Maintenance Requests

SAP S/4HANA (or ECC)
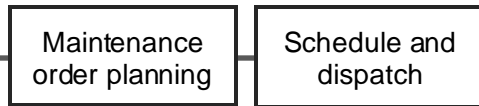Asset Management Foundation | Maintenance Management | Order Management | Logistics | Financials

Source: SAP 2023

Increase productivity, safety, and asset reliability
Maintenance Technician persona

Reactive
Corrective or breakdown

Proactive
Maintenance Plan

Predictive
IoT, ML

Trigger
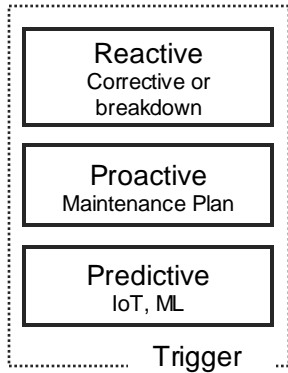
Maintenance Technician (SAM)
Process on Service and Asset Manager

Maintenance order planning	Schedule and dispatch

Maintenance planner (PM)
Process on S/4HANA

Receive, prepare and accept work
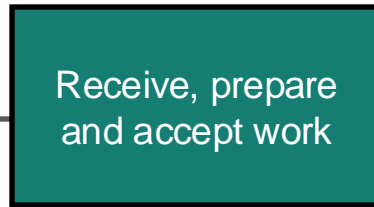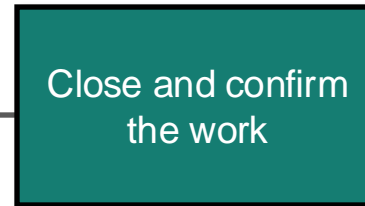
- Notifications
- Work orders
- Inspection rounds
- Spare Parts PRT Materials Management
- GIS & Map visualization

Perform the work
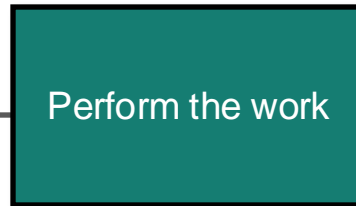
- Operations
- Measurement readings
- Attachments
- Damage catalogs
- Checklists

Close and confirm the work

- Time recording
- Material consumption
- Digital signature
- Follow-up actions
- Work order and notification completion

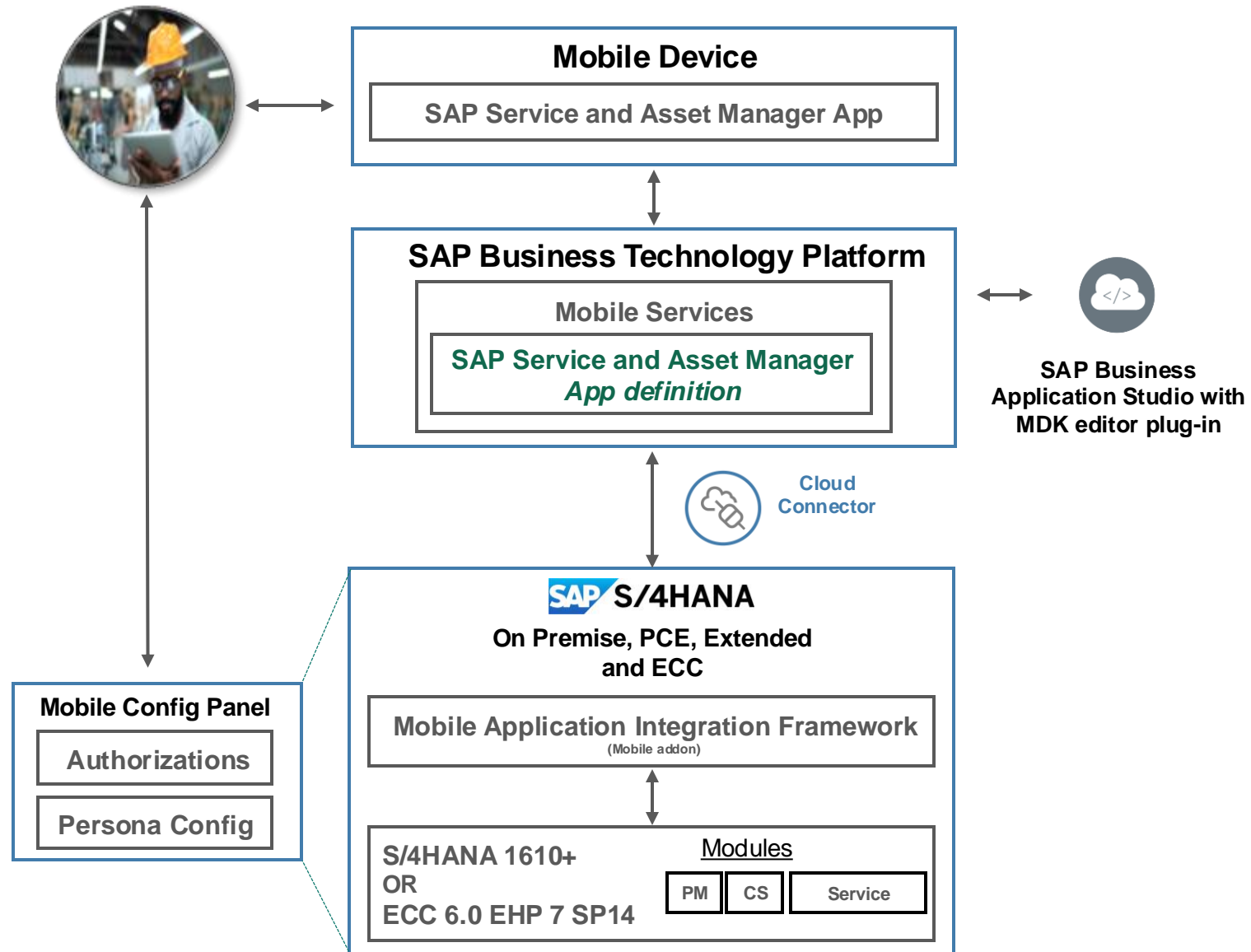| Order cost settlement and closure	Monitor and analyse

Maintenance back office (PM)
Process on S/4HANA

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SAP Service and Asset Manager Architecture

Mobile Device

SAP Service and Asset Manager App

SAP Business Technology Platform

Mobile Services

SAP Service and Asset Manager
App definition

SAP Business Application Studio with MDK editor plug-in

Cloud Connector

SAP S/4HANA

On Premise, PCE, Extended and ECC

Mobile Application Integration Framework
(Mobile addon)

S/4HANA 1610+
OR
ECC 6.0 EHP 7 SP14

Modules

| PM | CS | Service |

Mobile Config Panel

Authorizations

Persona Config

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Use of persona-driven concepts at CENIBRA

New!* Safety Engineer

Isolates equipment to create a safe zone for maintenance activities (WCM/2024)

Inventory Clerk

Manages parts and materials used in the maintenance or service execution process (CENIBRA has been using Fiori)

Service Technician

Executes service orders for customers at different locations (SAM – Medservice)

Maintenance Technician

Executes proactive and reactive maintenance activities on plant assets (SAP SAM)

Supported with 2305 release of SAP Service and Asset Manager.

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Use of persona-driven concepts at CENIBRA

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Motivators of the Mobility Maintenance Project & Business Challenges

01
Reliability

Need for greater reliability of the inspection process in the industrial area.

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02
Process change

Need to systemically redeploy the concept of inspection routes.

03
Checklist

Need to carry out inspections with the checklist in hand, next to the equipment.

04
Simplification

Need to simplify by reducing bureaucracy for closing orders.

05
Saving time

Increased availability of the inspector in the field to "take care" of the assets on the route and those that are not on the route.

Project Scope: Mobility for Inspection
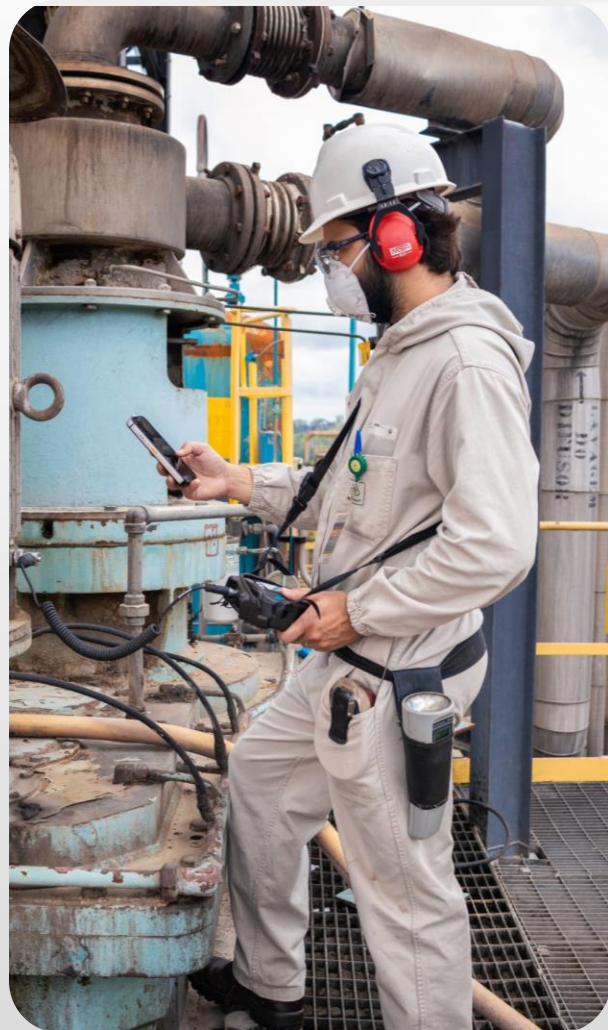
Key Standard Features of SAM Application for Maintenance:

- Equipment Inspection
- Display of the Equipment Class Overview
- Execution of Maintenance Works
- Display of Technical Documents
- Maintenance Order Bill of Materials
- Confirmation of Work
- Display of the Equipment Technician List

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Challenges and Objectives

Project Objectives

Implement SAP Asset Management mobile app for SAP S/4HANA at CENIBRA to attend the main scope:

Inspection Route:

- **10 inspectors**: Optimize inspection time;
- **7500** orders/month: Reduction 50% of orders;
- **280**/month inspections: Reduction of +/- 50% time;

Why SAP
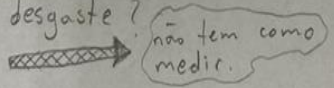
- CENIBRA has been an SAP customer **since 2003** and has **all the modules** implemented, so we believe in SAP solutions;

- Evaluation of the SAP® Asset Management mobile app for SAP S/4HANA® during the implementation of SAP S/4HANA according to SAP Activate methodology;

- Flexibility to use the mobile app online and offline and use it with various devices, allowing the most suitable device to be used in each maintenance area;

- Customization potential, allowing unique steps in its maintenance processes to be configured;

- Solution roadmap aligned with its strategic IT plan.

Learning Path

- 22JTA03 - MAP com duplicidade (itens duplicados)
- MAP com itens em dupicidade
- Equipamentos parados, como proceder?
- 22JBA46 (cavalete, não está cadastrado). Ajustar mol
- Tem como selecionar "flagar" todos os itens do MA
- 222AG06M preenchido incorreto, equipamento p
- como corrigir preenchimento indevido após concl
- Ergonomia
- Somente 1 local de instalação por Equipamento (T
- Mancais funcionais e sem desgaste? → não tem como medir.
- Manter pergunta do isol. térmico?
- Busca na lupa, procura apenas o texto em Negr
- MAP 218AG03 errado, ñ tem acopl., e sim correia

Samsung Galaxy XCover Pro

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System mobility screens

Process After

Home Screen
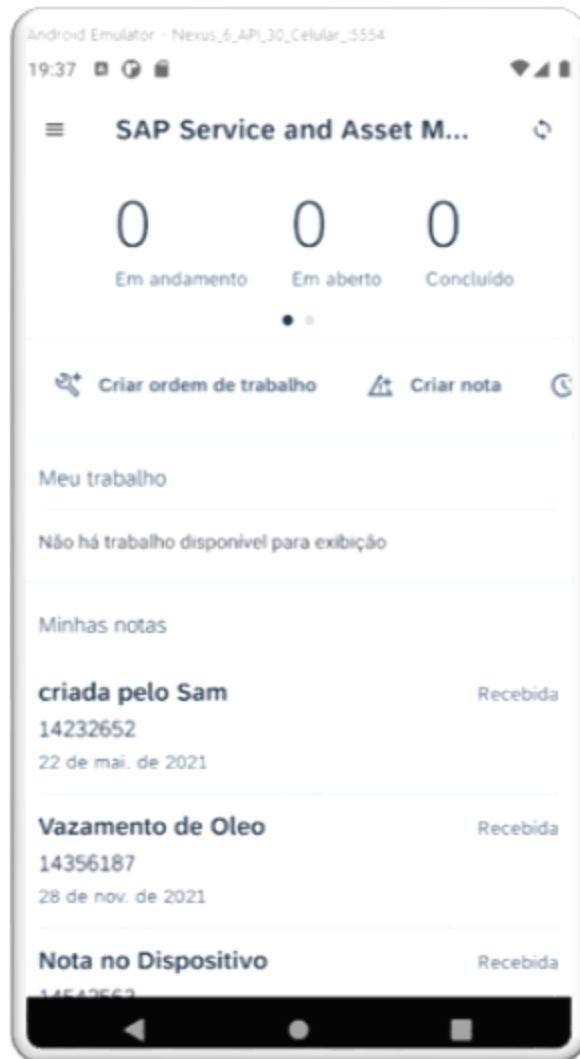
Home Screen & Features

List of Orders
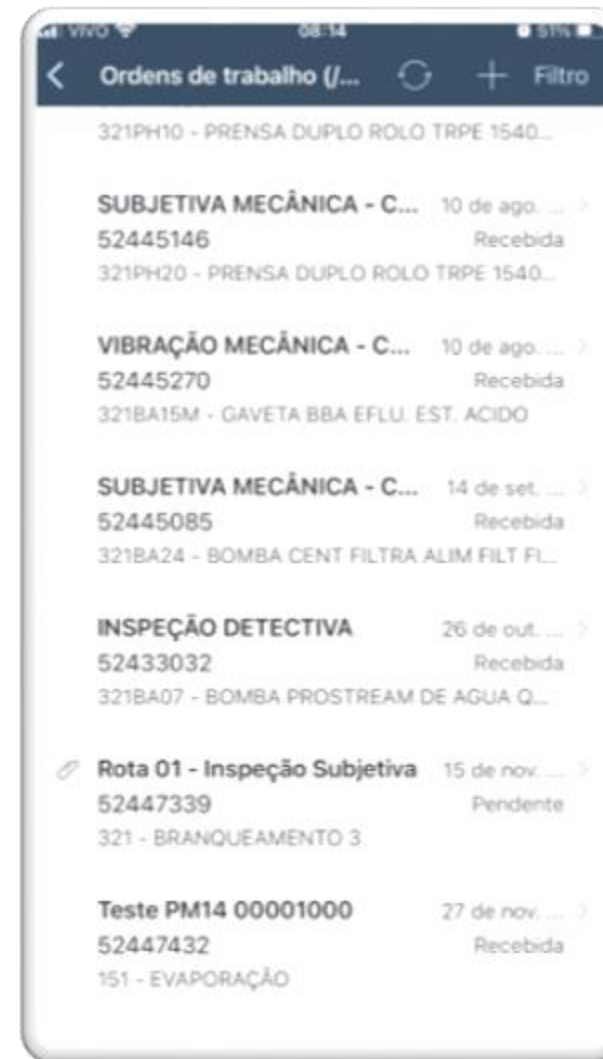
Process After

List operations with status
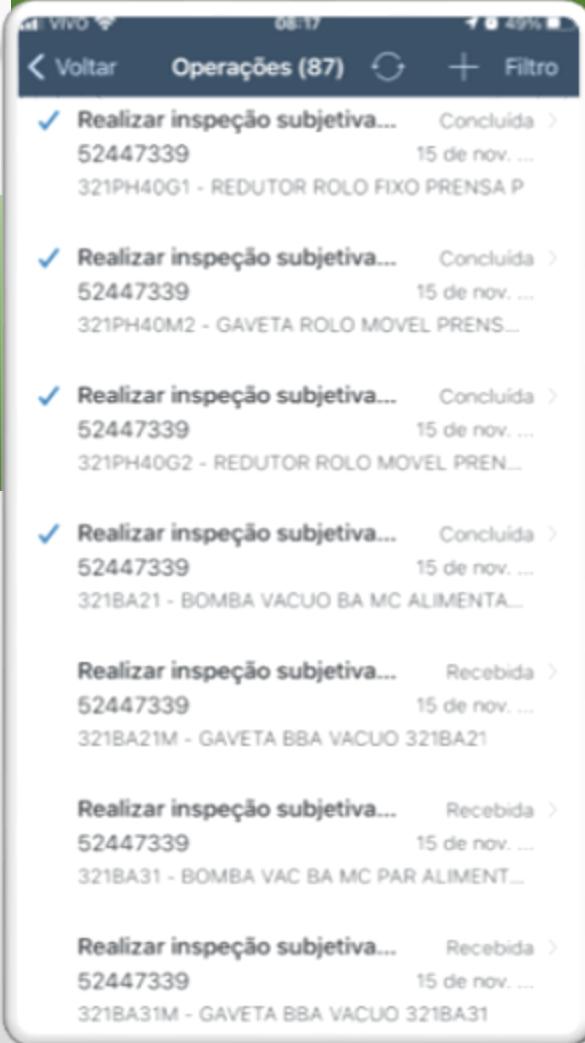
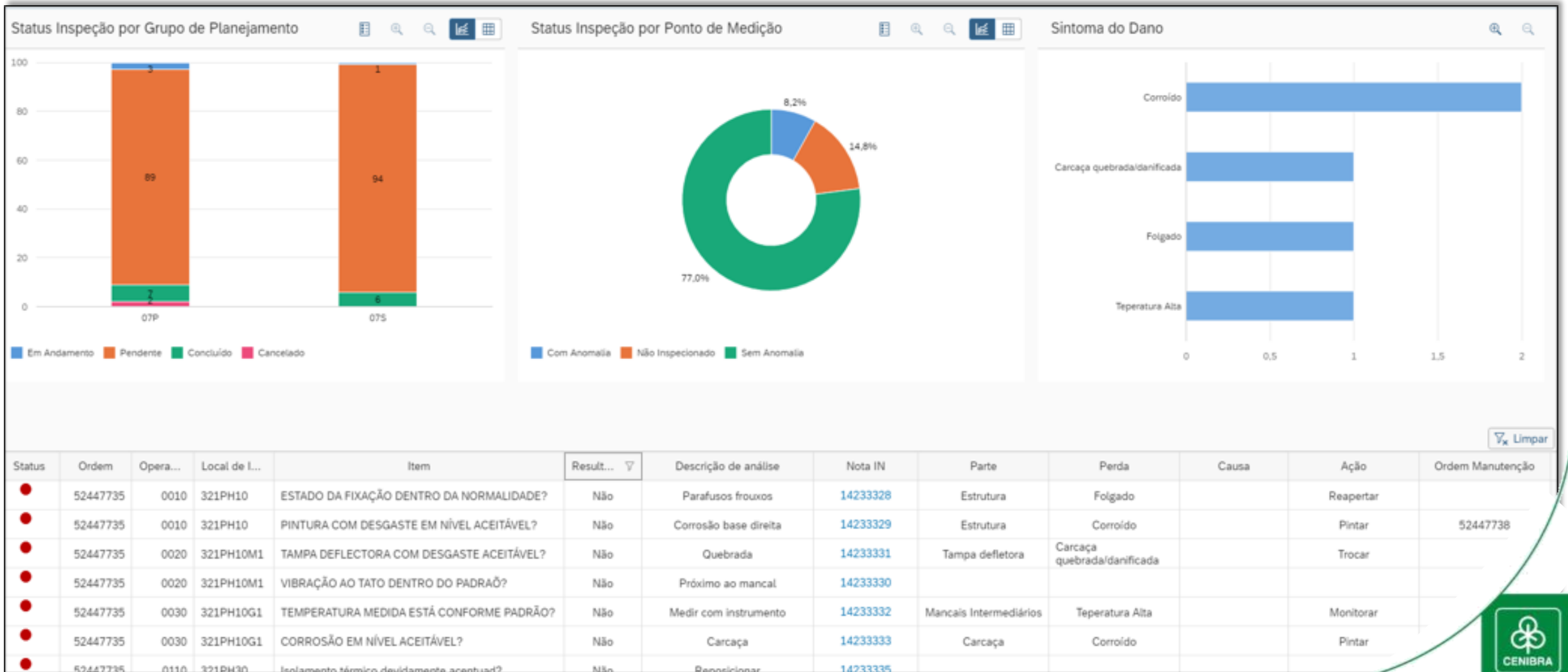Systemic logging time to start inspection, read inspection points, and end activity

55 seconds on average for equipment with 8 inspection points.

O futuro presente em cada ação.

Performance indicators in SAP FIORI
Process After

Fiori Inspection Panel

Performance indicators in SAP FIORI
Process After

Fiori Commissioning and Testing
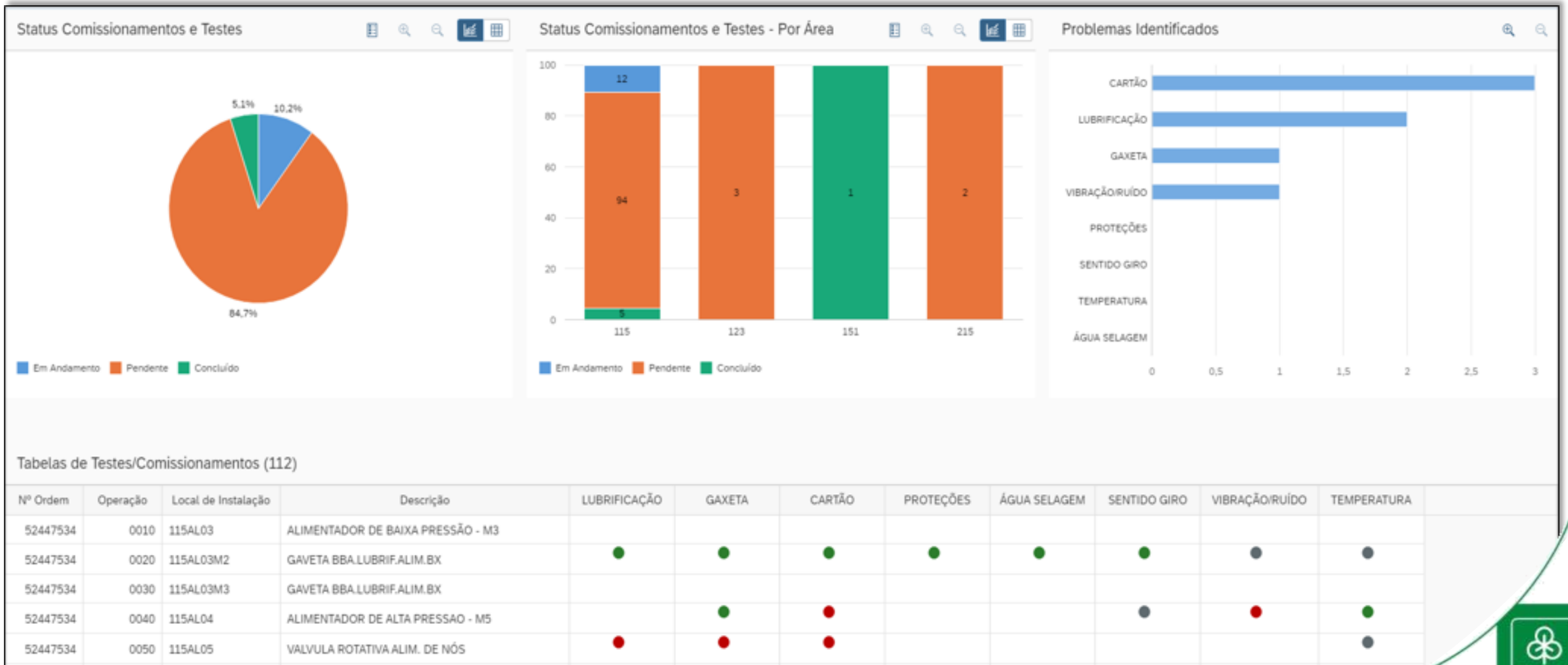
03

Ours Results

SAM Project Numbers

Equipment Inspected

7,500/month
(750 inspections per inspector on average).

Points inspected

Points inspected by inspector:
4,836/month.

Work Permits

1,706/month

Activities

Service Measurements (activities):
320/month.

Benchmarking

Inteactions
11 meetings.

Presentations

Event Presentations: 9
2 of which are international events.

Current usage of SAM by 4 out of 10 mechanical inspectors

We are upgrading from SAM to version 2405, all **10 inspectors** will use the tool.

O futuro presente em cada ação.

Benefits for the business

Task	Before	After
Order closure	~7 hours per week per inspector.	~30 minutes to deal with anomalies. Inspection order is closed automatically (-92,86%).
Order Quantity	~750 orders per month inspector.	~5 orders per month per inspector (route concept brought the equipment for the operations of the orders).
Anomaly identification	Annotated on the inspector's pocket paper.	Generation of IN (Inspection Note) grade automatically for each anomaly identified. The breakdown is given directly in the field on Mobile.
Inspection x Maintenance Integration	Radio communication or when he arrived in the room at the end of the day.	When it finds an anomaly in the inspection, the SAM automatically generates a note. Online it is possible to see in the Fiori Dashboard the indication of the problem of the problem to be addressed.
Printing orders/checklists	Printing the order list in an Excel spreadsheet. Due to the large volume per inspector, orders with the checklist Where not printed.	Today, the order is downloaded to the mobile device without the need for printing. The checklist is part of the order download.
Inspection management.	It didn't exist.	Performed through a Fiori with graphs that indicate: Accomplished, Canceled, Pending, if anomaly found and if it has been treated.
Work permit.	Performed in workrooms with paper evidence records (signatures on orders.	Registered at the work site on the foot of the equipment with the mobility and photo record of the evidence attached to the work order automatically.

CENIBRA

Thank you very much

Arigatōgozaimasu

Muito obrigado

Vielen dank

https://www.cenibra.com.br/Sustainability report

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Ronaldo Neves Ribeiro

ronaldo.ribeiro@cenibra.com.br

Celulose Nipo Brasileira SA – CENIBRA