

EMPOWERING INDUSTRIAL INNOVATION FOR OVER 20 YEARS

PAMELLA CAMPOS
Commercial Manager



***OPTIMIZING OPERATIONS WITH
AUTOMATION, AI, AND ADVANCED
ROBOTICS FOR A SMARTER
TOMORROW***

TCS



At TCX Industrial, we exist to empower industries with smart, scalable, and high-impact technology solutions.

WHO WE ARE

Our focus: Delivering value through automation, digital transformation, and robotics in complex industrial environments. Our mission? To make operations more efficient, safe, and future-ready — across Brazil and beyond.



Great
Place
To
Work®

Certificado

30/01/2019 - 30/01/2020

BRASIL

TCS



KEY SECTORS WE SERVE



AGRIBUSINESS

AUTOMOTIVE

FOOD &
BEVERAGE

MANUFACTURING

MINING

OIL & GAS

METALLURGY

TCS



KEY CLIENTS

Trusted by industry leaders across sectors.





About Us

By the Numbers **TCX**

TCS

+100
Specialists

Strategically distributed
across national and
international operations

+800
Projetos

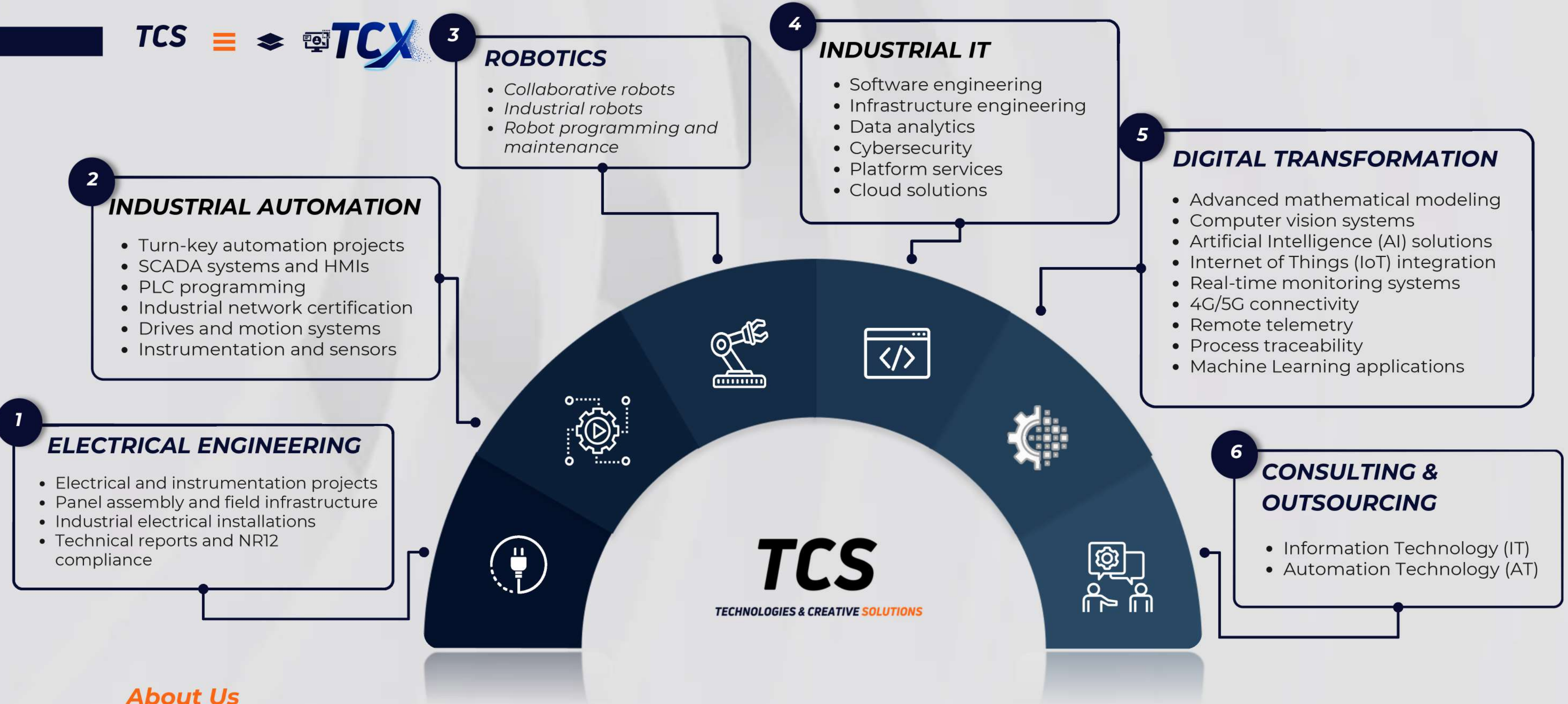
successfully completed with
tangible results

+80
Clientes

cross Brazil and spanning a
wide range of industrial
sectors

+20
Years

of proven experience in
Industrial Technology



About Us

Areas of Expertise

ELECTRICAL ENGINEERING

At TCS Industrial, our Electrical Engineering division stands out for delivering customized, end-to-end solutions across a wide range of industrial sectors. Our team is composed of highly skilled and certified professionals, committed to providing projects that combine safety, efficiency, and full regulatory compliance — all powered by the latest technologies on the market.



PANEL ASSEMBLY

- Power Centers (Eletrocentro)
- PLC Control Panels
- Low and Medium Voltage Switchboards (Fixed and Withdrawable Drawer Type – CCM)
- Custom Panels
- Control Desks
- IT Racks
- Andon Panels

ELECTRICAL ENGINEERING – CONCEPTUAL, BASIC & DETAILED

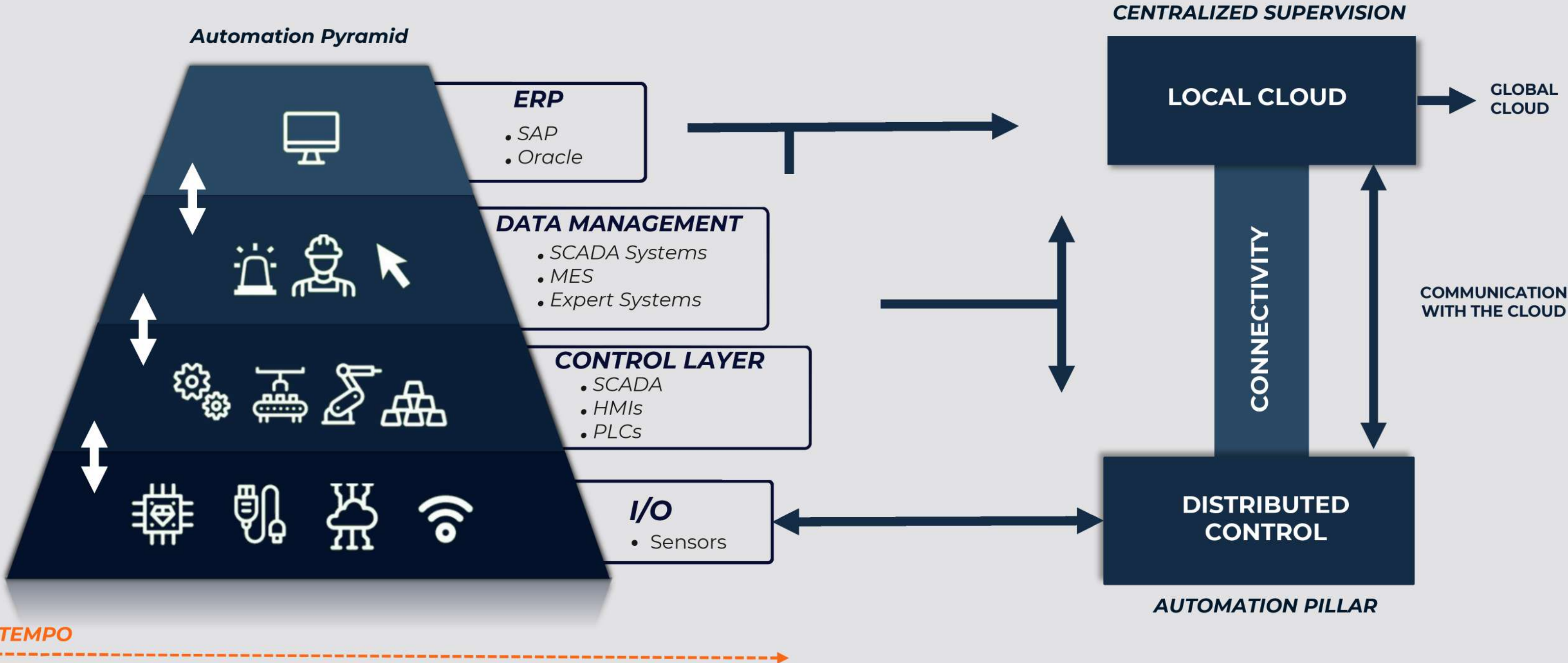
- Single-Line Diagrams
- Electrical Room Layouts
- Detailed Cable Routing and Bill of Materials
- Technical Specification of Panels and I/O Lists

NR12 Compliance

- Technical Reports and Compliance Certificates
- Detailed Project Documentation
- Development of Cause-and-Effect Matrices
- Installation and Safety Adjustments for Machines and Panels

INDUSTRIAL AUTOMATION

At TCS Industrial, our Automation team is composed of specialists focused on implementing cutting-edge solutions that enhance operational efficiency and process precision. We leverage advanced technologies to integrate automation systems that fully align with Industry 4.0 standards — enabling real-time, data-driven decision-making and intelligent operations across the entire plant floor.



At TCS Industrial, our Robotics team is composed of highly qualified specialists dedicated to applying robotic technologies across multiple industrial sectors.

ROBOTICS

We combine deep industry expertise with cutting-edge technology to deliver innovative, tailor-made solutions that drive efficiency, precision, and continuous improvement in manufacturing processes.



MATERIAL HANDLING

We deploy robots for material handling tasks, ensuring high precision and operational efficiency.

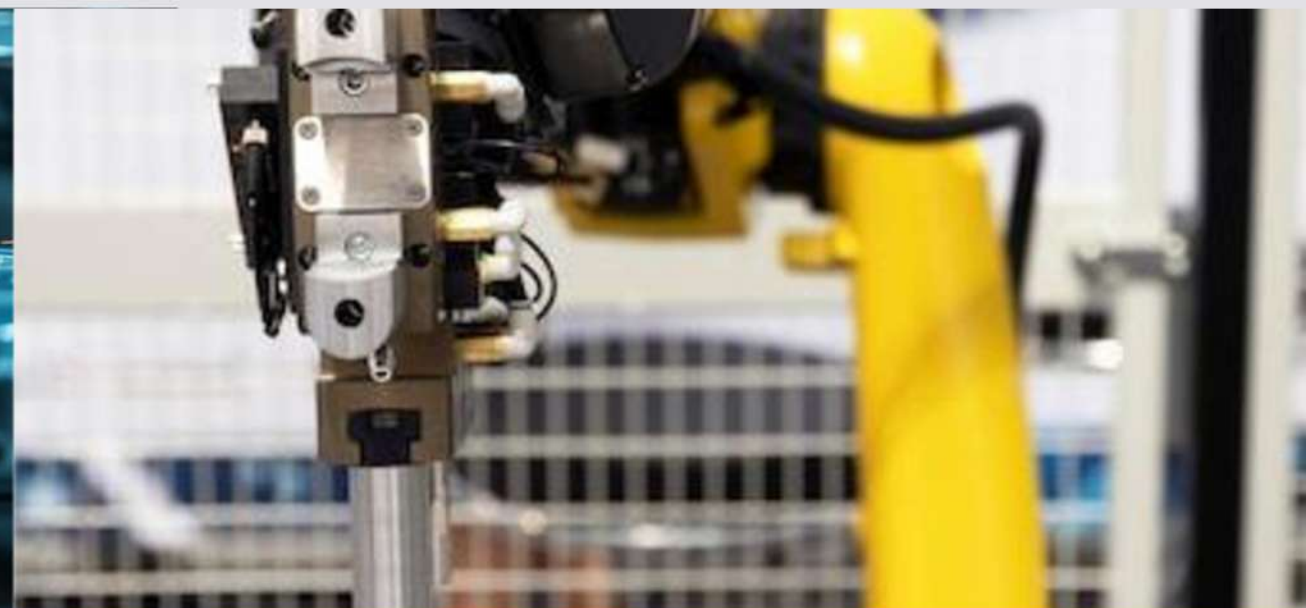
Our expertise covers everything from simple movements to complex manipulations in dynamic and demanding environments.



ROBOTIC WELDING

We integrate robotic welding systems designed to deliver high-quality, consistent welds.

Our experienced team focuses on cycle time optimization and precise positioning, reducing splash and improving weld bead quality.



VISION-INTEGRATED INSPECTION

We develop and integrate robotic systems with computer vision to perform high-precision inspection tasks.

These solutions enable real-time decision-making, ensure product quality, and support corrective actions — all with minimal human intervention.

UNDERWATER ROBOTICS & ARTIFICIAL INTELLIGENCE

We develop lightweight, flexible robotic manipulators capable of accessing hard-to-reach areas in submerged equipment. Operated from the surface via an ROV umbilical and a dedicated software platform, this system brings agility and precision to subsea operations.



INDUSTRIAL IT

At TCS Industrial, our Industrial IT division is made up of specialists focused on delivering advanced technological solutions. We combine multidisciplinary expertise to drive efficiency, connectivity, and innovation in our clients' industrial operations.



PLATFORM SERVICES

Implementation and management of scalable, high-performance technology platforms



SOFTWARE ENGINEERING

We design and develop custom software solutions tailored to the specific operational and business needs of each client.



CLOUD SOLUTION

We deliver secure and scalable cloud computing solutions, enabling remote access, real-time data exchange, and flexible system expansion.



DATA SECURITY

We design and implement robust and efficient IT infrastructure, tailored to support demanding industrial environments with high performance and reliability.



INFRASTRUCTURE ENGINEERING

We design and implement robust and efficient IT infrastructure, tailored to support demanding industrial environments with high performance and reliability.



DATA ANALYTICS

We transform raw data into valuable insights through advanced analytics — empowering strategic decision-making and continuous process improvement.

DIGITAL TRANSFORMATION

TCX is a spin-off of TCS Industrial, born from over 20 years of hands-on industrial expertise. By leveraging cutting-edge Industry 4.0 technologies such as IoT, Artificial Intelligence, and Computer Vision, we develop tailored solutions that boost operational efficiency and foster innovation across diverse industrial sectors. Our approach is rooted in co-creation — working closely with clients to transform complex challenges into intelligent, high-impact results.



COMPUTER VISION SYSTEMS

We develop computer vision solutions for real-time inspection and monitoring, enabling greater precision, quality control, and automation in industrial processes.

IOT SOLUTIONS

Our IoT solutions connect and optimize industrial devices, allowing real-time data exchange, automation, and operational efficiency.

4G/5G CONNECTIVITY

We implement 4G and 5G technologies to enable fast, reliable, and secure communication between industrial systems — supporting remote operations and real-time data transmission.

TRACEABILITY SYSTEMS

We develop traceability solutions that enable end-to-end tracking and control of industrial processes — ensuring transparency, compliance, and operational oversight.

ADVANCED MATHEMATICAL MODELING

We design and implement advanced mathematical models to optimize industrial processes, improve resource utilization, and support intelligent decision-making.

AI SOLUTIONS

We implement Artificial Intelligence solutions to drive automation, predictive capabilities, and advanced data analysis across industrial operations.

REAL-TIME MONITORING

We deliver real-time monitoring systems to ensure the efficiency, safety, and reliability of industrial processes — enabling rapid response and continuous improvement.

TELEMETRY SOLUTIONS

We offer telemetry systems for remote monitoring and control of industrial equipment — enabling real-time visibility and operational responsiveness from anywhere.

MACHINE LEARNING

We apply Machine Learning algorithms for predictive analytics and process optimization, enabling smarter decisions and increased operational efficiency.

CONSULTING & OUTSOURCING

At TCS Industrial, we are fully equipped to handle implementation, expansion, modernization, retrofitting, and maintenance projects across a wide range of industrial sectors. We offer consulting and outsourcing services to complement our clients' internal teams in critical areas, ensuring greater flexibility, efficiency, and speed in execution.



OUTSOURCING CONTRACT

We provide skilled professionals to support industrial operations, supplementing internal teams in areas such as Industrial IT, automation, and electrical engineering. Our outsourcing model ensures access to top-tier talent, backed by flexible contracts that cover multiple services and resources — tailored to your operational needs.

UMBRELLA CONTRACT

We offer flexible contracts that cover multiple services and resources, enabling a customized and scalable approach that adapts as our clients' needs evolve.

ON-SITE RESOURCES

Our consulting service provides a comprehensive range of solutions aimed at optimizing processes and fostering technological innovation. We operate with flexibility, centralized management, and a strong focus on cost reduction, project simplification, and execution speed.

COST REDUCTION

Our solutions are designed to optimize resources and minimize operational costs, while maintaining performance, quality, and scalability.

ON-SITE PERSONNEL

We allocate skilled professionals on-site to ensure continuous support, seamless integration, and immediate response to operational needs.

CENTRALIZED MANAGEMENT

We coordinate all aspects of the project through a centralized management approach, ensuring efficient execution, alignment with business objectives, and full visibility throughout every stage.

ON-SITE RESOURCES

We provide on-site resources by allocating skilled professionals directly at client facilities, ensuring consistent support and operational continuity where it's needed most.



TCS

A TRUSTED REFERENCE IN LATIN AMERICA - DISCOVER OUR SOLUTIONS!

In 2019, we were recognized by FCA Latam as the most innovative technology supplier of the year.

**Luis Santa
Maria**

**Procurement Director
at FCA LATAM**

**Fernando
Sousa**

**CTO & Co-Founder
of the TCS Group**

**Antonio
Filosa**

**CEO of FCA
LATAM**

OUR PRODUCTS



1

APPLICATIONS



2

APPLICATIONS



3

APPLICATIONS



4

APPLICATIONS





A modular platform that enables real-time monitoring of machines and processes using IoT technology. Designed to provide deep operational visibility, MMI helps companies optimize performance, reduce downtime, and make data-driven decisions with confidence.






APPLICATIONS

-  MACHINE MONITORING
-  PROCESS MONITORING
-  FAILURE PREDICTION
-  BOTTLENECK IDENTIFICATION
-  ROOT CAUSE ANALYSIS
-  REAL-TIME ALARMS & ALERTS




INTEGRATION CAPABILITIES

-  PLC
-  IOT CONNECTIVITY
-  MITSUBISHI
-  SIEMENS
-  SAP
-  AND OTHER MANUFACTURERS
-  SYSTEMS

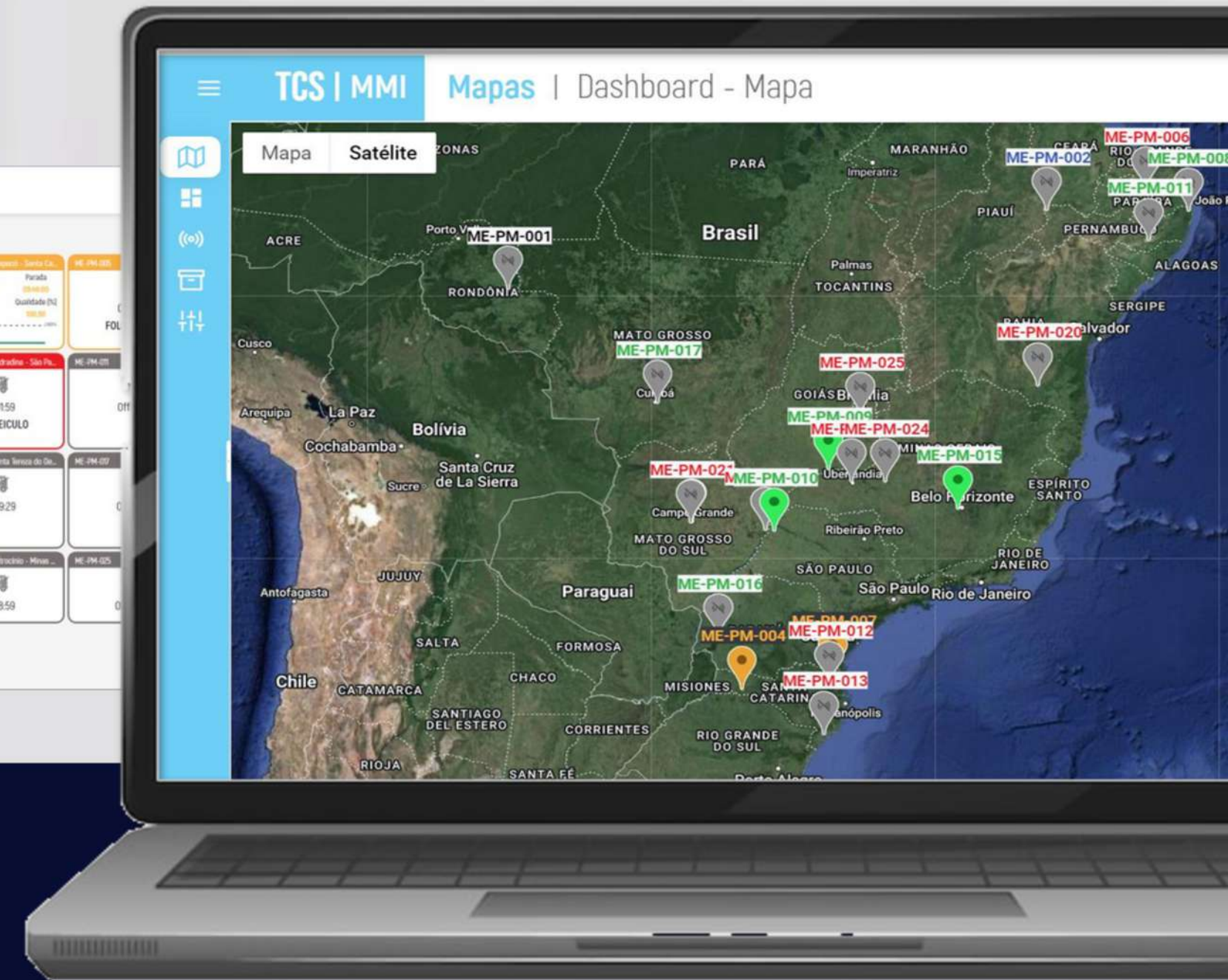
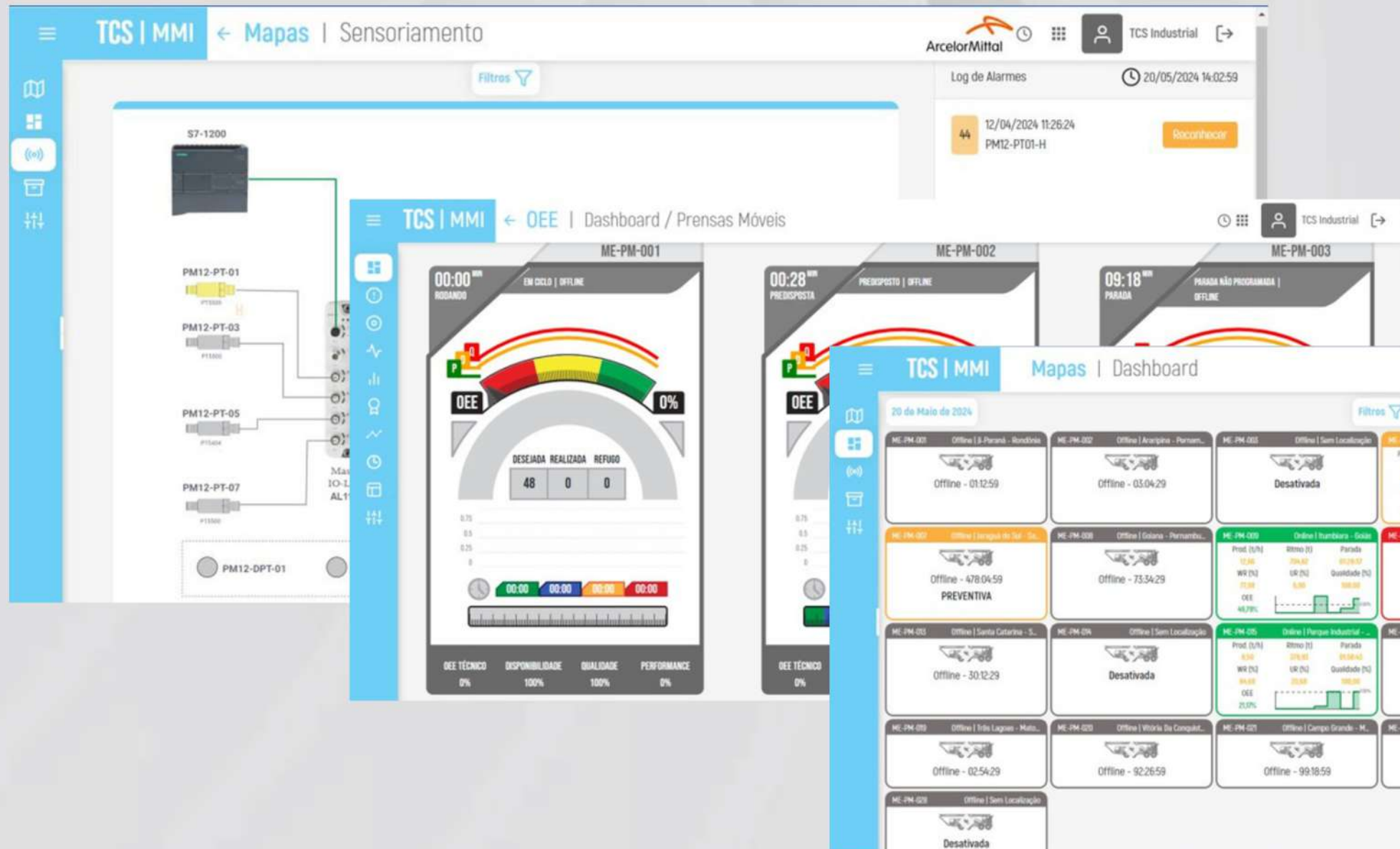
TECHNOLOGIES

-  ANALYTICS
-  DASHBOARDS
-  INDUSTRIAL SENSORS
-  COMMUNICATION PROTOCOLS (MQTT / AMQP)
-  CYBERSECURITY

INTERFACES

-  RESPONSIVE WEB INTERFACE
(ACCESSIBLE VIA DESKTOP, MOBILE, AND TABLET)
-  CLOUD-BASED SYSTEM
-  ANDON SYSTEMS

Predictive Telemetry Machine Learning OEE Monitoring



With real-time production visibility, companies can manage proactively, boost efficiency, and achieve better outcomes.

TCS



3

VISIONPRO

We developed a computer vision solution that uses a camera, lighting, and locally developed software to monitor the application of sealant during robotic operations. The system tracks the adhesive applied by the robot, verifying its thickness and continuity in real time. When the result is positive (OK), the part is automatically approved and released. In the case of a negative result (NOK), an audiovisual alert is triggered, the result is displayed on a monitor, and the robot performs a new application to ensure accuracy and consistency.

APPLICATIONS



PRODUCTION INSPECTION
(High precision, high speed, high repeatability)



PRODUCT DIMENSION MEASUREMENT



ITEM COUNTING



VOLUMETRIC CALCULATION



OPERATION IN SIMULATED ENVIRONMENT
(Digital Twin)



FACIAL RECOGNITION

INTEGRATION CAPABILITIES



TRACEABILITY SYSTEMS



AUTOMATION SYSTEMS



ROBOTIC SYSTEMS



INSPECTION AND MONITORING SYSTEMS

TECHNOLOGIES



CAMERAS
(COGNEX, KEYENCE, Intelbras, and other manufacturers)



MACHINE LEARNING



VISION SENSORS



ARTIFICIAL INTELLIGENCE

INTERFACES



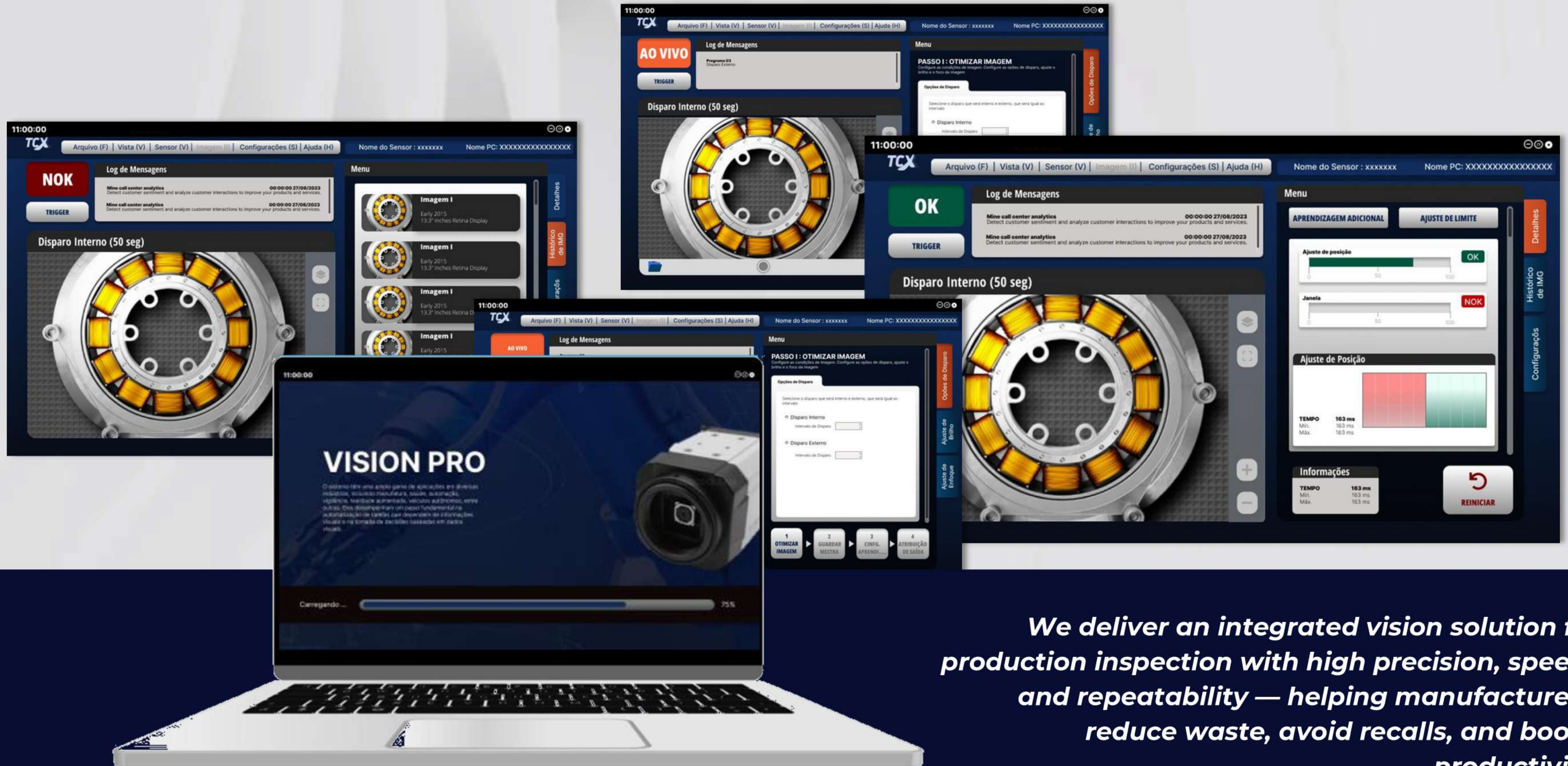
WEB INTERFACE
(desktop, mobile, and tablet)



CLOUD-BASED SYSTEM



LOCAL SYSTEM
(Stand-Alone Mode)

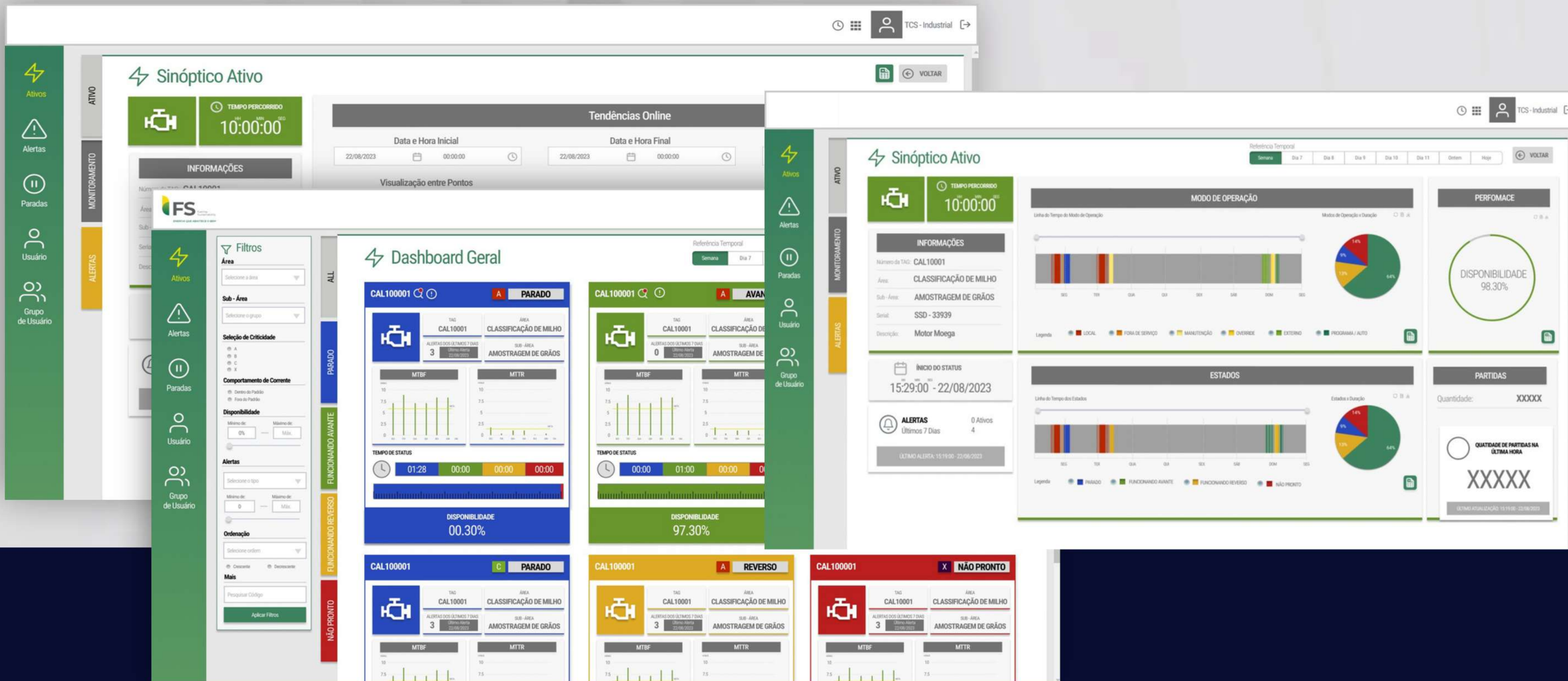


We deliver an integrated vision solution for production inspection with high precision, speed, and repeatability — helping manufacturers reduce waste, avoid recalls, and boost productivity.

TCS



TCX



THANK YOU!

PAMELLA CAMPOS

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Our technologies today are transforming the industry of tomorrow.

