

LNF  **Pimentel**

— SOLUÇÕES E SERVIÇOS EM ENGENHARIA —

About us:

Our expertise has more than ten years linking technology and sustainability.

We have nation-wide reach, currently working at several sites distributed in Brazil.

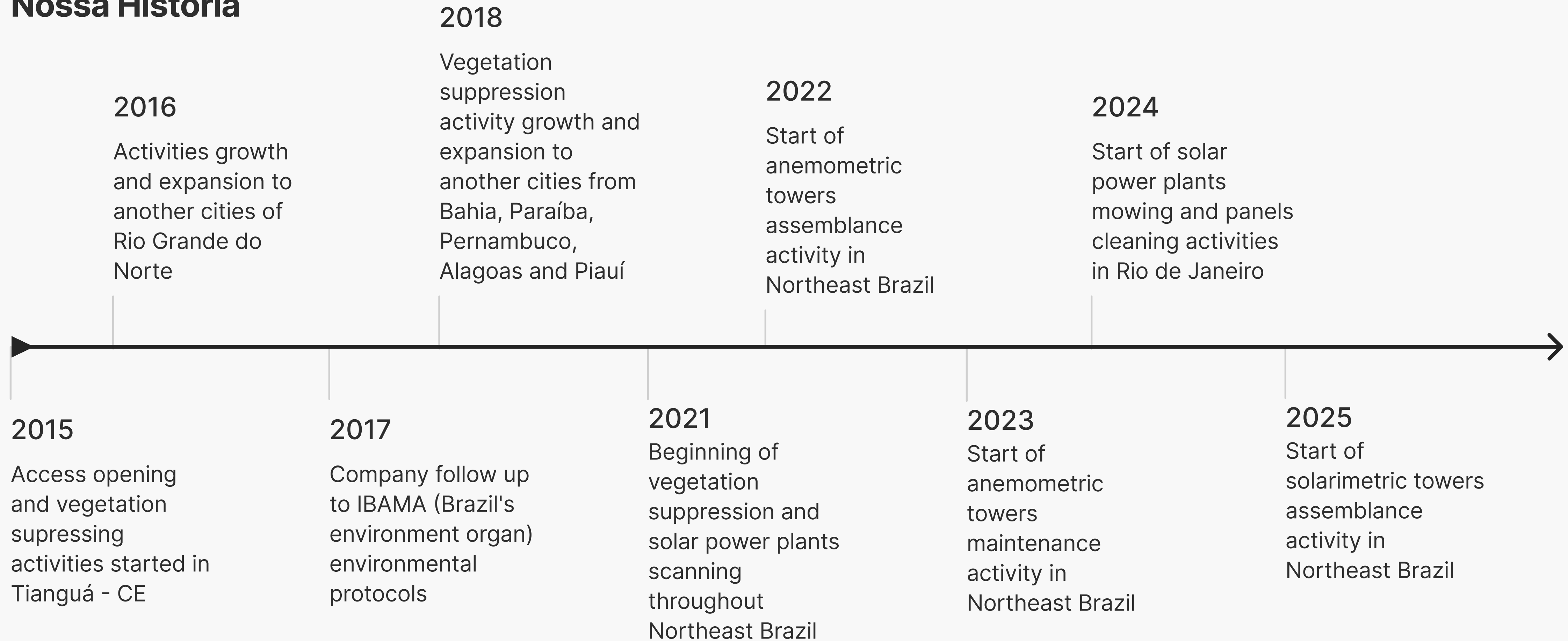
Starting in 2015, LNF born with the purpose of bringing specific and effective solutions for the Green Energy industry sector.

Nowadays we are attached to success in Eolic and Solar power plants prospection, offering integrated strategies that grants viability to successful projects.

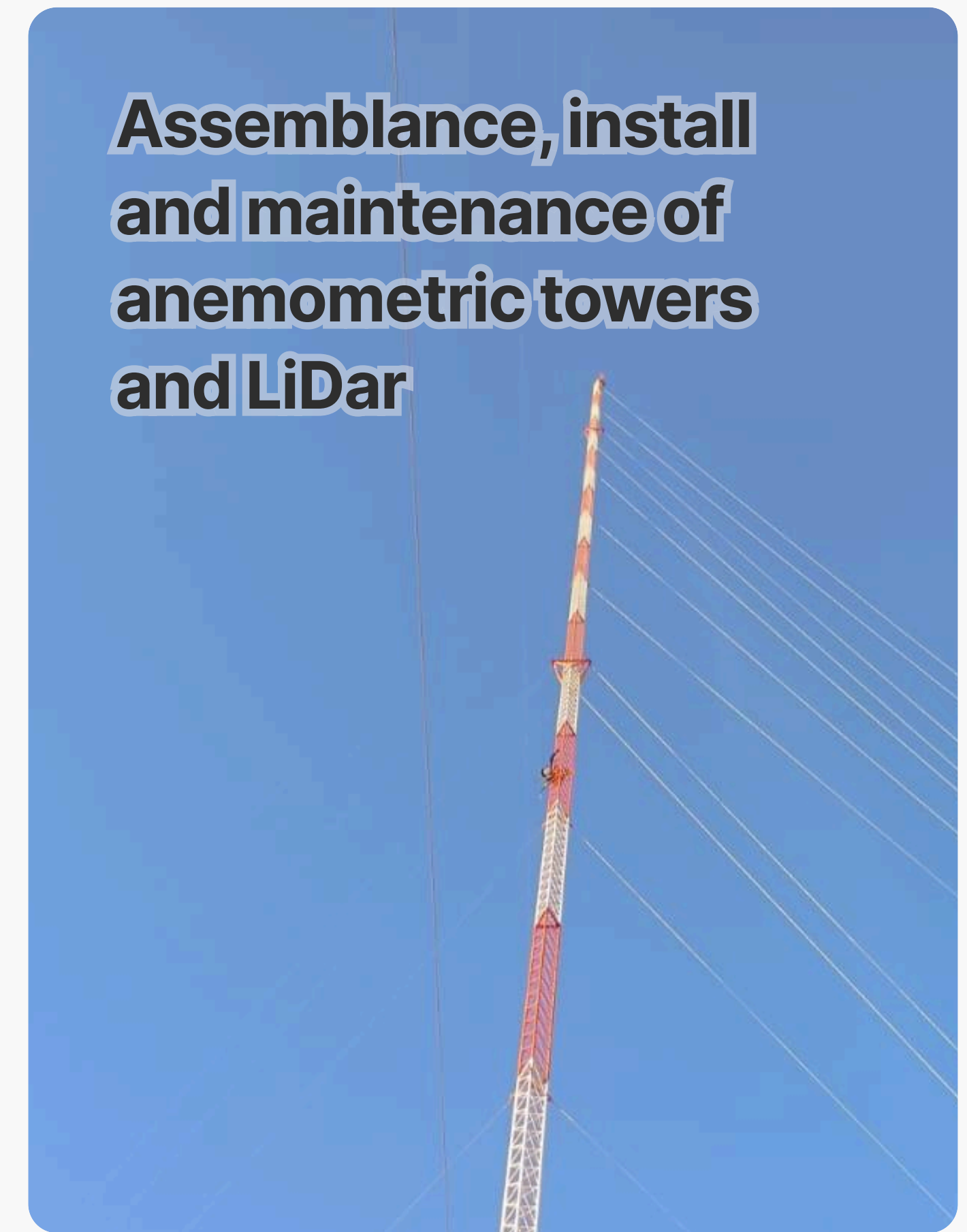
We are more than just consultants, we are specialists. Our team has mastery from technical analysis to maintenance on high-rise metallic structures, bridging top level engineering precision with field work to embrace the challenging landscapes of Brazil.



Nossa História



Our services:



Access Opening and Vegetal Suppression Services:

1. Planning and Licensing (ASV)

→ We following environmental demands before any intervention or act.:

- ASV gain: ASV stands for Vegetation Suppression Authorization Management, a term issued from IBAMA.
- Forest Inventory: Species managing and identification to assure environment compensation goals are achieved.
- Faun and flora rescue: Protection program for endemic species and faun transposing before heavy machinery work.

2. Selective and Mechanized Vegetal Supression

→ The removal of vegetation is strategically made to minimize impact and maximize efficiency:

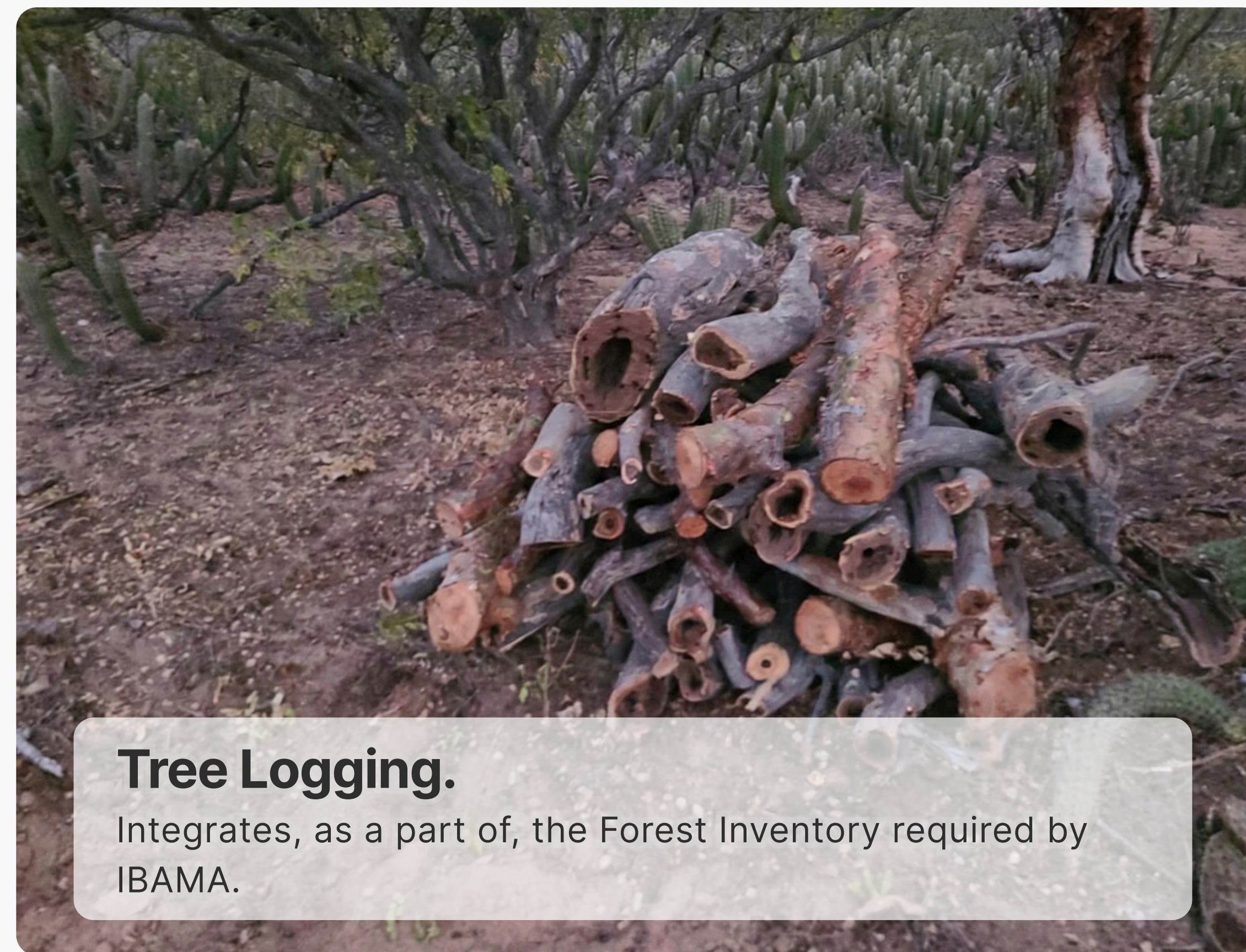
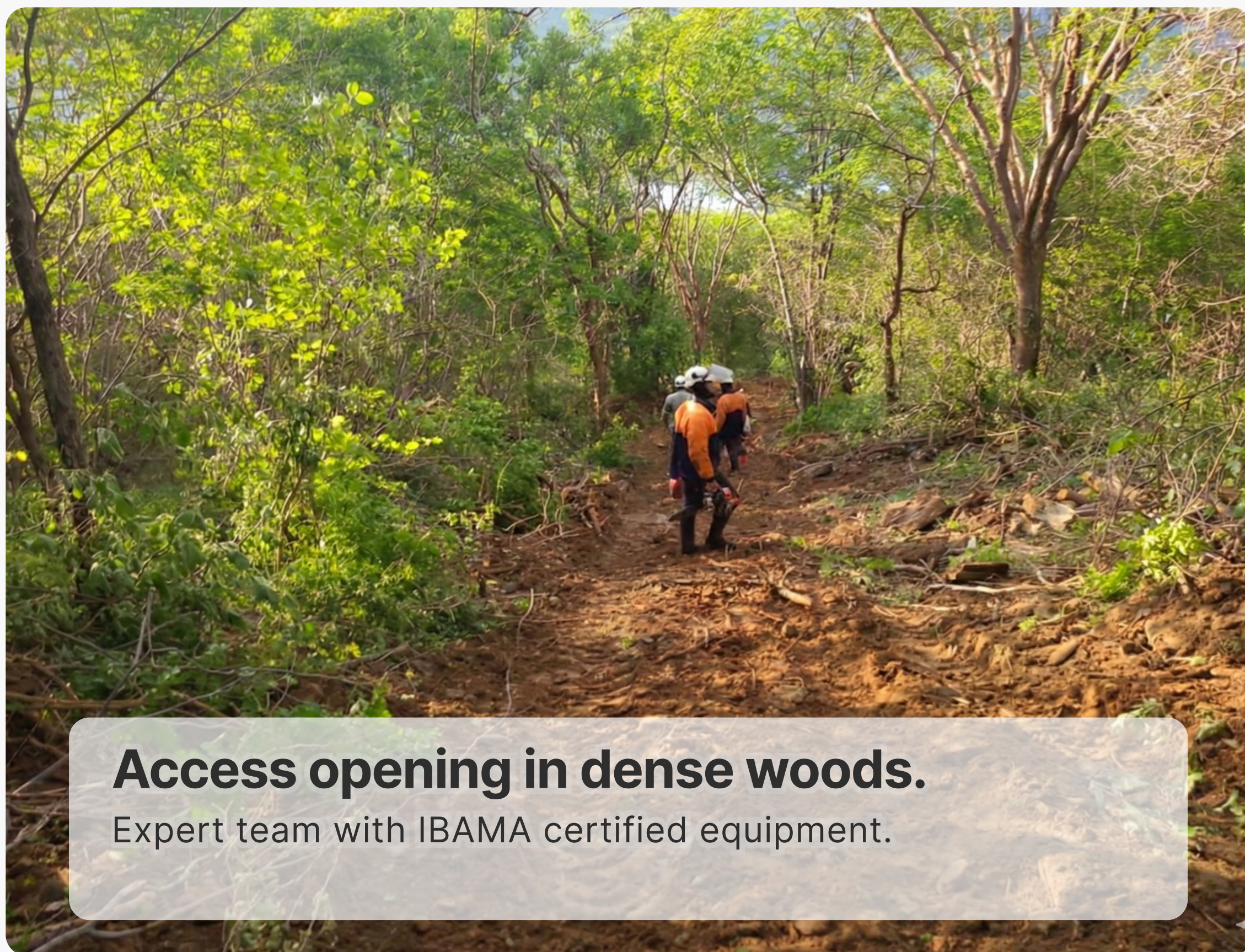
- Cut and Removal: Modern equipment usage (such as Feller Bunchers or licensed chainsaws) for arboreal and bush area cleaning.
- Biomass: processing, stacking and tracing of logs. All material are viable to commercial use, donation or organic reusage by being mashed into soil.
- Site Cleansing: Logs and roots removal from areas where foundations will be installed.

3. Access opening and setting

→ We transform raw terrains into safe and operational paths:

- Land Leveling: Creation of internal roads that handle special loads (such as loaded heavy vehicles).
- Rainwater draining: Sewers and gutters to avoid pluvial erosion and assure working traffic even under rainy weather.
- Soil compressing: Sub-base layers install to grand the needed stability while assembling structures.

Vegetal Suppression



Vegetal Suppression



We have our own team.

Quality with readiness when solving problems



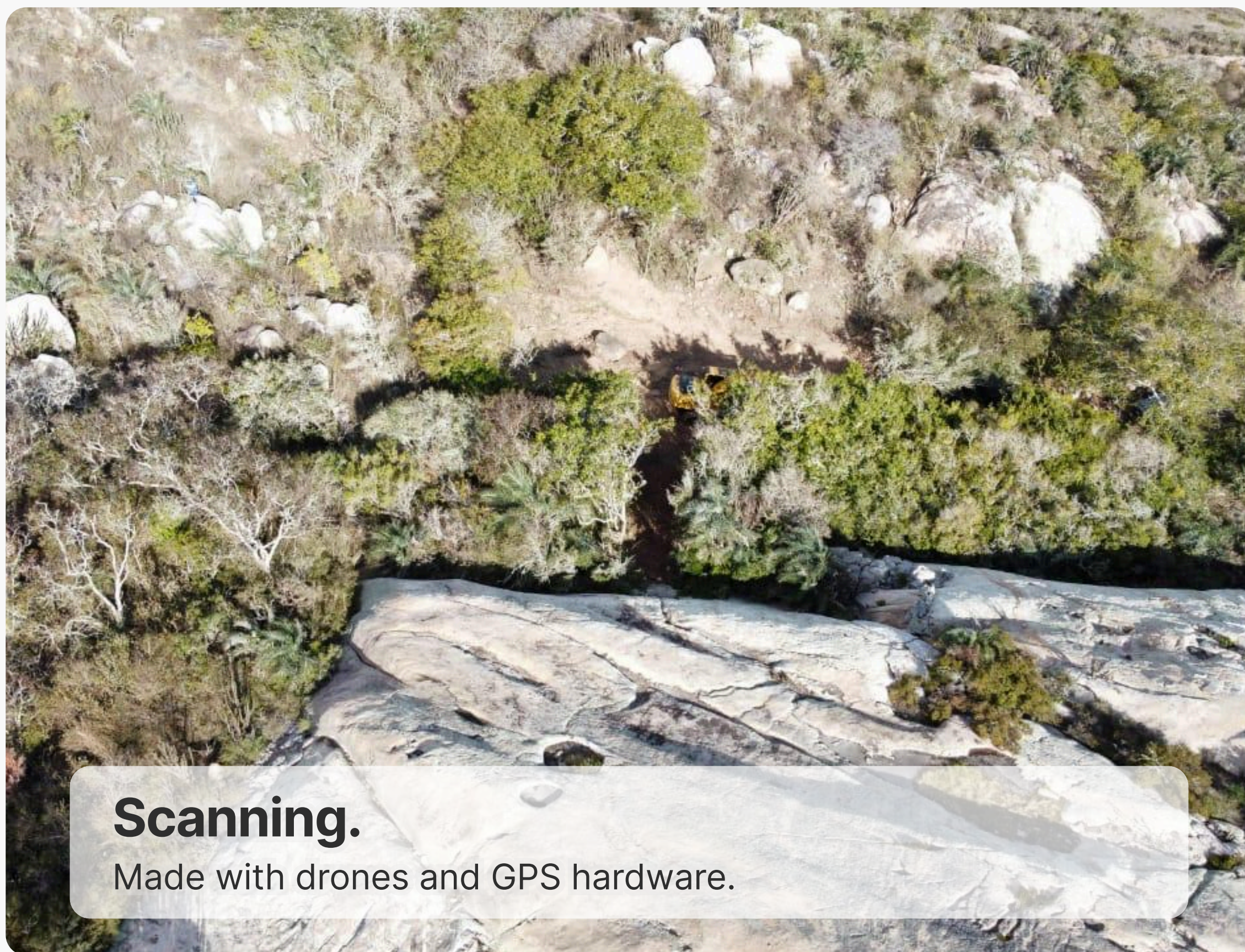
One cubic meter setting.

Following DAP directives.

Access opening.

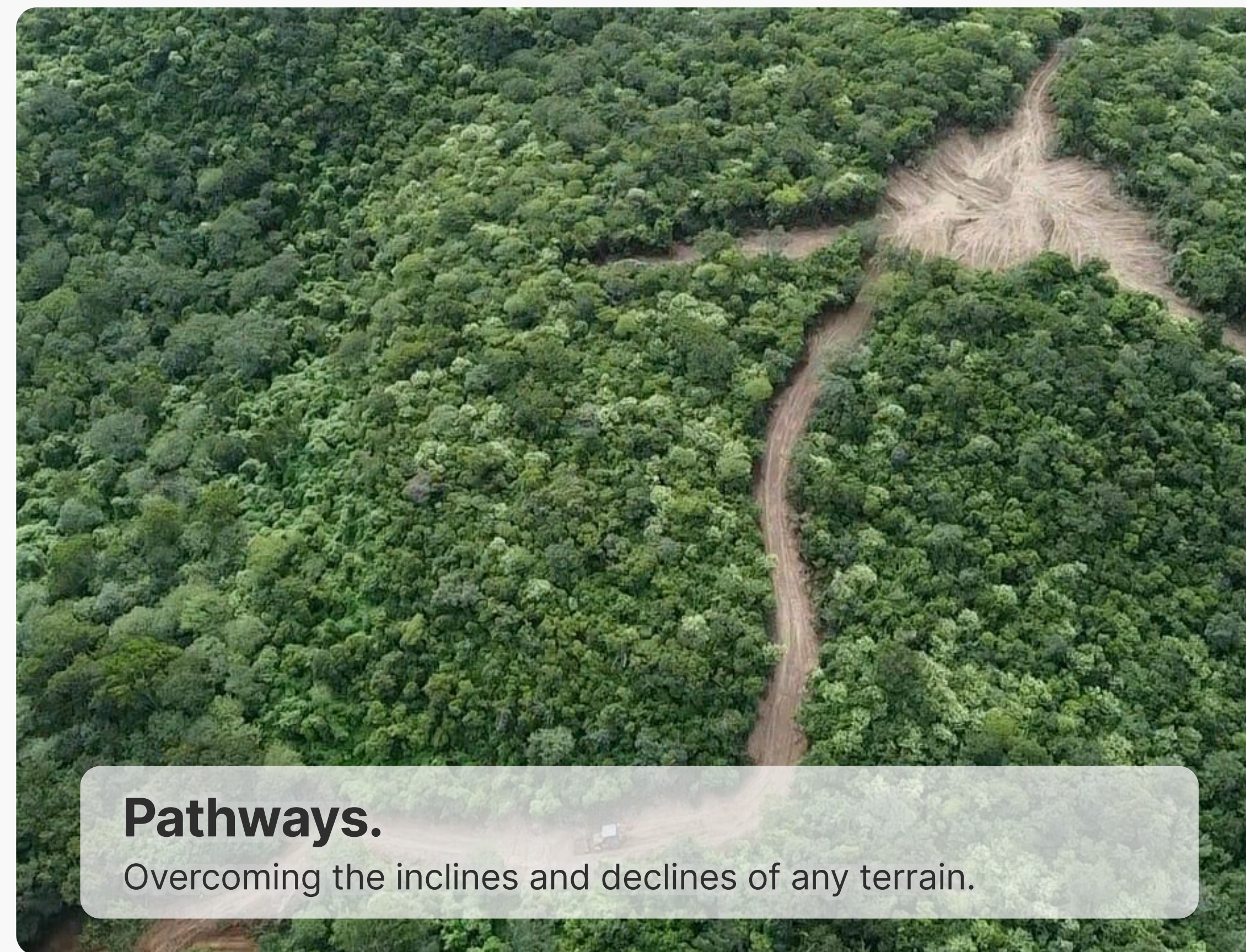


Access Opening.



Scanning.

Made with drones and GPS hardware.



Pathways.

Overcoming the inclines and declines of any terrain.

Our Competitive Edge



Dedicated team

Our expertise in tower maintenance allows the planning of access that ease not only the building but the upcoming maintenance of installed equipments.

Remote Area Logistics

Operational knowledge in attending hard reaching locations throughout the country.

Rigorous and Safety requirements

Strict environmental norms and work safety directives fulfilment.

Anemometric Tower Set Up and Maintenance Service

1. Implementation logistics and Planning ahead

- Siting: GPS precise installing spot, granting the tower have a trustworthy representation of that area Eolic energy generation potential.
- Access Logistics: Team and materials mobilization towards hard reaching, remote locations topography.
- Foundation and Anchoring: Concrete foundations and anchored stays instalment, dimensioned due to soil type and tower height

2. Structural Assemblance (Work in Heights)

- Safe hoisting: Truss structure modular assemblance following strict safety protocols (NR-35).
- Verticality and Alignment: Precision levels and theodolite usage to ensure tower isn't unaligned thus interfering with sensor measurements.
- Lightning rod and signage: Atmospheric Discharge Protection System (SPDA) and spatial lights and signs (following COMAER rules) set ups.

3. Instrumenting and Commissioning

- Sensors set up: Anemometers positioning, wind vanes, thermometers, barometers, hygrometers among different heights.
- Data Logger: Set up and coding of tower "brain", granting data recording and dispatch (via satellite or cellular networks).
- Certified Assemble: Final check-up of arms and supports to avoid tower shadow influence in measurements.

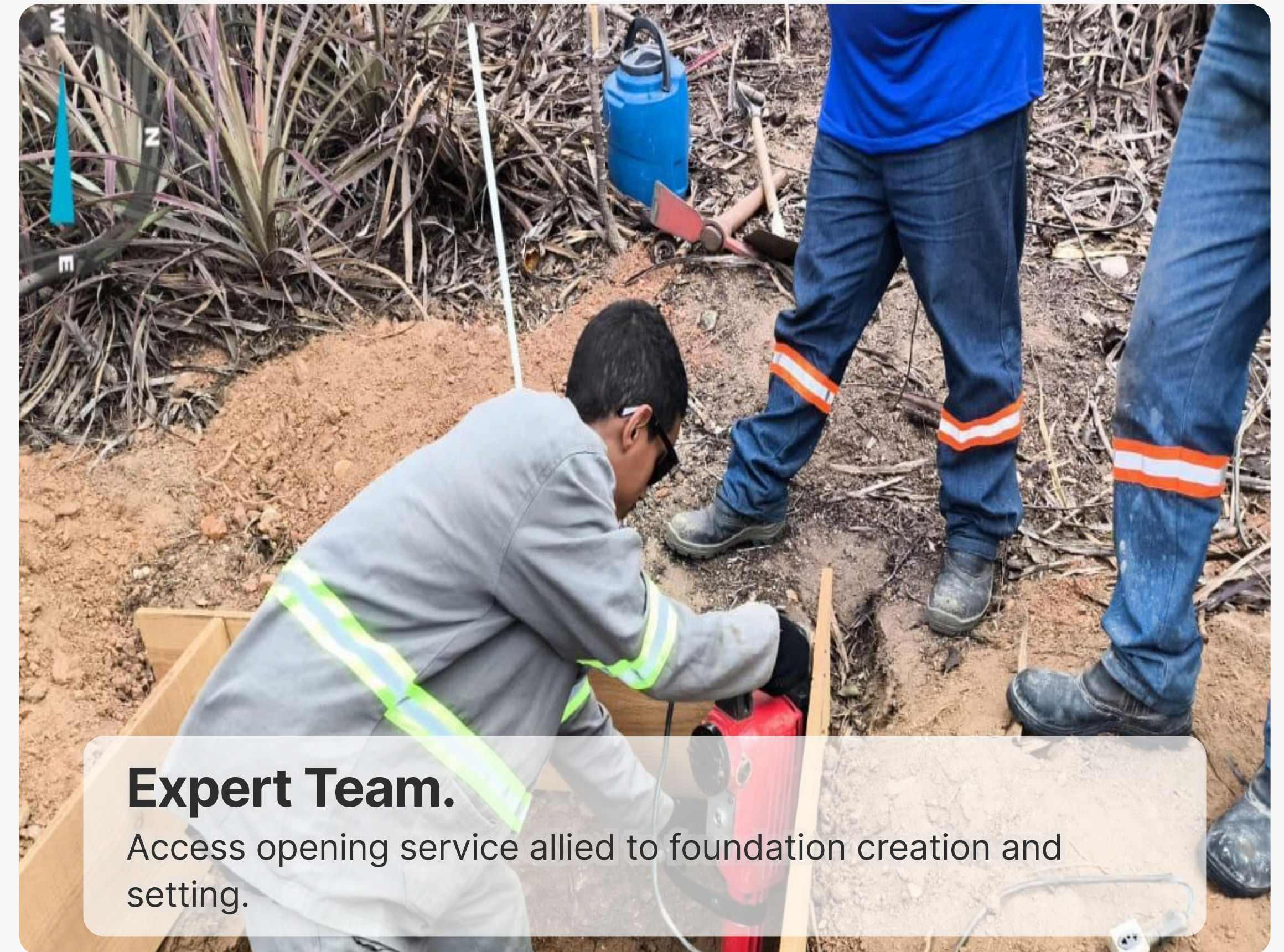
4. Preventive and Corrective Maintenance

- Tensioning and Tightening: Periodical check of stay cables tension and bolts.
- Integrity check: Corrosion, oxidation and paint state check.
- Sensor fine tuning and exchange: Programmed substitution of anemometric bearings or damaged sensors due to weather conditions.
- Solar Systems Cleanse: Measurement system photovoltaic panels maintenance.

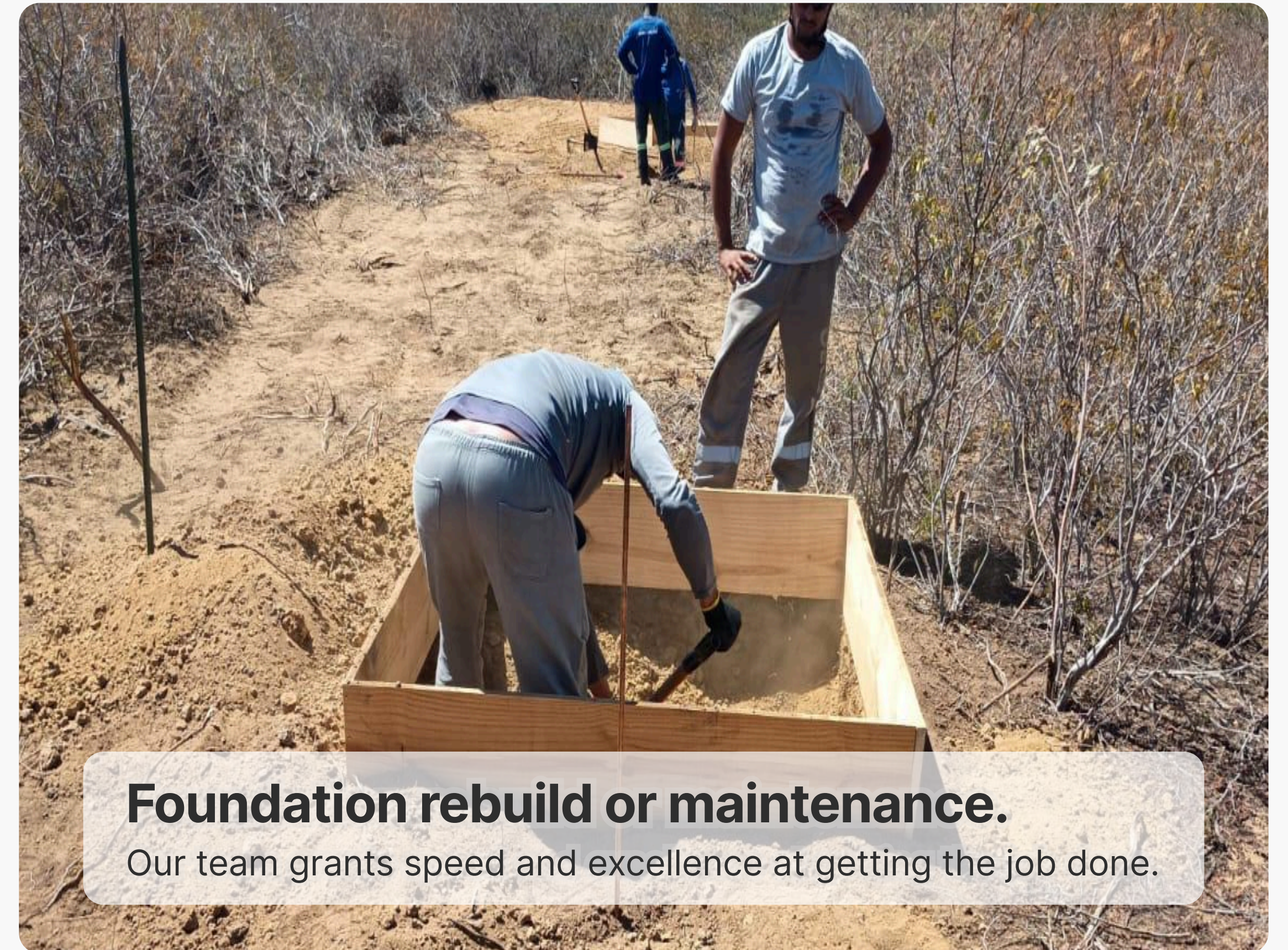
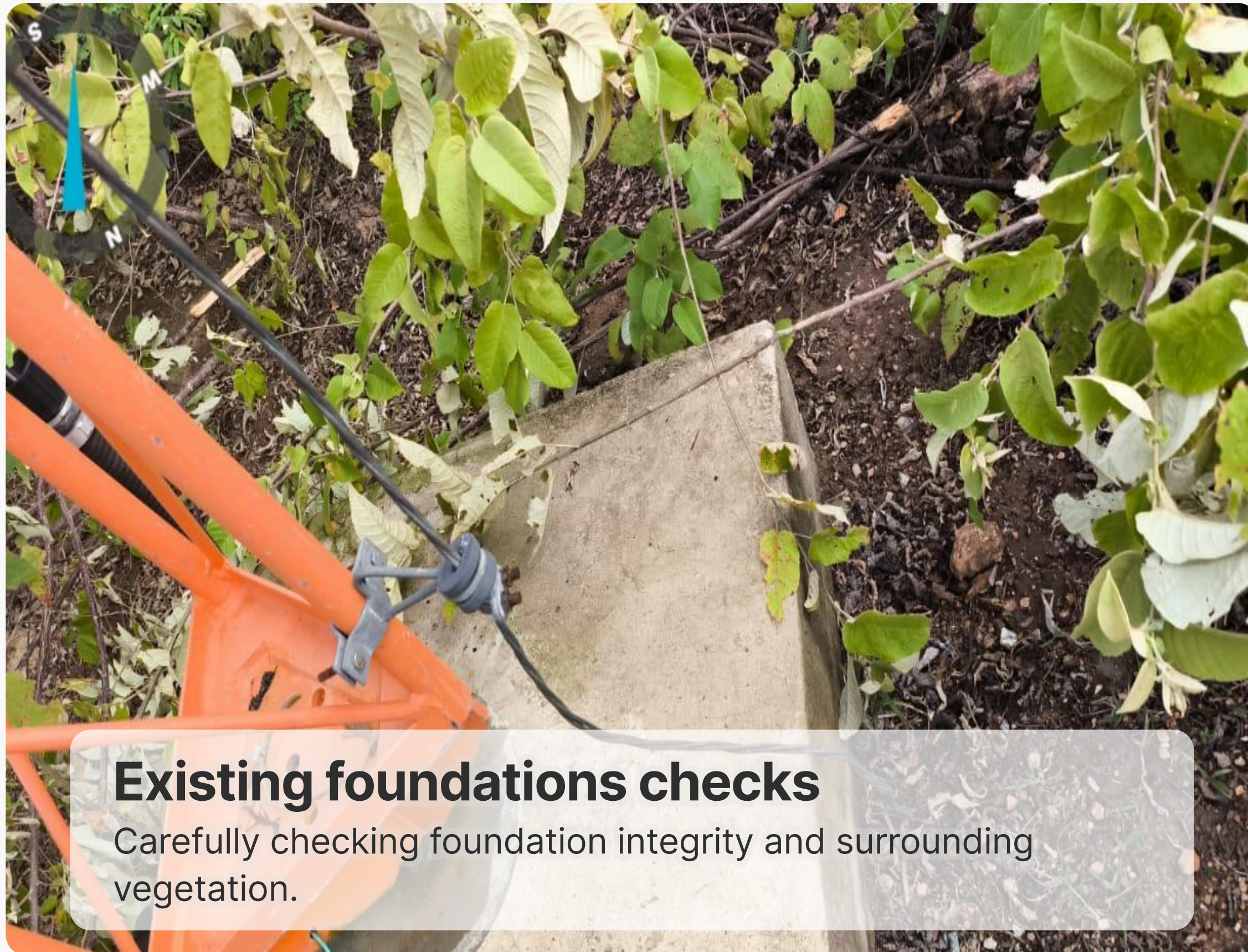
Anemometric Tower Aet Up



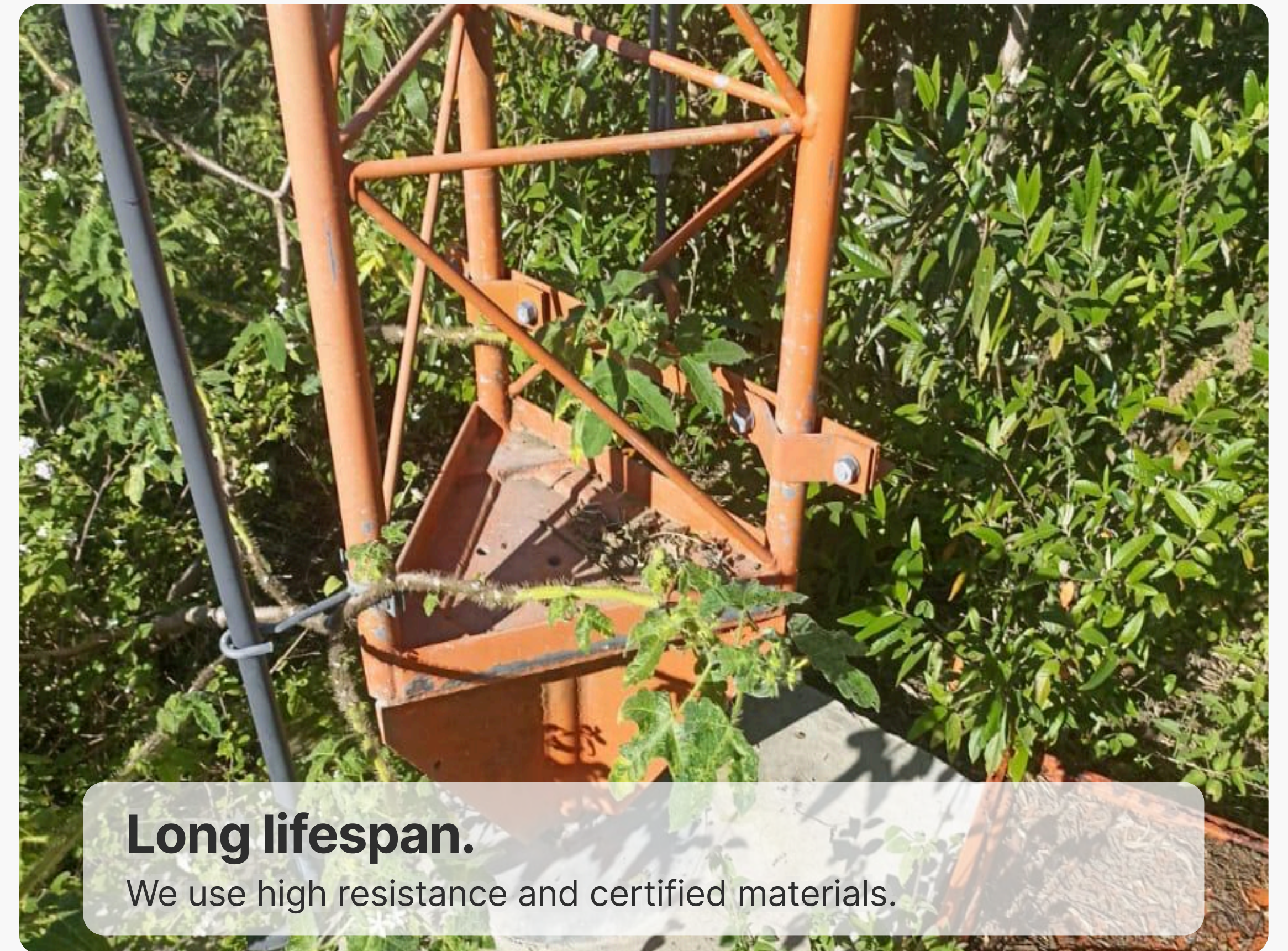
Anemometric Tower Set Up.



Anemometric Tower Maintenance.



Anemometric Tower Maintenance



Our Competitive Edge



Service Verticalization

As experts in metallic structure maintenance, our meticulous inspections are able to find flaws that would be missed by other teams.

Emergency Swiftness

Quick moving to solve any transmission issue, minimizing data points loss.

Norms Compliance

NR-10 (Power Safety) and NR-35 (Work with heights, needed to enable work in industrial ceilings).

Solar Power Plant Maintenance

1. Preventive Care

- Panel technical cleaning: Dust, rust, birds excrement, pollution remnants removal to prevent any loss from shading. Our methods focus on preserving the glass integrity. Fixing structure retightening: Trackers inspection to assure wind and vibration don't influence in structure setting.
- Air Thermography: thermal cams (portables or drone cams) to identify modules and connections hotspots to provide fire prevention and module wear. Vegetation management: bush and grass control to avoid shading and heating issues

2. Predictive Maintenance (with data analysis)

- Remote monitoring: SCADA constant watch to detect instant generation losses.
- I-V Curve Analysis: Electrical tests to evaluate if module performance matches the manufacturer's warranty
- Invertors inspection: Filter cleaning, fans check and firmware update.

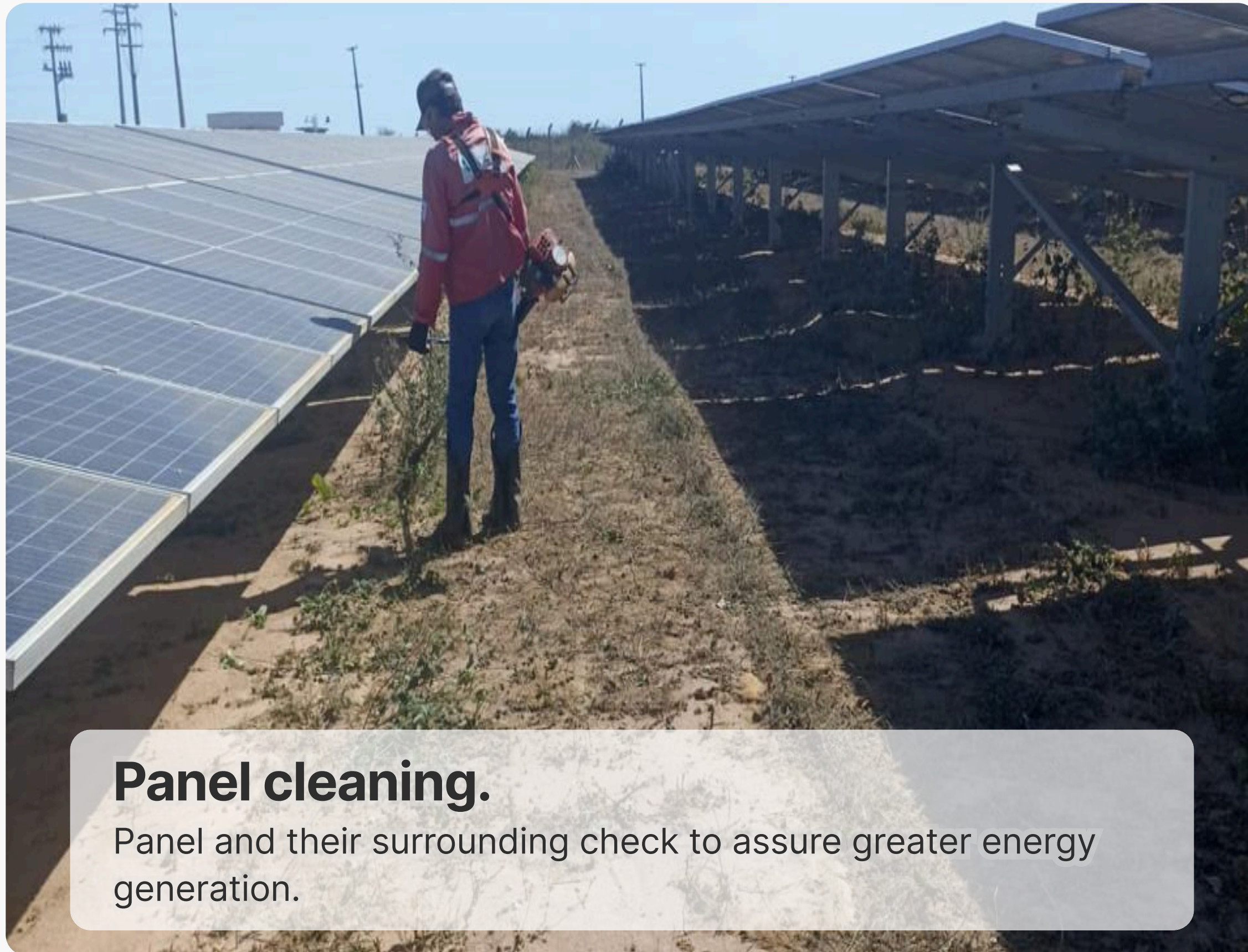
3. Corrective Repairs (quick fixes)

- Component renewal: Worn out modules, fuses, invertors and/or circuit breaker replacement
- Cable and connections repair: isolation rift fixing (energy arc) and MC4 damaged connectors replacement.
- Structural Recover: We work with expertise in metallic structures, mounting and corrosion affected foundations repair.

4. MV Substation maintenance

- Transformer inspection: Oil checking with chromatography analysis and isolation tests.
- Manutenção de Painéis de Média Tensão: Limpeza e teste de relés de proteção. MV Panels maintenance: Cleaning and protective relays testing

Solar power plant maintenance



Solar power plant maintenance



Our Competitive Edge



Safety culture.

NR-10 (Power Safety) and NR-35 (Work with heights, needed to enable work in industrial ceilings).

Multidisciplinary team.

Integrating professionals that are relatable from electrical parts to mechanical integrity of metallic structures

Technical appraisal.

Detailed report with performance indicators and improvement recommendations hand over.

Accomplished projects:

We have a ten year history. Last year, 2025, we achieved:

83

Vegetation suppression projects

97

Access opening projects

27

Tower set up projects

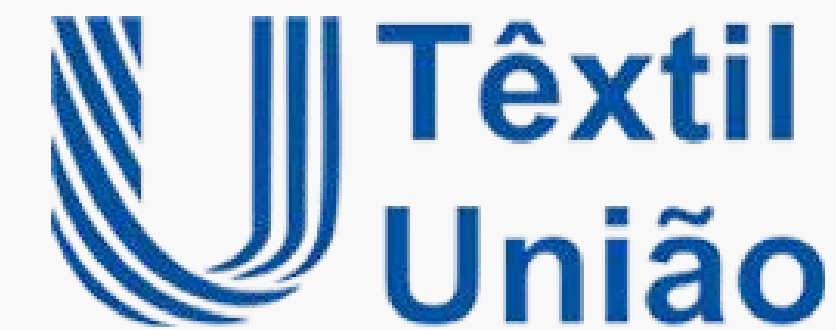
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Tower maintenance projects

55

Solar power plant maintenance projects

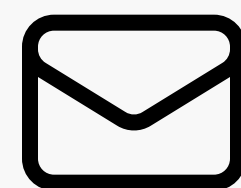
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85 98198 6388



comercial@lnfpimentel.com.br



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