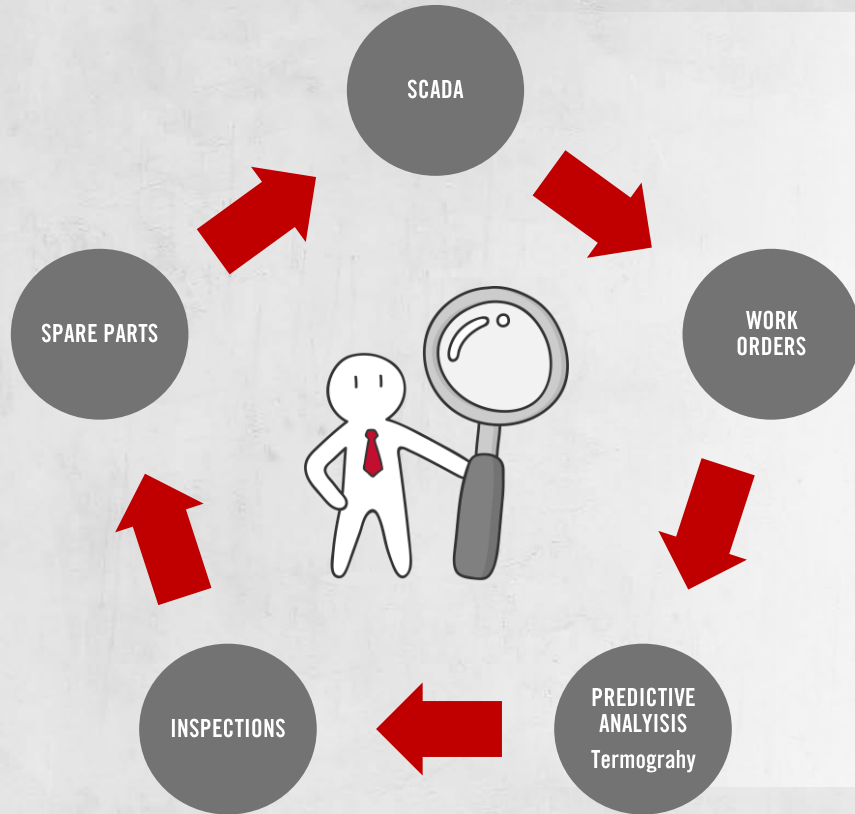


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WHAT IS O&M BIG DATA?



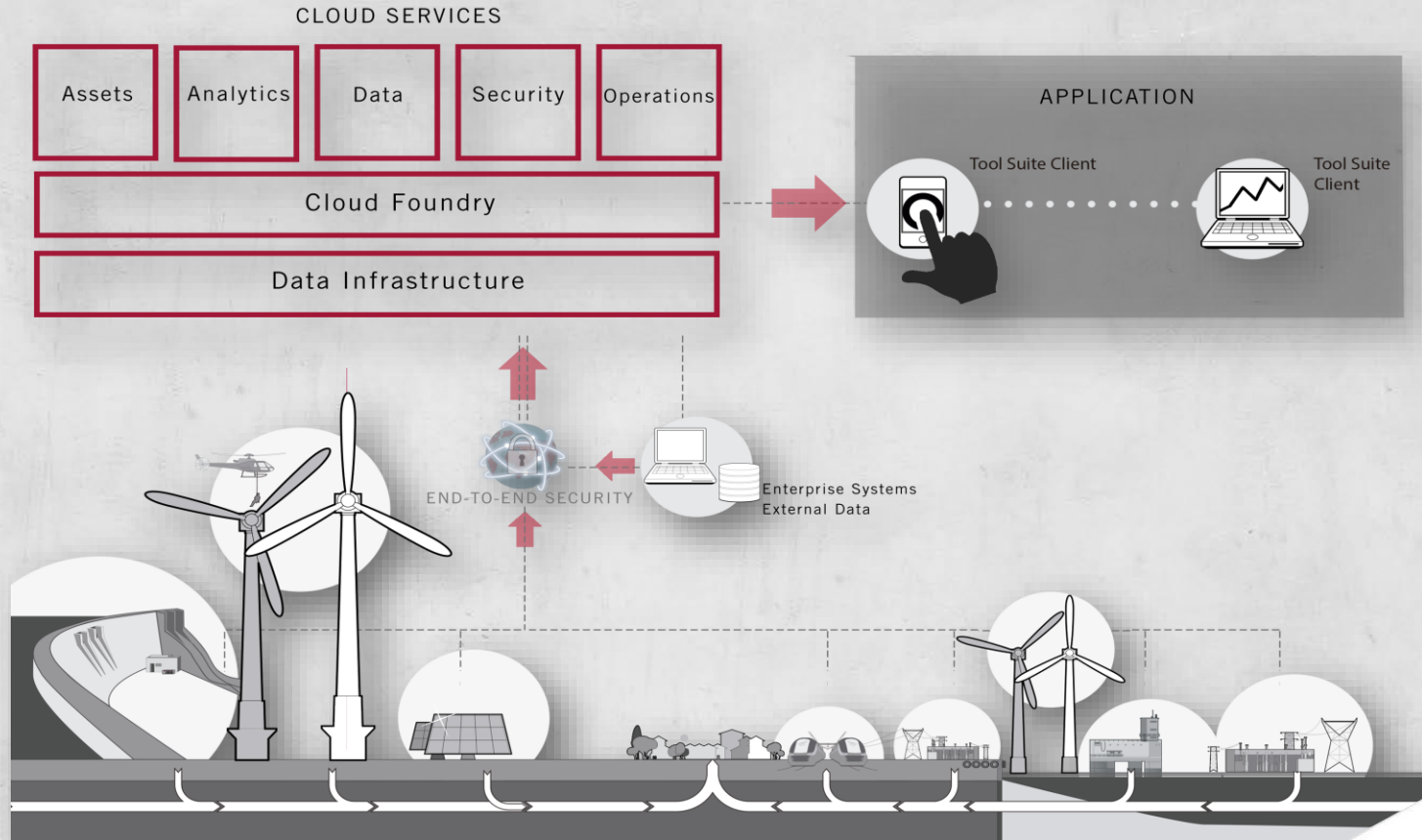
MANY DIFFERENT DATA SOURCES

- ▶ Different scada technologies
- ▶ Different work orders format (excel, cmms,...)
- ▶ Spare partes information
- ▶ Inspections reports from different providers and technologies
- ▶ Different predictive tools

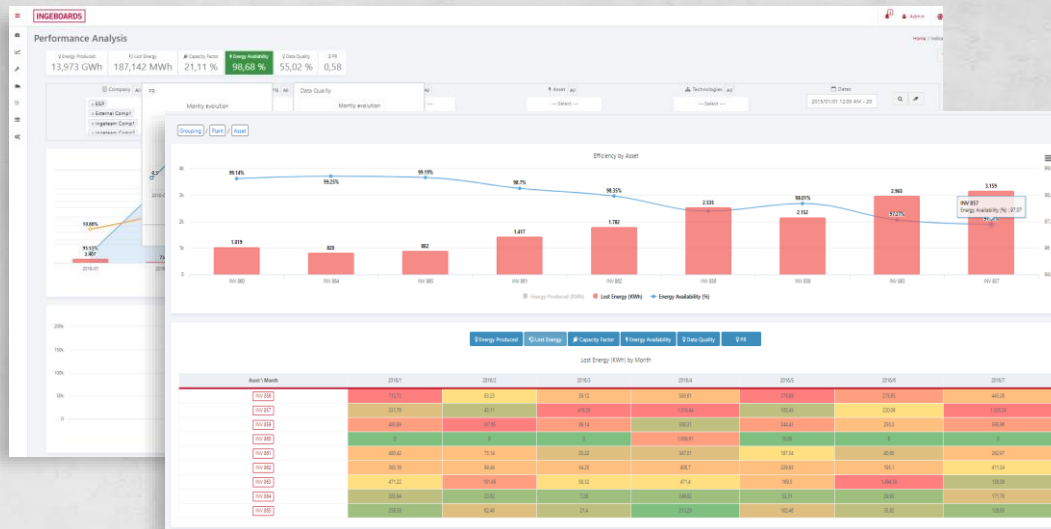


HIGH NUMBER OF PV PLANTAS

BIG DATA SOFTWARE PLATAFORM



SCADA DATA ANALYSIS



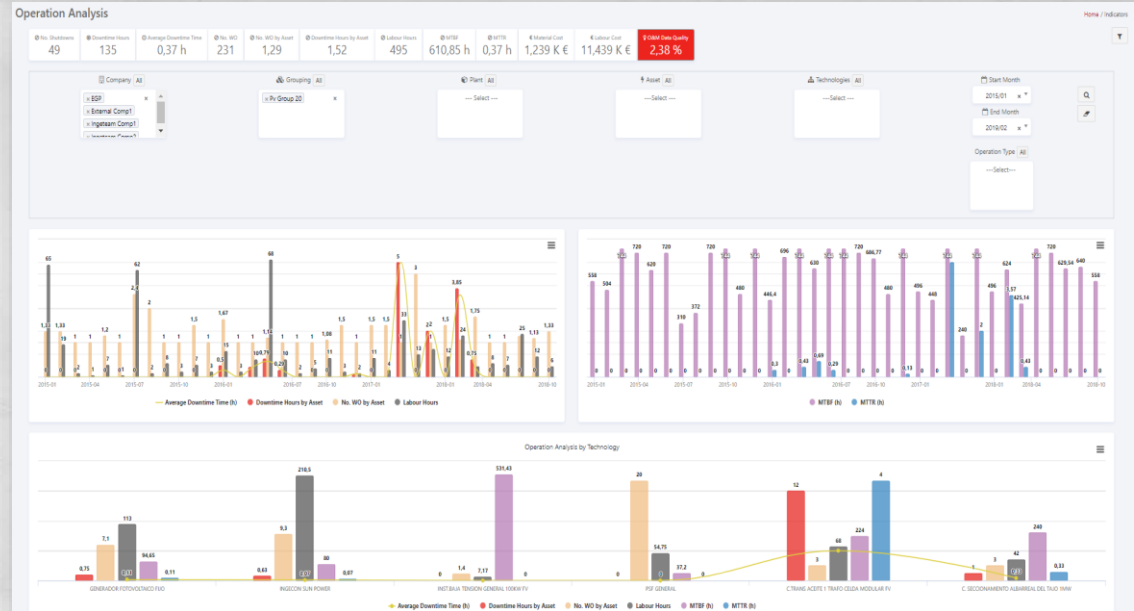
- ▶ Energy Produced
- ▶ Energy Availability
- ▶ PR
- ▶ Efficiency by PV Inverter Technology
- ▶ Efficiency by Asset
- ▶ Other KPI's

SCADA DATA ANALYSIS... ENOUGH?



CMMS Data OPERATIONAL ANALYSIS

- ▶ O&M Data Quality
- ▶ No. WO
- ▶ MTBF
- ▶ MTTR
- ▶ OPEX Costs
- ▶ Spare Parts Costs
- ▶ Labour Hours Costs
- ▶ PV Technology Analysis
(Transformer, Inverter, Solar Field,...)
by number of work orders, MTBF,
MTTR..

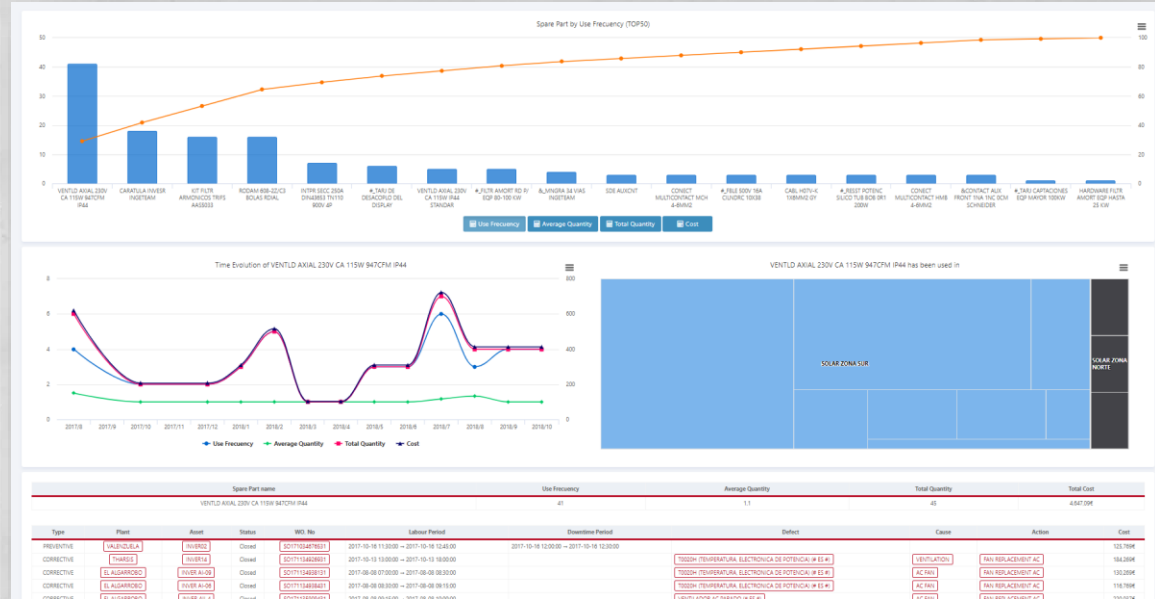


CMMS Data FAILURE ANALYSIS

- RCA
- Operation
- Spare Parts
- Technicians
- When?
- Where?
- Work Orders

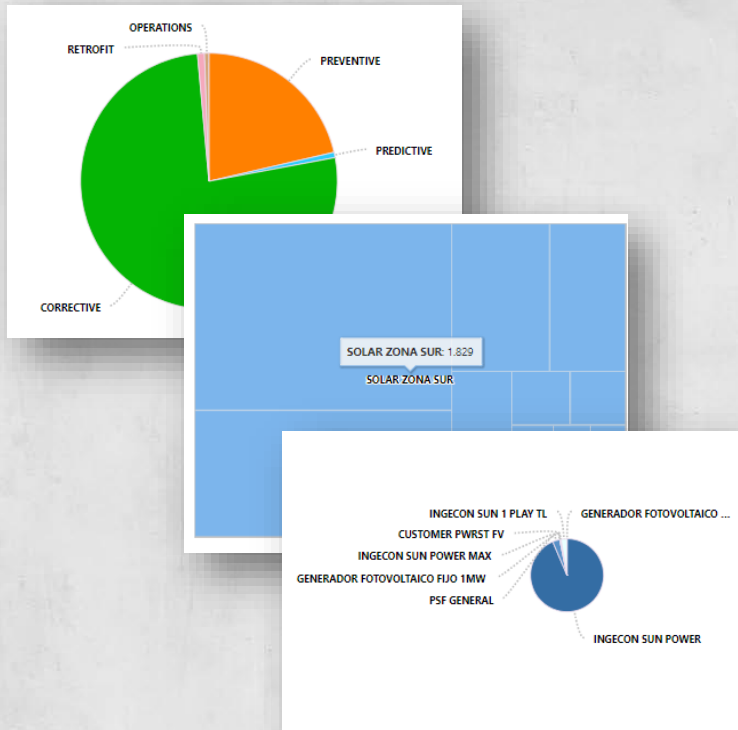


CMMS Data SPARE PARTS ANALYSIS



- Spare Parts (Use frequency, Average, Total Quantity, Cost)
- When?
- Where?
- Work Orders

CMMS Data TECHNICIANS / PROVIDERS ANALYSIS



► Task Type

► Experience

► Work Orders

BULLET POINTS

CMMS Data Analysis IS A MUST

► SCADA Data Analysis

O&M Data Quality



Reduce LCOE
Improve Profitability



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