

# SCADA**Scope**

## Go Beyond the OEM



**AP RENEWABLES**

Client

**Client name**

Date

**May 17 2023**

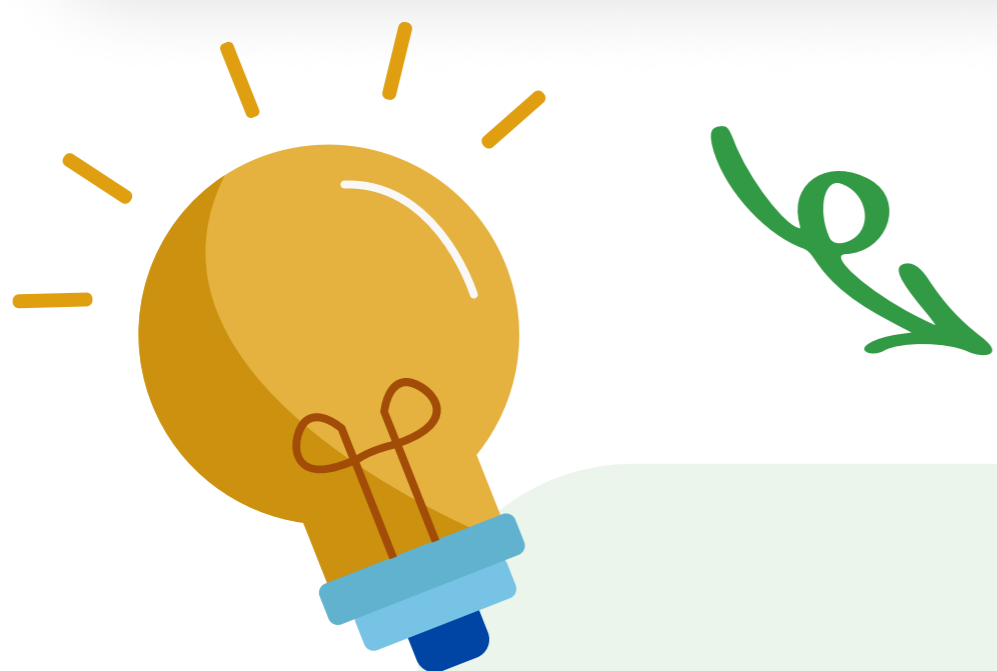
# Is your asset data lost in translation?

Our decade of experience helping owners and operators optimize their P&L proves

Most owners wish to have better diagnostics to help them plan repair and minimize revisits

Training new technicians takes months, because the OEM tools do not help a new technician know where to start and build on it.

Owners are lacking access to data the OEM has when it comes to root cause analysis and warranty claims



It's time to  
**Go Beyond the OEM**

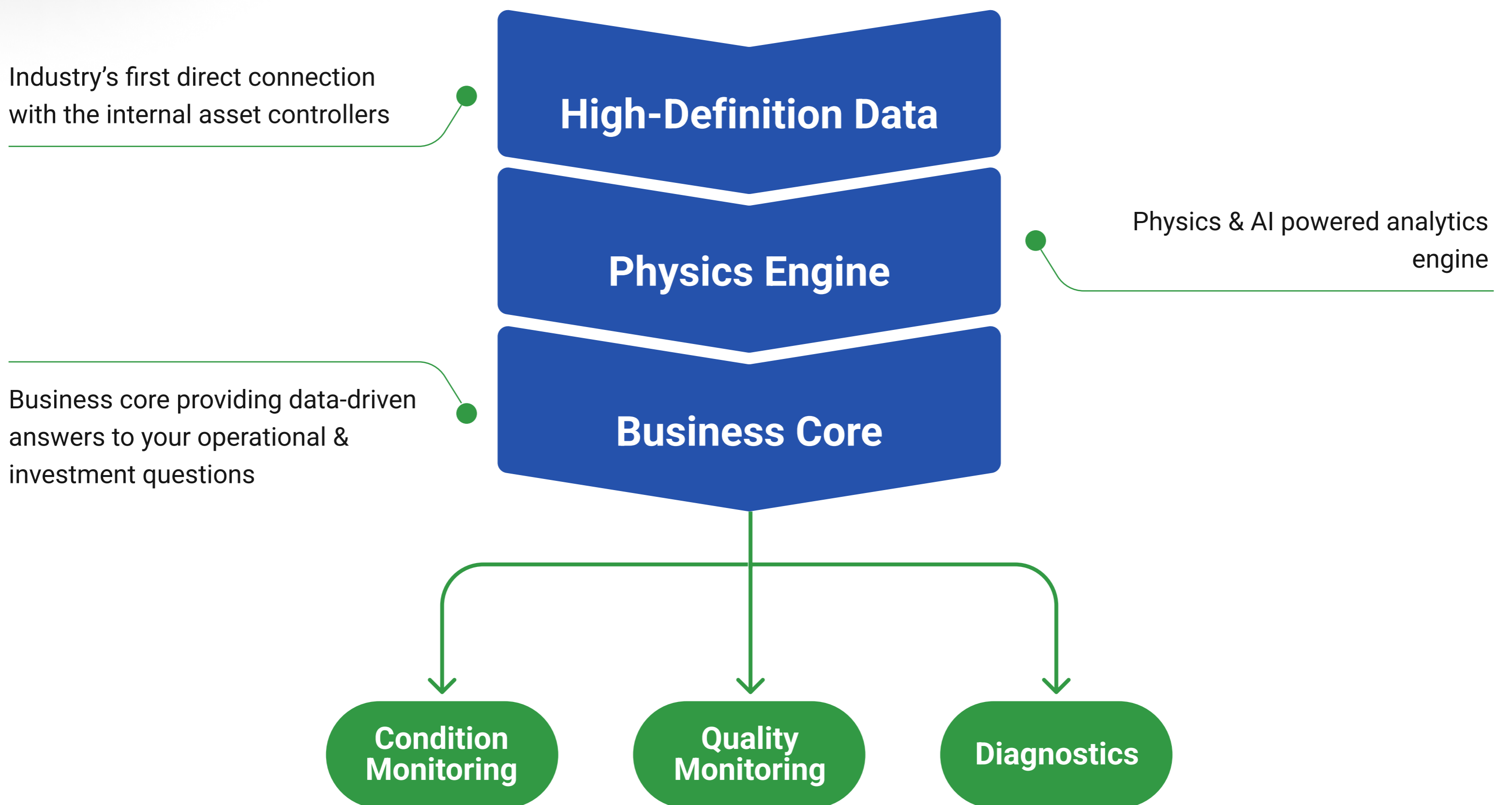


SCADA<sup>Scope</sup>™ is the industry's first modular data platform with direct asset connection & integrated business core to help you

## Go Beyond the OEM



SCADA<sup>Scope</sup>™ is a 3-layer modular platform:



SCADA<sup>Scope</sup>™ toolsets and reporting allows operators and executives to address **key challenges** in operating renewable assets when it's time to **Go Beyond the OEM**



**Fix the  
First Time**



**Build  
Skills**



**Your Asset,  
Your Data**



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# Fix the First Time



**Lack of clear diagnostics** information from the asset leads to **lengthy repairs & multiple visits** to the same asset for **the same problem**. Owner operators report:

- Many revisits to the turbine to fix the same problem
- Undue downtime, AEP & labour because of the revisits
- Excessive resets & asset stress
- Prolong MTTR
- Reduced MTBF

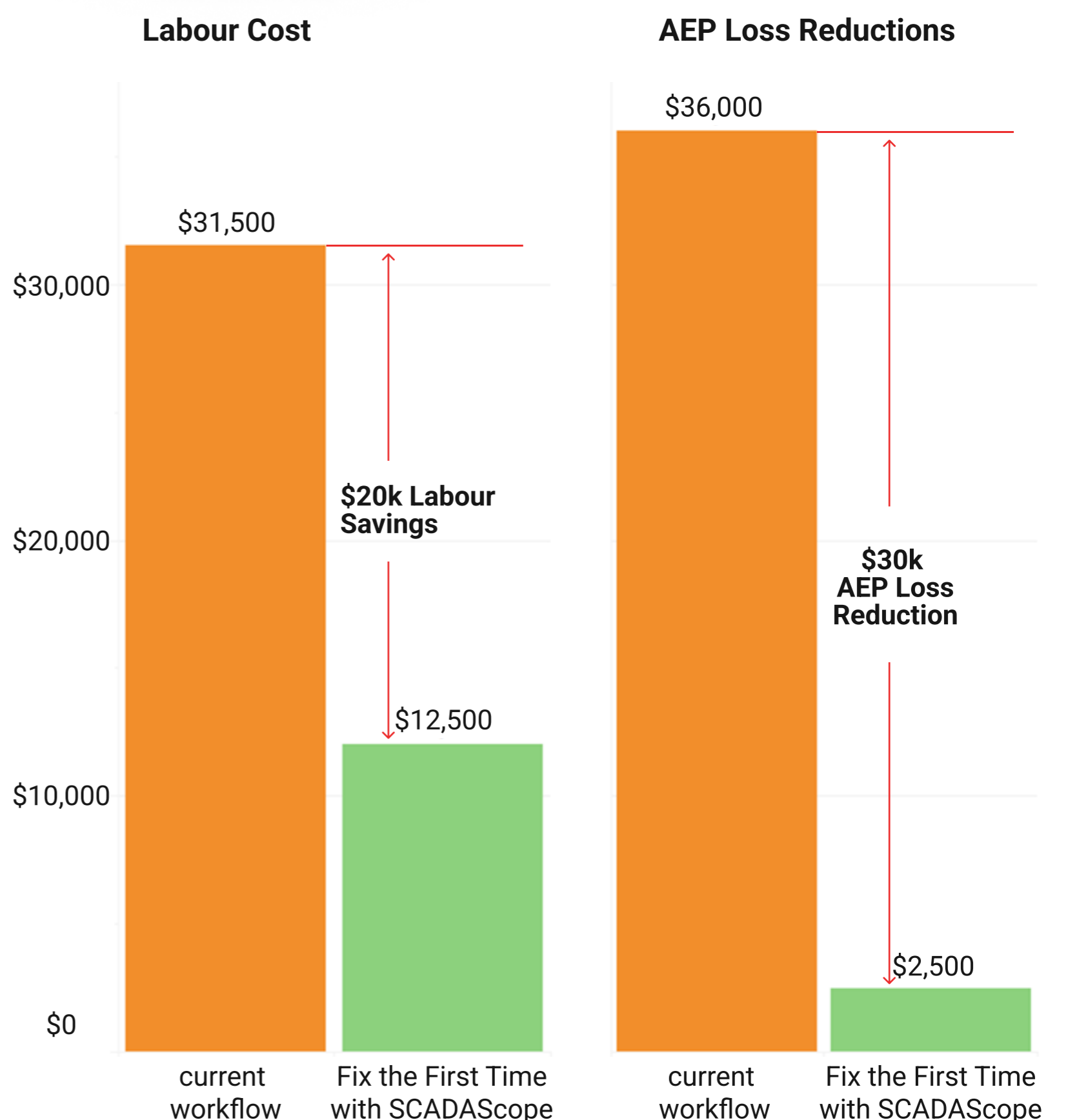


**SCADA Scope™** shines light on the real root cause & accelerates the troubleshooting by:

- Showing the exact PLC & CCU signals in real-time (fault oscilloscope)
- Suggesting list of signals based on the alarm
- Guiding the techs with causes & eliminations
- Providing a graphical sequence of root causes & effects



Fix the First Time with SCADA Scope™ improves P&L by **\$50,000** just on chronic pitch problems in a single year (average 100 WTGs US wind farm)



# Build Skills



**Out of date diagnostics tools impede learning** for new talent & **frustrate** experienced techs.

Industry statistics indicate:

- Up to a year to ramp up new techs
- Scheduling problems because only a select few could troubleshoot
- Limited visibility on quality
- Frustration in experienced techs because they "have to do everything"
- Lack of data causing part-swapping & guessing



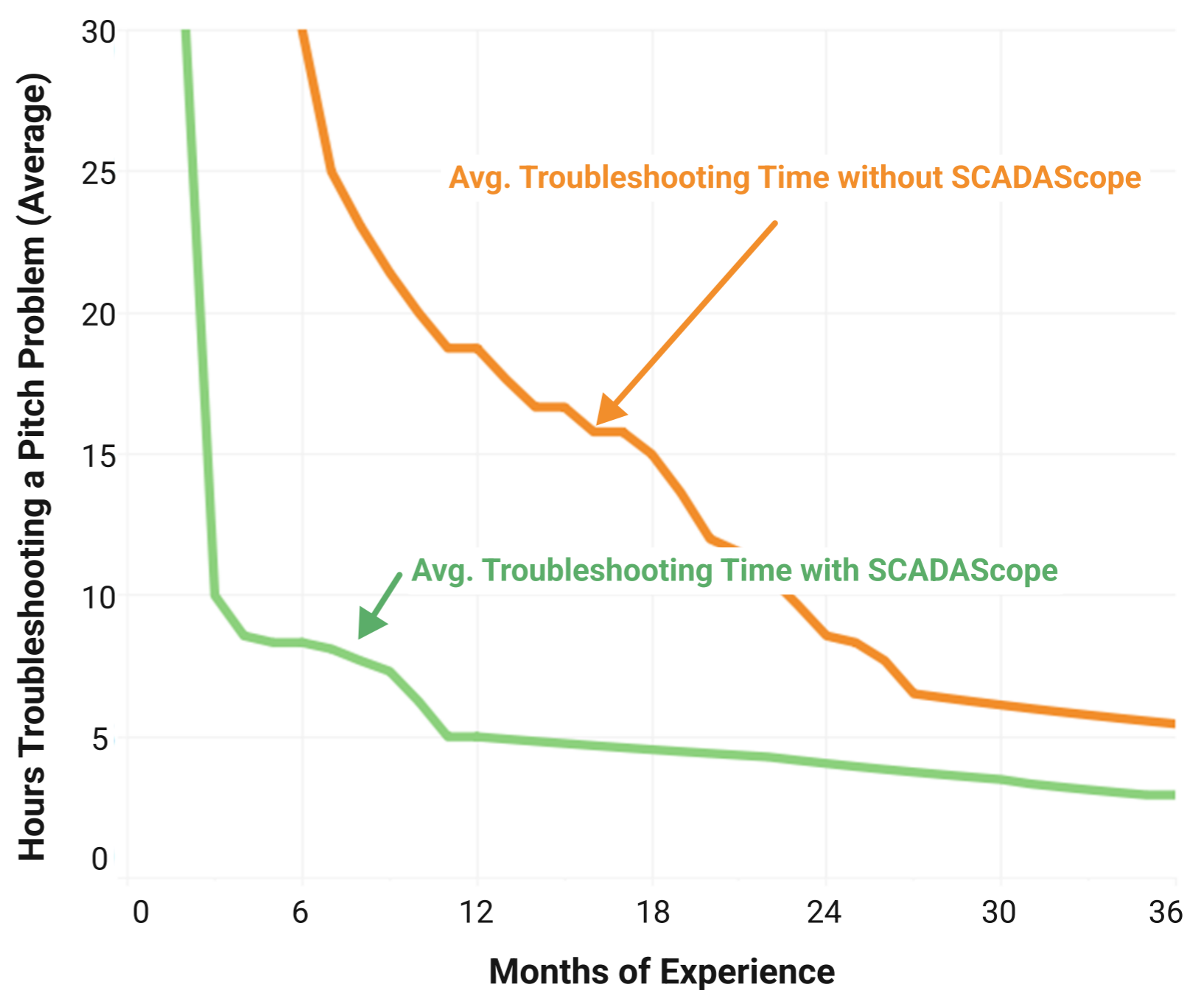
**SCADA<sup>Scope</sup>™ scaffolds new techs to ramp up earlier & build skills by having remote collaboration & improves work condition for experienced techs.** Data assisted troubleshooting enables:

- New techs to receive remote help & gain experience
- Quality monitoring and soft inspections
- Identifying the root causes & the effects
- Senior techs to avoid fatigue by troubleshooting remotely
- Cross-training



A new tech average time for pitch problems (MTTR) improves faster with SCADA<sup>Scope</sup>™ compared to traditional training. After 3 months a new tech with SCADA<sup>Scope</sup> could solve a problem as fast as a tech with 21 months of experience without the right tools.

**Avg. Pitch Repair Duration for a new technician**



# Your Asset, Your Data



The OEMs **restrict access** to the rich diagnostics & predictive data **already present** in the assets, impeding analysis & **forcing owners to spend on** additional hardware & software. Many operators report loss of business advantage because of:

No access to fault data for troubleshooting

No internal CMS on blades & other major components

OEM control of the data for warranty claims against the OEM

Unreliable basic SCADA data (e.g. alarms, availability)

Additional OEM costs to access their data



**SCADA Scope™** is a direct link to the computers inside assets to capture high definition data for diagnostics and condition monitoring beyond OEM options. Jailbreak your asset to:

Get real-time data at high-speed bypassing OEM SCADA

Collect fault data from converter, generator, transformer & substation

Monitor condition of blades, mainshaft & gearbox

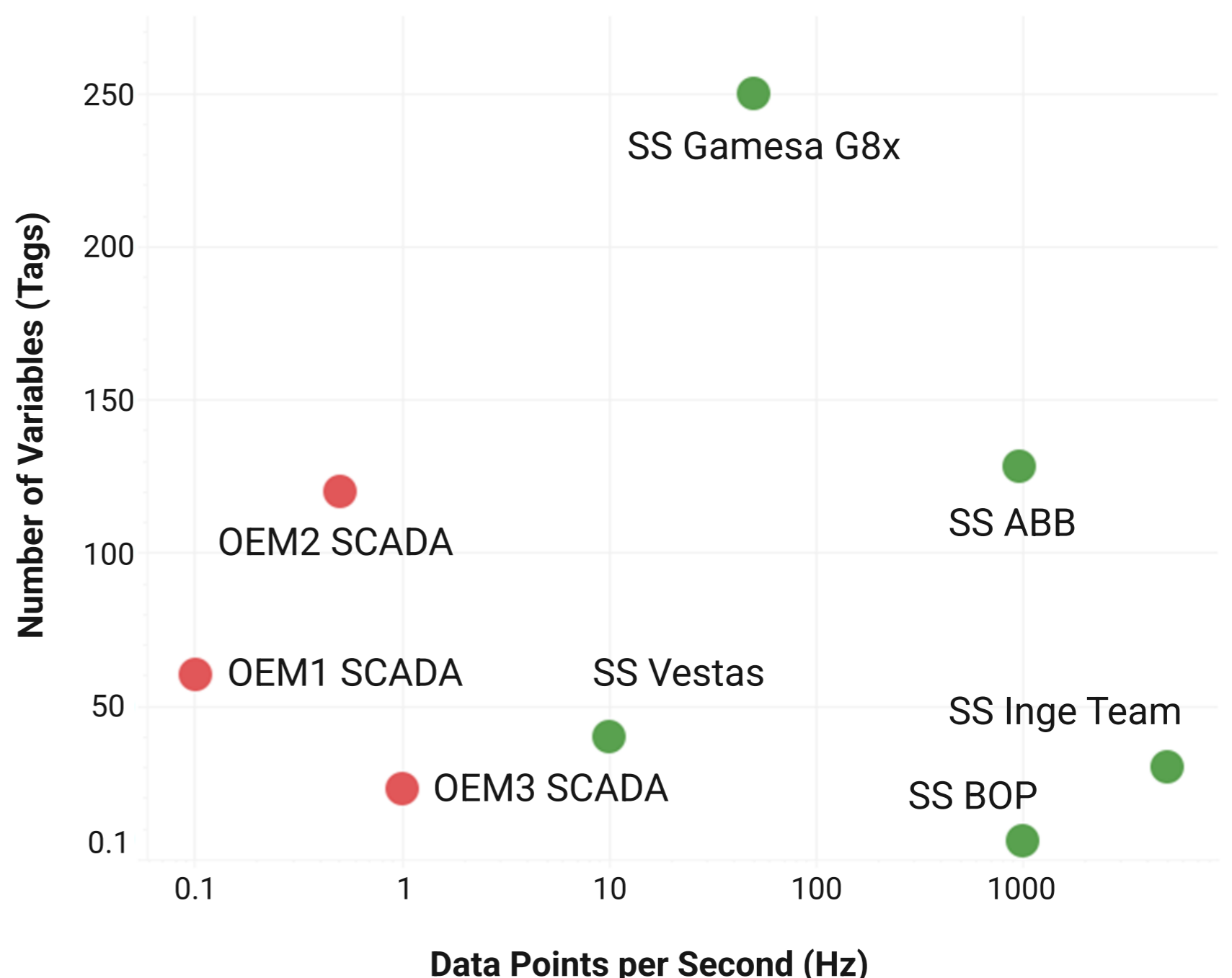
Have reliable communications

Accelerate converter troubleshooting



SCADA Scope™ family offers more data at much higher sampling rate (resolution) that enables troubleshooting and condition monitoring that are not possible with OEM SCADAs

Data Quality Comparison



# Ask for a live demo of SCADAScope™ to see how you could ...

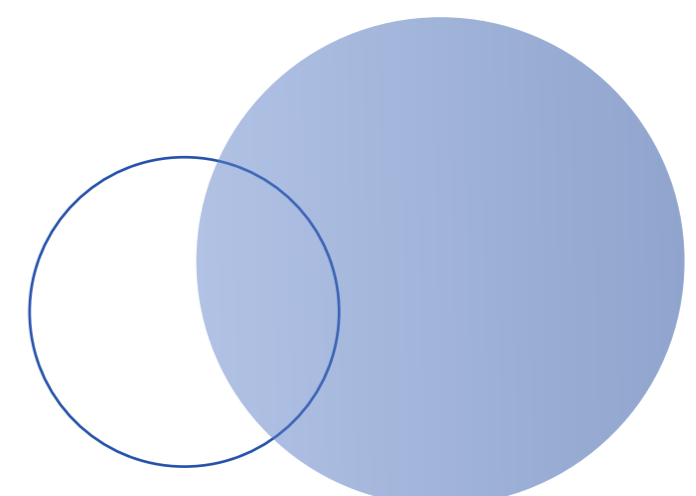


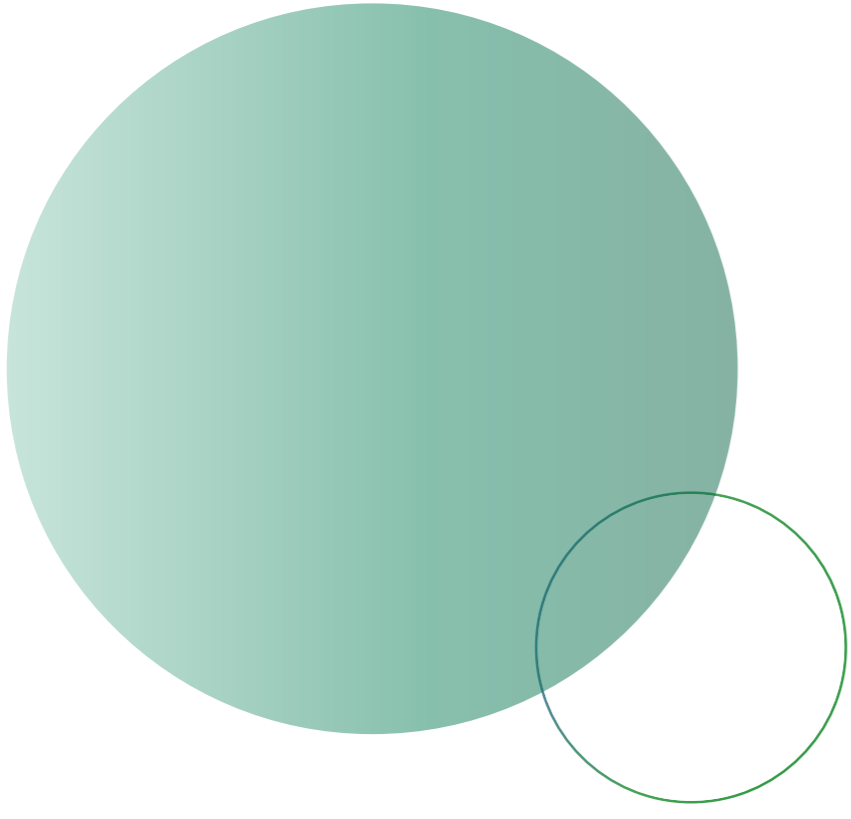
Encourage **Fix the First Time** culture to extended runtime (MTBF), shorten repairs (MTTR) and reduce the impact of revisits and part-swapping on your P&L budget with projected \$50k gains annually on just pitch problems.

**Build skills** by giving the right tools to experienced techs to support remotely and scaffold new technicians to start troubleshooting in as early as 4 weeks.



**Unlock your data from your asset** to get the best intelligence for your daily operations, root cause investigations and warranty claims without investing in new hardware or subscriptions from the OEM and get access to your data from your asset.





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