



# Customer Success for Medical Devices – Ventilators

Find out how we're helping Life Sciences companies launch the best products on the market – and meet their technical and compliance goals.



# Project Challenges



## Life Sciences

- Create a **common functional test platform** to handle multiple models of ventilators and subassemblies
- **Ensure backward compatibility** with past testers and products/subassemblies
- **Enhance and update** existing fixture designs
- **Create new fixture designs** and software for upcoming models (NPI) for Europe and Asia
- **Accelerate test time** and debug time
- **V&V for all testers/fixtures**
- Provide full documentation, to meet **IQ/OQ/PQ**



# The Averka Solution



Life Sciences

## THE AVERNA SOLUTION

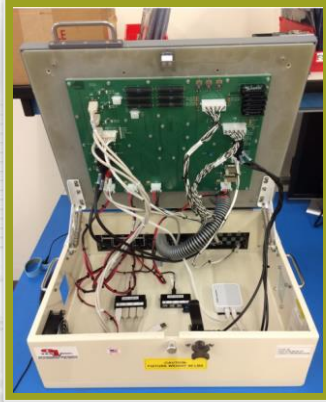
- Standard rack with mass interconnect to handle **multiple fixtures**
- Self-test diagnostic fixture to “**test the tester**”
- **Swappable, smart fixtures**
- UPS, PXI instruments, barcode scanning, removable side panels
- **Safety features** (e-Stops, warning lights, etc.)
- **Automated test sequencing** and simple user prompts
- Compressed **air hookups used to pull down the DUT** to the fixture, dramatically lowering noise during manufacturing



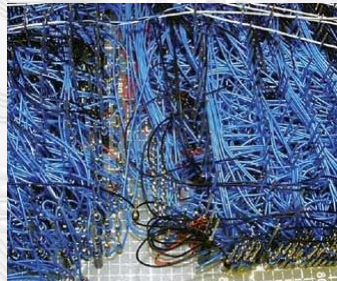
# Enhanced Fixture Design



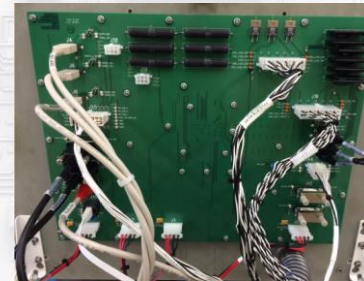
Life Sciences



- **Minimizes risk of manufacturing errors** and simplifies troubleshooting
- Backward and forward compatibility
  - Form/fit/function compatible with existing fixtures and DUTs, and future proofed for new platform
- Design rules created for PCB interface
  - Requiring filtering on the power to the DUT, buffering circuits to protect the DUT and ATE instruments



Past Design: Wire Wrap



Averna's Enhanced "Clean" Design

# Project Results & Benefits



## Life Sciences

Accelerated critical  
**New Product  
Introduction (NPI)**

**Fully automated  
testing** of all  
subassemblies

Test results stored  
for **advanced  
analytics**

**Elimination of test  
result variability  
and human errors**

Reduced test time  
from 2 hours **down  
to 5 minutes per  
unit**

Required  
documentation for  
**IQ/OQ/PQ**  
produced in less  
than half the time