



Believe • Achieve • Succeed

HVAC

Current Situation

- Initial construction utilized proprietary equipment
- The company has since went out of business
- Now being 17 years old, many issues have been identified
- We currently work with Gardiner
- Currently have limited controls
 - Numerous thermostats are broken, cannot replace
 - High School cafetorium “reads” 233 degrees
 - VAV (Variable Air Volume) was offline, causing the gym to heat up
 - Had to have a service call to identify and locate tripped breaker

The Way Forward

- Initially the request was for training on computer interface
- Conducted numerous meetings with Gardiner
- Gardiner conducted a evaluation from previous year utilities
- Spending \$500k+ for 4.4m kilowatt hours @ \$.11hr
- \$.11 /kWh is currently same as residential
- Identified that entire district is single meter
- No means to identify which building trending high usage
- Multiphase approach (Retrofit / Operational)
 - High School as test bed, move on to MS...
 - Fold 1 (Retrofit)
 - Remove and Replace all proprietary equipment with open platform equipment
 - Upgrade subsidiary controllers / downstream hardware
 - Gardiner is currently working with Colonel Crawford with similar issues (just in the reverse)
 - Fold 2 (Operational)
 - Introduction of Applied Intelligence
 - Allow Engineers (Gardiner) more access to assess, tweak, & monitor
 - Tech Support 24-7