PTISolutions
Predictive Technology, Inc.

PROJECT ROADMAP

CASE STUDY

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It can be tough to understand every in-and-out of your critical facility. Knowing when to service vs replace, understanding every metric in your facility, and having a turnkey partner can be an invaluable asset to your organization.

In this case study, the problems, solutions, and recommendations will fit most small to mid-sized businesses and can help determine the next steps for your organization.

STEP 1: ANALYSIS

The first step is analyzing the health of your critical facility. We start with a site visit by one of our skilled service technicians. While on site, our team will discuss current systems, performance, needs, and goals.

To analyze your current critical facility, ask yourself the following questions:

1. Am I confident in the performance of my system?
2. Do I know how much load is on each of my UPS?
3. Do I need to add anything else to my existing UPS?
4. Do I know how much runtime I have?
5. Do I know how old my batteries are?
6. What specific goals do we have?
7. Have we performed preventative maintenance on any of our critical equipment in the last year?
8. Have you had any downtime issues?

As you ask these questions, you will gain a broader understanding of your critical facility. It is recommended to review these questions quarterly to ensure your system is operating at peak performance.

UPS (Uninterruptible Power Supply) = a device that supplies power to critical equipment during a power reduction or loss that allows your equipment to stay online.

END-OF-LIFE CHART

Equipment	Lifespan
UPS	10-15 years
Battery Backup	3-5 years
Generator	15-20 years

It is important you perform preventative maintenance on all your critical facility equipment to ensure you're not experiencing any end-of-life issues. It is critical that batteries lifespan aren't extended because batteries at end-of-life can bubble, overheat, catch fire, or explode.

STEP 2: WORK THROUGH SOLUTIONS

When discussing replacement items for a critical facility, it is not as easy as replacing A1 with A1B. We have to ensure the unit(s) we're replacing is being replaced by a unit that will perform the following functions:

- Meet the capacity/load they will be putting on the UPS
- Have enough backup battery to meet runtime requirements
- Match the amps that the circuit can handle
- Meet any voltage requirements specific to their facility
- Review inputs and outputs on units to ensure they are compatible

After reviewing each component, we determine which hardware to will work best in your facility.

CAPACITY CALCULATOR

Speaking of capacity, let's walk through a capacity exercise to ensure you're not overloading your equipment.

Capacity = the amount of space left on your UPS for additional items
Load = the amount of space you're currently using on your UPS

It is never recommended to exceed 80% load on your single-phase UPS. Here is how you calculate your load and determine your capacity.

_____ UPS WATTS x .80 = _____ LOAD

For Example, you have a 5kVA unit, so your max load should be 4,000 watts. 5,000 x .80 = 4,000

Most UPS will display the load/capacity on the front screen, make sure to check periodically to ensure you're not overloading it.

If you overload your UPS, you could experience:

- Shorter UPS lifespan
- Decreased runtime
- Potential power failures and drops

kVA = the volt amps or wattage of a unit
Runtime = the amount of time your UPS can run on battery

STEP 3: PROPOSE SOLUTIONS

Once all points have been verified, our team will propose the best solutions for your needs. With our proposal, we include resources, details, data, runtime, spec sheets, diagrams, and any other resources to help your organization understand the solutions we are proposing. As we move forward through the proposal process, there may be some additional information needed, below are some examples.

1. Would you like to discuss extended warranties?
2. Would you like to add preventative maintenance?
3. Do you need new PDU's? If so, what type?
    a. Basic, Metered, Monitored, or Switched?
        i. How many outputs do you need?
        ii. What kind of inputs?

Once we narrow some of these particulars down, we're ready to place the order!

TYPES OF PDU'S

Basic PDU's
Basic PDU's offer reliable power distribution to the cabinet to help manage power capacity and increase functionality. .

Metered PDU's
Metered PDU's allow you to measure power consumption at the outlet level to gain level 3 power usage effectiveness (PUE).

Monitored PDU's
Power monitoring PDU's offer quick access to the PDU's current, volts, real power, apparent power, power factor, and kilowatt hours.

Switched PDU's
Switched PDU's offer real-time power consumption monitoring including voltage, real power, apparent power, power factor, amps and kilowatt hours via secure web interface.

STEP 4: INSTALLATION

We're nearing the finish line of this project. Our team of service technicians will coordinate with your organization to schedule installation and startup. Before installation, our team will work directly with an electrical group to ensure all electrical is configured properly. Predictive Technology installation typically includes:

- Verifying electrical
- Installation of all hardware and equipment
- Connection of all servers and critical hardware to new equipment
- Setup all device communication (most devices come equipped with inteli-slot cards and device communication).
- Assistance in setting up alarms and alerts
- Training for on-site team members

From here, your equipment will do the rest! Your facility is now up to date, fully functional, and is being monitored it for alerts or alarms. You can kickback and relax when the next storm rolls through town because you're not going to experience any downtime.

GET YOUR PROJECT STARTED TODAY WITH PREDICTIVE TECHNOLOGY

Predictive Technology is your turnkey partner ready to help you build, revamp, or update your critical facility. Contact us today to get started!

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