



AkitaBox

The Guide to Building Data Collection

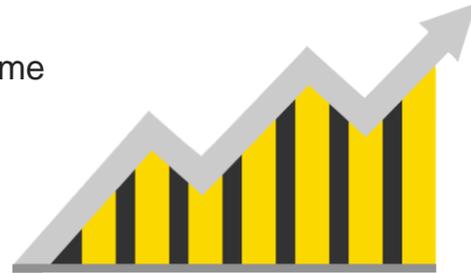
5 Steps To Successful Preventive Maintenance Implementation



Introduction

You are reading this because you have made the decision to implement or improve your preventive maintenance (PM) plan. Preventive maintenance can have a [return on investment as high as 545 percent](#). The benefits of a good plan are undeniable as PM helps facility managers:

- Reduce average work order completion time
- Improve proactive maintenance tasks to reactive tasks completion ratio
- Reduce average work order cost
- Extend equipment longevity
- Improve energy efficiency



However, without good data on building assets, you will see limited benefits and are wasting your time with preventive maintenance. Information collected during implementation needs to be accurate as it will be referenced on nearly every work order.

This guide will help you implement a preventive maintenance plan that provides the highest possible return on investment. The guide is divided into 5 steps for successful preventive maintenance data collection:

1. Identify Preventive Maintenance Systems
2. Use a Standardized Naming Convention
3. Limit Data Collection for Accuracy
4. Photograph Equipment
5. Track Asset Locations

Let's get started!



Step 1: Identify Preventive Maintenance Systems

[Preventive Maintenance](#): Any care or servicing of building assets at scheduled intervals for the purpose of extending longevity, improving efficiency, inspecting operability or improving up-time.



The high price and high maintenance needs of HVAC or mechanical assets typically put them near the top of the preventive maintenance list for facility managers. Plumbing and electrical assets are critical in daily building operation and should be tracked as well.

Don't forget about other core systems such as your building envelope and fire protection assets. The cost to replace a roof can be astronomical at over 10 dollars per square foot. Fire doors and extinguishers should be inspected regularly for safety and compliance purposes. These systems need to be included in your PM plan.

Below is a non-exhaustive list of systems that should be in your preventive maintenance plan:

- HVAC or Mechanical
- Plumbing
- Electrical / Power
- Building Envelope / Roof / Windows
- Fire Safety Assets
- Pavement / Parking Lots / Sidewalks
- Flooring
- Paint
- Security System / Cameras
- Elevators
- Grounds / Fields / Irrigation
- Vehicles
- Site / Lighting / Landscaping / Signage
- Other industry specific systems should be included for healthcare, education or industrial facilities

You are likely tracking all of these systems in some way right now whether it is in paper, software or stored as institutional knowledge among your team members.



As a general rule of thumb, a building asset should be included in your preventive maintenance plan if:

- It will be touched for maintenance at least once annually or
- Exceeds a replacement cost of 5,000 dollars or
- Would cause extreme duress in the case of failure

Use this guideline to inform your team of what systems they should collect data on for preventive maintenance at your buildings.

Step 2: Use a Standardized Naming Convention

If you are taking the time to collect information on your building, you need to use a standard naming convention to make the collected data useful.

When your building was initially turned over from construction, your general contractor likely named building assets in a way that made sense for construction, not facility management. As a result, some of your buildings may have different assets with the same name. For example, in a building with several renovations and additions it is common to have two Air-Handling Units name AHU-01.

For the sake of accurately tracking preventive maintenance, [standardized naming conventions](#) help ensure names are not duplicated within a building and are intuitive for team members to understand. For naming assets, the industry standard is to name an asset with an easily understandable acronym and number based on the type of equipment and the quantity (For example, the second exhaust fan in a building would be named EF-02). The [American Institute of Architects \(AIA\)](#) and [Construction Specifications Institute \(CSI\)](#) are the great resources for naming convention knowledge.

Use standardized forms when collecting data in the field. There are [several apps](#) on the market place that simplify this process. Dropdown fields or multiple-choice options in forms help avoid errors when collecting data.

The screenshot displays a mobile application interface for data collection. At the top, it shows the asset name 'AHU - 100' with options to 'Rename', 'Move', or 'Delete'. Below this, it indicates the 'Pin Type (Asset): Mechanical' and provides a link to 'View Tasks and Notes'. A 'Website Edit' button is visible. A prominent 'Create Task' button is present. A dropdown menu is open, listing various equipment types: Air Conditioner, Air Filtration System, Air Handling Unit (which is selected), Boiler, Dehumidifier, Diffuser, Fan, Furnace, Humidifier, Other, and Thermostat. At the bottom, the form includes fields for 'Manufacturer' (Trane) and a floor plan diagram with labels for 'Bedroom/Dorm' (A-131) and 'Bedroom/Dorm' (A-133).

Example of data collection form



For example, you may track equipment categories for HVAC, plumbing and electrical. Having a dropdown prevents bad data collection (ie. “mech” is typed in instead of “HVAC” or “plumbing” is misspelled as “plubing”).

Standardization simplifies data collection and eliminates long-term issues associated with bad facility management data. Do not overlook this step when implementing a preventive maintenance plan.

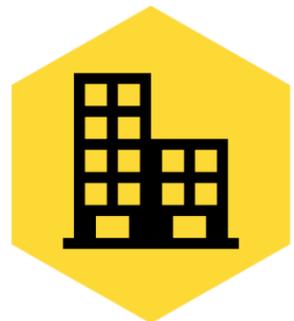
Step 3: Limit Data Collection for Accuracy

This may come as a surprise, but more data is not always better. More data means more opportunity for inaccurate collection and more time spent looking for the data you need.

Think of what information will be important to collect for daily preventive maintenance. We recommend including the following data fields and types in your [standardized forms](#) for information collection:

- **Asset Name** (Text field)
- **Unique ID** (Text field for a serial number or barcode placed on equipment)
- **Category** (Dropdown list that includes all preventive maintenance systems)
- **Type** (Dropdown list of specific type of equipment such as Air-Handling Unit or Exhaust Fan)
- **Manufacturer** (Text field)
- **Model** (Text field)
- **Key Parts** (Text field for quantity and type of filters, belts, etc...)
- **Location** (Text field for room, floor, building, etc...)
- **Notes** (Text field)

Anything beyond this list can be overwhelming during data collection. Instruct your team to add unique aspects of assets to the notes field. It is easier to manage these unique aspects of data entry at a desktop computer so time isn't wasted with unnecessary field data collection. At the very least, if you collect the make and model of an asset, you can easily find operations manuals and other data points online.





Step 4: Photograph Equipment

A picture is worth a thousand words. Photograph building equipment and asset nameplates to use in your preventive maintenance work orders. When a work order is created, maintenance staff can reference the picture to ensure they are servicing the proper asset.



Photographing also serves as a fail safe when verifying the accuracy of data collected. Reference nameplate photos with collected data fields to ensure the data matches and is accurate. Take a photograph once and save future field trips to look at building equipment.

Step 5: Track Asset Locations

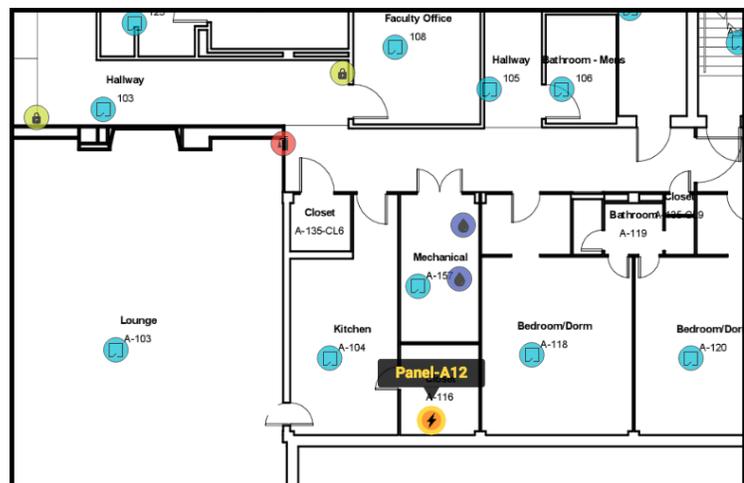
Whenever a work order is created, maintenance technicians need to know 4 pieces of information:

- The asset name and type
- The tasks that need to be completed for the work order
- Past maintenance activity
- The location of the asset

If your team doesn't know where equipment is located, they will waste time calling team members or wandering around trying to find equipment that needs to be serviced. Track this information in a useful way to improve the productivity of your labor force.

Each asset should include a specific location with a:

- Building name,
- Floor or level and
- Room, Unit or Area.



Asset-mapping software example



In buildings over 50,000 square feet, you will find [asset-mapping software](#) to be incredibly helpful. These programs allow you to pin-point the specific location of equipment on a floor plan to eliminate confusion when looking for assets. When performing maintenance in a building that has 50 different exhaust fans, [asset-mapping software](#) will save your team a ton of time by directing them to the specific piece of equipment that needs to be serviced.

Final Note

Asset data will be referenced throughout the life of your buildings. To learn more about data collection, contact the author [Luke Perkerwicz](#) or [AkitaBox](#) at the link below:

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