

Property Management Guide:
A Guide to Implementing a Property Management System in an Organization

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President, Metalcraft Inc.

Preface

Published in 1952, the original edition of our Property Management Guide was designed to assist in the tracking of an organization's fixed assets in order to prove ownership and location. Since that time we have expanded to address a much broader audience as we strive to assist and educate our readers on the tracking and controlling needs of today as well as tomorrow.

Metalcraft was originally organized in 1950 to solve a unique problem for an advertising specialty company. By finding a solution for that particular customer Metalcraft transformed from a small, start-up business to a vibrant, operating company. Two years later we took the valuable knowledge gained through working with that customer and applied it to a universal challenge facing all business and industry – the capability to permanently identify equipment and all fixed assets to prove ownership and location.

By 1980 the position of Property Manager(s) within an organization became much more important because while business and industry discovered the many benefits of tracking and controlling, the technology-driven automation evolution created increasingly complex internal processes that mandated faster and more efficient tracking systems. Property Managers communicated their needs and specific requirements to manufacturers and the industry expanded as the needs became more and more varied. Automated tracking with bar coding technology became the new trend in 1984 and Metalcraft's research and development again put the wheels in motion to meet the needs of an ever-growing industry.

As we approached the turn of the century Metalcraft again took the initiative and looked to incorporate the next generation of property control into its already diverse product offering. Like bar code before it, radio frequency identification (RFID) has changed the way business may track and control their assets – both fixed and mobile.

Since its inception Metalcraft has subscribed to the business philosophy that serving our customers is a privilege and helping them find solutions for all their tracking and controlling needs is a challenge we take very seriously. Therefore, we continue to work on solutions for a broad base of business and industry's tracking and controlling needs. From bar code to RFID technologies we still feel our original goal of educating readers on the management of property has not changed since our first writing in 1952. We hope you find the information in this publication helpful for your tracking and controlling requirements. If so, then we have accomplished our goal.

Waldo O. Smeby
President

Introduction

Controlling and tracking assets is crucial to the success of business as society has become less and less labor intensive while the importance of managing property and processes continues to grow. The traditional meaning of fixed assets included furniture and fixtures found in the office, laboratory, classroom, plant, and expensive machinery and equipment as well as returnables such as containers and pallets. We have now expanded this definition to include work-in-process accountability.

Managing this much broader definition of “property” has become a major concern to institutions and businesses. Astute managers realize the benefits of proper utilization of fixed assets and that the tracking of all property can increase efficiency and decrease costs.

Property Management has been defined as:

“The science of getting maximum value from the investment made in assets by assuring proper utilization, preventing loss and pilferage and all other aspects of security-related issues, scheduling timely maintenance, tracking physical location, maintaining proper insurance coverage, and scheduling depreciation write-offs.”

But Property Management includes more than this. At its inception Property Management was thought of purely in terms of locating, identifying, and controlling fixed assets. Today, Property Management includes all of the following functions:

- Property Control and Fixed Asset Accounting
 - Where is the property? Who does it belong to? What is its value?
- Maintenance Management
 - When was maintenance last done? When is it due again? Should a preventive maintenance program be used?
- Security Control
 - Is each item where it should be? Which department has control of each item? Has the property been removed from that department off the premises?
- Service Contract
 - Is the item covered by a service contract? For how long? When was service last performed?
- Warehouse – Location Control/Inventory Control
 - What is our inventory turnover? Where are returnable containers? Has the item moved to the next picking location? What stock and materials need to be reordered?
- Manufacturing/Work-In-Process

- Which workstation currently houses the work-in-process? What are we seeing for real-time production figures? Was the order inspected properly? Did the order ship on time? Was the manufacturing process tracked and controlled?
- Manufacturing Date Control/Warranty Control
 - Where and when was it manufactured? When does the period of warranty expire? What is the record of warranty service?
- Calibration System Control
 - When was calibration last done? When is it due again?
- Billing and Invoicing
 - Billing for usage of property; i.e., utility poles.
- Tool Control
 - Who has the tool? What is its value?

About Not-For-Profits

Not-for-profits are required to show depreciation as an expense on external financial reports. A comprehensive Property Management Program will aid in efficient compilation and accurate accounting.

For further information request the “Statement of Financial Accounting Standards No. 93” from:

Financial Accounting Standards Board
 401 Merritt 7
 PO Box 5116
 Norwalk, CT 06856-5116
 Tel: (800)748-0659
 (Weekdays 8:30 a.m. to 5:00 p.m. EST)
 Web Site: www.rutgers.edu

For further information regarding GASB 34 contact:

Governmental Accounting Standards Board
 401 Merritt 7
 P.O. Box 5116
 Norwalk, Connecticut 06856-5116
 Tel: (203) 847-0700
 Web Site: www.gasb.org

You may also wish to consult your auditing firm for a clearer understanding of these standards.

About the Property Manager

Today, the employee(s) assuming the responsibilities of Property Management varies from business to business. Generally the responsibilities are in addition to other responsibilities and

may also be assigned to a number of personnel throughout the organization. The “Property Manager” must serve as a catalyst to “make things happen” to ensure that a comprehensive tracking and controlling program is not only established and implemented, but also perpetuated.

Ultimately, the success of the program depends on the wholehearted support of top management and the enthusiastic commitment of the entire organization. The benefits are many and when properly explained will gain the needed support to establish a workable system.

Throughout the contents of this guide the terms “ID” and “property identification” are used. Our definition of “ID” and “property identification” refers to “identification nameplates and labels.”

Effective Controlling and Tracking of Property Produces Solid Benefits

When utilized effectively a property identification program involving tracking and controlling can produce numerous benefits across a wide range of organizational activities and concerns.

- Preventing unnecessary duplication of assets eliminates unnecessary expenses and provides credibility on requests for additional assets.
- Facilitating the location, inventory, and appraisal of assets offers greater efficiency resulting in lower capital investment costs that ensure a more controlled environment for purchases, in-house fabrication, and transfer of assets.
- Establishing ownership and maintaining market value assures companies are in compliance with Federal Contractors A-110 and A-21 Regulations.
- Allowing proper accountability of publicly owned items meets requirements of auditors, bond raters, and government regulations as well as increasing eligibility for government contracts, funds, and grants.
- Facilitating the establishment of a fixed asset depreciation schedule and system ensures effective depreciation procedures while meeting the requirements of generally accepted accounting principles such as GASB 34.
- Controlling and tracking of property allows companies to improve record keeping systems in compliance with Sarbanes-Oxley legislation that was enacted in 2002 to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to securities laws.
- Establishing ownership by providing detailed information available through effective Property Management Systems allows for adequate and cost-effective insurance coverage and helps minimize insurance expenses, as well as expediting insurance recovery in case of loss, while discouraging internal unauthorized removals, theft, and other security-related concerns.

- Providing the necessary information for timely maintenance and preventive maintenance programs facilitates an efficient calibration program that eliminates interference with production schedules and general operation.

Planning and Implementing an Effective Controlling and Tracking Program

Step 1.

Involve as many people in the planning process as possible including top and middle management. Actively seek input from those whose support is necessary for implementing and perpetuating the program.

Step 2.

Secure and review information from outside sources such as trade publications, trade associations, and peers in other organizations. Many workable systems are already in place and may be adapted to your situation without “reinventing the wheel.”

Organizations such as the National Property Management Association (NPMA) and the American Society for Testing and Materials (ASTM) can assist you in implementing your program and can also provide excellent training programs for the person(s) within your organization responsible for Property Management. To learn more about NPMA and how they can assist your organization contact:

NPMA National Office
1102 Pinehurst Road
Dunedin, FL 34698
Tel: (727)736-3788
Fax: (727)736-6707
Web Site: www.npma.org
E-mail: hq@npma.org

ASTM National Office
100 Barr Harbor Drive
PO Box C700
West Conshohocken, PA 19428-2959
Tel: (610) 832-9585
Fax: (610) 832-9555
Web Site: www.astm.org
Email: service@astm.org

Step 3.

Determine what information you need from your property control and tracking records and how you will use it. Not-for-profit institutions, governmental units, and private businesses will all have different requirements, especially in such areas as depreciation for tax purposes, accountability for assets, insurance, etc. Determine which regulations and procedures apply to your particular industry or agency.

Step 4.

Determine the approximate number of items to be located, identified, and recorded. Set a minimum dollar value for each item to be included. Expensed items may also be included, especially if they are of significant value* or are highly movable assets, such as PCs and other equipment, which are highly vulnerable to theft and potential transfers for unauthorized use.

*According to an article in a publication from the National Property Management Association, "From an accounting perspective, there are four stages in the life of an asset: 1) budgeting for acquisition of the item, 2) acquiring and receiving the item, 3) using the item, and 4) disposing of the item. Accounting transactions that are recorded at each of the four stages impacts the value of the asset (on the balance sheet) and the operating expense (on the income statement). While in many companies the property accounting system does NOT directly update the master financial records, the property accountant(s) is responsible for reconciling the subsidiary property ledger with the corresponding asset and expense account balances."

Step 5.

List the desirable data elements to be recorded for each item or piece of property to be tracked. The list will vary depending on the size and responsibility of your organization. As you consider each element, put a check to indicate interest:

- _____ Identifying number(s)
- _____ Description
- _____ Location
- _____ Date of acquisition
- _____ Original cost (including installation)
- _____ Description method
- _____ Class
- _____ Use and responsibility
- _____ Ownership (company, government, leased, etc.)
- _____ Replacement cost
- _____ Maintenance requirements
- _____ Is the item a security risk, meaning could it be easily removed from the premises?

Step 6.

Determine which software program best suits the property identification needs of your organization. If an automated system is not a consideration at the time of implementation you may still opt to use ID products with both an automated bar code as well as a human-readable number for conversion at a later date. You will need to consider the following for your automated Property Management System:

- _____ Availability of software that fits your individual needs
- _____ Company-wide accessibility to records or limited accessibility (use of LAN [local area network] support, company-wide mainframe or individual PCs)
- _____ Advantages of batch versus real-time systems
- _____ Advantages of a bar code scanning system to read identification numbers

_____ The management reports you will require

Step 7.

Decide on a reliable method to identify each item of property so you may cross-reference the item with the permanent property record. See Section 4 for tips.

Step 8.

Assign responsibilities for implementing, installing, and maintaining the system.

Person Responsible:

_____	Acquire computer system including software and all supplies
_____	Acquire identification nameplates or labels
_____	Identify each item with a control nameplate or label
_____	Receive, document, inspect, and move equipment to use location
_____	Record information on each item
_____	Standardize the location of identification nameplates or labels
_____	Establish disposal and record purging procedures
_____	Provide proper training in all aspects of Property Management
_____	Determine whether the item is a security risk, meaning could it be easily removed from the premises?

Step 9.

Prepare a detailed written procedure and make it part of company policy. Allow for periodic follow-up to make certain the program is properly functioning. It is highly recommended that companies make this an addition of current ISO compliance programs. A Property Management System with a procedures document will help you to meet ISO standards.

Step 10.

Decide on a record keeping system. Each asset or asset group should have a record established for each item, either when it is initially purchased or when received from a supplier.

The Identifying Factor

Numbers

To manage property you must be able to identify all items falling into a given category in order to be able to cross-reference the actual property and its subsequent records. It is not practical to use the manufacturer's assigned serial numbers as they lack order or uniformity when combined in an overall system. They also are frequently inaccessible and may be nonexistent on many pieces of equipment.

The preferred choice for a numbering system is a sequence of consecutive serial numbers with no particular significance for any single number or groups of numbers. By utilizing this system you are able to code an unlimited number of items with the fewest possible digits as well as easily process the transfer of assets or the addition of new items. In addition, it is much easier to

replace a tag on a piece of equipment that has been improperly removed or destroyed using a sequential or consecutive numbering system instead of having to reprint a specific number. Replacement ID is a much more simplified and cost-effective process.

Other methods of categorizing assets:

- Blocks of sequential numbers are sometimes reserved for items having common characteristics, such as type of equipment or location. Expansion is confined to the remaining unassigned numbers in each block.
- A letter or number prefix followed by a sequential number is another system that is very effective. The prefix often identifies a particular location, use or class of each item. Expansion is unlimited within each code because of the sequential number.
- Color-coding is another effective and highly visible method of identifying location, use or class.
- Non-sequential numbering can easily be achieved via data transfer making this a very viable and cost-effective option when required.

We recommend you select as few as possible prefix classifications or color codings as procurement of the ID tags may be more costly due to the changes required along with additional inventory needed for each designated series.

Nameplate or Label (ID/Identification Tag)

The purpose of the nameplate or label is to assign a control number to each designated item of property, which could include inventory, equipment, work-in-process, and all other related tangibles of value requiring tracking and controlling. It also provides a common ground of communication between the controlling department and the users that are responsible for the operation or use of the asset.

The following are numbering options that you may select:

Human-Readable Only

For many years nearly all serialization was done with the use of a human-readable number, either into stainless steel or aluminum. With the advent of bar coding, computer-generated serialization has come to the forefront. This type of serialization can be either photo-imaged or digitally printed with both a bar code and human-readable or human-readable only.

It is important to ensure that your supplier can guarantee shipment of your exact order with few, if any, skips in sequence and no duplicates.

Bar Code and Human-Readable

Simplicity and accuracy by using bar code numbers offers a more efficient system and one that rewards its users with improved overall speed, timeliness, and cost-effectiveness. Benefits to your organization include increased productivity as well as a reduction in labor costs.

Bar coding allows you to enter data more quickly and accurately than a manual method that helps eliminate transposition errors. Bar coding also eliminates handwritten and keypunch entry and can significantly reduce the time necessary to conduct an inventory by as much as 60 to 80 percent (statistics reveal that bar coded data can be collected at equivalent keyboard speeds of more than 1,700 words per minute).

The bar code allows you to further automate your system through machine recognition of data entry. It allows you to collect specific data in a portable mode at the source and then transfer that data back to your host computer.

Computerization is standard for Property Management Systems today. Partially automated or fully automated systems are available. To be fully cost-effective a Property Management Program using computers needs three elements:

1. Hardware and software to maintain the master record of all items.
2. A scanning system that “reads” the identifying nameplate or label.
3. Bar code nameplates or labels to identify property. Typically, these will contain both a “human-readable” number and a “bar code” number.

Radio Frequency Identification (RFID)

Radio frequency identification (RFID) is a generic term for technologies that use radio waves to automatically identify individual items. There are several methods of identifying objects using RFID, but the most common is to store a serial number that identifies a product on a microchip attached to an antenna (the chip and the antenna together are called an RFID transponder or an RFID tag). The antenna enables the chip to transmit the identification information to a reader. The reader converts the radio waves returned from the RFID tag into a form that can be passed on to computers that can make use of it.

The Permanence Factor

The cost of the labor involved in affixing nameplates or labels is much higher than the actual cost of the ID tags themselves, especially in regard to the labor required to implement the initial program and affix the tags, which is why permanent identification tags are generally less costly in the long run.

Example of Tagging 10,000 Assets

EXAMPLE OF TAGGING 10,000 FIXED ASSETS

Company Profile

- 10,000 fixed assets.
- Converting human-readable only system to a bar code system.

Item

1. Hardware Costs (\$2,000).
Customer wants 2 laser scanners with PDAs; approximate cost is \$1,000 per unit
 2. Software Costs (\$1,500).
Application software for PDAs. (Serial number cross-reference using the old serial number system and applying a new serial number.)
Fixed asset software upgrade.
Report generators.
Training.
 3. ID Costs (\$3,103).
Metal bar code nameplates (Metalcraft standard XPA191 black-type nameplate @ \$31.03/c).
 4. Application of Nameplates (\$20,000).
Cross-reference of new bar code number to the old tag number; application cost is \$2.00/asset).
- Total Cost = \$26,603.

Bar Code ID as a percent of the total cost is 11.7%.

The previous example illustrates the actual costs that companies and organizations should consider when applying labels. This example was included to emphasize the importance of purchasing a quality, permanent label as the cost of the label is minimal compared to the labor costs of installing the labels.

Factors affecting permanence include environmental stability, numbering method, and affixing method.

To assist you in determining the proper product for your particular application or environment we offer our Product Selector Guide on our web site at www.idplate.com. Simply answer the questions about environmental conditions for your individual application and you will instantly receive a recommendation as to which Metalcraft products will best serve your overall needs.

Metalcraft continually evaluates the performance of our products in a variety of environments and applications. Through this research we have identified the best materials, affixing methods (including adhesives), symbologies, and printing methods for virtually every environment and application.

Environmental conditions can vary greatly. Metalcraft classifies its products for mild to harsh environments according to whether or not that product resists:

- Solvents-including kerosene, cutting fluids, petroleum-based and biodegradable solvents, as well as acetone.
- Abrasion-which might occur from harsh cleaning, polishing or machining.

- Caustics/Acids-such as caustic soda, sodium hydroxide, oven cleaner, vinegar, and citric acid used in food processing, battery acid, sulfuric acid, hydrochloric acid, and nitric acid.
- Temperatures-including elevated temperatures or extreme temperature variations such as those in an autoclave.

Please review our catalog for further definitions and selections based upon your application environment.

Permanence Factor One: Environmental Stability

Some identification tags will be used in a temperature-controlled office. Others may be used in extreme indoor and outdoor atmospheres. Consideration of environmental resistance is important.

Permanence Factor Two: Numbering Method

The type of numbering used also affects permanence.

As mentioned in a previous section both indenting serial numbers and computer-generated bar coding using either photo-imaging or digital printing are excellent permanent numbering methods.

Permanence Factor Three: Affixing Method

Another factor to consider is the method to fasten the nameplate or label to your equipment. If you are uncertain which adhesive is best suited for your environment, consult Metalcraft's Product Selector Guide (refer to this topic on previous page). You may also request test samples to conduct your own evaluations.

Pressure-sensitive adhesives provide an excellent bond when properly applied and can be matched to specific applications for a variety of environments.

Mechanical fasteners also provide permanence; however, attachment costs are high and you may risk damage to your equipment.

It is imperative that you train your applicators to follow all directions implicitly. Shortcuts can only lead to a poor bond and serve to negate all up-front work.

Appearance of ID label also an important consideration

An additional factor in selection is the overall appearance of the tag. An attractive, distinctive nameplate or label can be mounted "out front" on the finest equipment. The nameplate or label should not be affixed in an area where it is confused with others already adhered to the equipment. Using a company or institution logo will further enhance your label for instant recognition of ownership.

Off-Site Printing...The Preferred Choice

By its nature bar coding necessitates that the nameplates or labels you use for identification be of high quality. This will influence your choice of imaging methods and whether to produce your bar codes off-site or on-site.

There are a number of imaging or printing methods available when you have your bar codes commercially produced off-site. The best known permanent imaging method for long-term use is photographic. Bar code and alphanumeric human-readable copy are photographically reproduced for optimal clarity and detail and then embedded below the surface for maximum image protection. Digital offset printing provides excellent clarity and resolution even on extremely detailed designs or logos. The labels can be subsurface printed in order to increase their overall durability. Digital technology can also accommodate both sequential and non-sequential numbers.

Other printing methods such as thermal transfer printing, laser engraved printing, ink jet printing, and dot matrix printing provide a lower quality resolution and decreased durability when compared to products that an off-site printer can provide.

Obtaining your bar codes off-site or printing on-site is a key consideration. While there are some reasons that you may desire to produce your bar codes on-site, for property control purposes it is a less acceptable alternative. There are a number of advantages to purchasing your bar codes off-site that need to be reviewed as you determine the best method of printing your ID tags and labels:

1. Typically, property control requirements are sporadic, so it may be difficult to justify an in-house printing system. The high cost investments for on-site equipment, supplies, and training should be carefully weighed and compared to the off-site alternative.
2. There is a learning curve when producing labels on-site, and for sporadic property control requirements it is likely more beneficial to rely on the expertise of an off-site producer.
3. Property control applications can have a wide array of environmental conditions: exposure to UV light, high temperatures, chemicals, solvents, solutions, and abrasion. In addition, surface conditions (flat, smooth or rough) may also apply. A nameplate or label needs to be matched to meet environmental and surface criteria.
4. Generally, an off-site supplier has greater flexibility to accomplish customization such as size, logos, and color coding schemes.
5. Producing labels on-site does not guarantee the bar code will be readable. A verification system needs to be in place that measures bar code label specifications to ensure that they will be readable. Off-site suppliers will accept responsibility for complying with standards and ensuring your bar codes are readable.

Take Control with Metalcraft

Metalcraft has been producing high quality ID nameplates and labels since 1950. Our expertise in serially numbered identification means we can supply a wide range of products for a variety of Property Management applications. From indented nameplates to RFID, we are truly a “full service” supplier in every sense of the word.

Our free support literature ranges from our product catalog and standard sample packet to our individual product sheets, which provide technical product specifications and test results. You may request any of our literature and samples via phone at (800) 437-5283 (outside USA at (641) 423-9460) or via our web site at www.idplate.com. Quote requests and specification requirements may be submitted online at www.idplate.com, via e-mail at metalcraft@idplate.com or via fax at (641) 423-8898.

Our Metalcraft Customer Service Specialists are available by phone to visit with you regarding your application needs and may be accessed Monday through Friday, 8 a.m. through 5 p.m. Central Time through our toll free number or via e-mail.

We also have a national/international group of Metalcraft Sales Associates ready to work with your organization directly on your specific requirements. Contact a Metalcraft Customer Service Specialist or access our website for the representative nearest you.

We can also help you find peer organizations or other service companies that can assist with your Property Management Program. These may include scanner suppliers, property and tracking software, and other tracking-related products and services. In addition, we can direct you to a number of “Metalcraft Approved” companies that will directly install asset tracking systems for your company.

This unique complementary service offered through Metalcraft will bring your system on-line with fewer problems and false starts. Our in-house Customer Service Specialists as well as our nationwide network of sales associates are standing by to help you get your program up and running!

The Author

Waldo O. Smeby began his career at Metalcraft as the Controller, became President of Metalcraft in 1988, and has been majority owner since 1993. With over 45 years of experience in the industry, Mr. Smeby has conducted numerous seminars related to property management programs and fixed asset control over the span of his career.

Mr. Smeby has worked with many businesses, hospitals, schools, and governmental organizations and has been active in organizations such as NPMA, AIM, and GPI. He has a Business Administration Degree from Luther College.

Mr. Smeby believes in giving back to the community and has been acknowledged by being elected to the Board of Regents at Waldorf College in Forest City, Iowa, and awarded “Small Businessman of the Year” and “Small Business Person of the Year for the State of Iowa” by the Chamber of Commerce of Mason City, Iowa and the U.S. Small Business Administration respectively.