The Managed Print Services Association

MPS Provider Best Practices: Supplies Management

MPSA
MANAGED PRINT
SERVICES ASSOCIATION

The Managed Print Services Association

The Managed Print Services Association (MPSA) defines MPS, as:

"The active management and optimization of document output devices and related business processes."

The mission of the MPSA and its members is to address and optimize businesses' office document management while enhancing the growth, and efficiency of the MPS segment through advocacy, marketing, education, research, standards, and a general community of interest. In order to reach these objectives, the MPSA provides community-driven best practices—like those contained in this document—to empower its members to make more informed decisions regarding their MPS strategies.

Background

As an MPS provider, supplies management is simultaneously your single greatest risk factor and profit driver in managed print services engagements. It is also an area that exposes your customer to the greatest potential for dissatisfaction. Often, MPS providers don't fully understand or account for all of the costs associated with the management of supplies and consumables, resulting in erosion of profitability.

Intent

Through collaboration with in the numerous subject matter experts participating in the Standards and Best Practices Committee, the MPSA has compiled this set of best practices. This document will offer MPS practitioners, like you, a set of written best practices that will aid you in promoting overall profitability while enhancing value for your customers. As part of a broader body of knowledge, this specific set of best practices will center on supplies management.

This document is intended to aid a MPS provider's leadership and operational management teams in designing, managing, and improving its supplies management program. These best practices are applicable broadly and should be considered inclusive of a well-run MPS business. However, you must determine whether these best practices apply to your specific situation.

Ultimately, the success of your MPS program will rely heavily upon the application of these considerations from initial scope to execution—throughout the entire lifecycle of your own MPS program. As with all information, you must determine the goals and objectives to be achieved and solved with the implementation of these best practices.

These best practices are suggested to help minimize cost exposure and improve customer experience, and are part of a larger body of work. Therefore, we encourage you, the reader, to consider these best practices as part of the entire body of knowledge made available through the MPSA.

Focus and Scope

What follows will focus on the best practices surrounding MPS supplies management, which span three core areas of the ITIL-compliant, MPS framework (see Managed Print Services Framework Overview):

- Service Transition (Implementation)
- Service Operations (Facilitation / Maintenance)
- Continuous Service Improvement (Optimization)

Combined, these three focus areas comprise what is known as post-sales operations. These elements span the requirements to implement, maintain, and continuously optimize the customer's MPS environment following contract signature.

As a reminder, we have chosen a proven method and format of providing this information using the ITIL Framework Service methodology as a guide. This is a technical tool that is used by some of the more robust IT environments in that elements of a solution are categorized in a uniform method. The ITIL framework provides best practices, which an organization can adopt or adapt in order to realize the IT service management objectives of aligning IT services with the current and future needs of the business, improve quality of services and reduce the cost of providing services.

Best Practices: Supplies Management

Management of the Device Fleet

Impact:

It is important to be considerate of how you, as the MPS provider, intend on managing the device fleet for which you have been contracted. This is the first step in managing the customer's supplies needs. Without initial due diligence—as well as the proper systems and processes—you will be unable to set proper expectations or limit your risk, due to potential problems that may arise in managing the different devices.

Considerations:

Service Transition (Implementation)

Identify which devices will be connected to the network, and which devices will be locally attached (to workstations).

- Network-attached devices may be monitored using remote monitoring and management software.
- Locally attached devices are more difficult to monitor and manage:
  - Consider connecting locally attached devices to the network.
  - Alternately, consider standardizing device models and establishing cost averages across these models. Then reconcile quarterly or biannually to ensure usage matches contract pricing.
  - When using workstation-based software tools, evaluate reliability of this management software to aid in management of the locally attached device.
- Understand which devices will fully report, partially report, or not report at all. Reporting variances remain quite common depending upon the devices' manufacturer, model, and firmware version.

Determine if any portion of the fleet co-located at the customer's site(s) be unmanaged (not covered under contract):

- Evaluate potential for misdirected stock or other abuses (whether intentional or unintentional) where similar device models may be in use.
- Include onboarding checklist to document which devices will be managed or unmanaged as part of your agreement. This document should require customer and provider signature.

Establish safety stock (i.e. hot-swap inventory) needed on-hand.

Service Operations (Facilitation/Maintenance)

Determine whether you, as the provider, employ a proactive or reactive order processing system.

Understand how disposition of devices will occur:

- Ensure physical disposition is mirrored in supplies management system to prevent erroneous shipment of supply items.
- Monitor and manage on-hand stock.

Continuous Services Improvement (Optimization)

- Over time, review total pages printed versus total supplies shipped (and the expected yield). This can highlight potential leakage.

Supply Chain Management

Impact:

To ensure maximum profitability and customer satisfaction, providers must expertly manage their supply chain to expected quality levels. This should include:

- Timely and accurate delivery of supply items.
- No misuse, theft, leakage, or crossover to non-contract devices.
- Maintain customer satisfaction at desired levels.
- Targeted yield rates are being achieved.
- Reduce the cost of provider's processes.

Considerations:

Service Transition (Implementation)

Establish regular reporting on a monthly/quarterly basis, summarizing key usage analytics to track overall cost and delivery metrics. This process should allow you, as the provider, to identify issues or opportunities for improvement.

Key considerations for establishing your reporting structure should include:

- The highest-usage and highest-cost supply items, with an eye for supply items that generate greatest profit (and thus create the greatest exposure).
- Degree of variance in usage and yield versus expected targets.
- Premature failure (e.g., device uptime or availability metrics)
- Identified issues across all devices of a given make or model.
- Identified issues across sites or locations.

Service Operations (Facilitation/Maintenance)

Reporting structure should enable individual supply items to be "rolled-up" by device, device-type, location, and in an organizational hierarchy appropriate for analysis and decision-making.

Key considerations for tracking and reporting should take into account the following:

- Which devices are covered in the contract, and which ones are NOT (see Management of the Device Fleet).
- Specify supply items by part number, devices, make/model, serial number, location (including building, floor, site, etc.), and network address.
- Specify each step of the supply chain to be tracked:
  - Supplies item order-alert (outage notice).
  - Order entry, receipt, and interim order process steps.
  - Order shipment, delivery, acceptance, inventory, use, and end-of-life.

Continuous Services Improvement (Optimization)

- Ensure there is no inventory build up due to excessive/premature ordering.
- Monitor for over-ordering due to built-in process or biases by customer.
- Monitor for leakage of high-value and cross-device compatible supply items.
- Monitor for yield issues including spikes in print volume, page coverage, and premature failure rates.

- Monitor for inventory build-up.
  - If this becomes an issue, review supplies ordering and inventory control processes.

Page Coverage Increases Supplies Cost

Impact:

Higher than expected page coverage causes increased usage of supply items, leading to higher costs than projected. This can also affect algorithms supporting auto-supply replenishment.

Common causes:

Common causes include poor assessment practices in identifying types of documents printed or copied, poorly aligned contract terms, changes in customer usage, or poorly maintained equipment.

Considerations:

Service Transition (Implementation)

Understanding the customer's volume trend as well as what type of content is being produced is essential.

Providers are encouraged to consider different contractual models that may or may not include supply items as all-inclusive.

Service Operations (Facilitation/Maintenance)

High-use devices should be monitored closely to ensure supply item depletion is accurately projected. Should usage differ greatly, provider should consult with client and adjust per contract allowances.

Low-toner or low-ink alerts (on-screen or via automated monitoring system) could trigger a replacement event by either provider or customer. Ensure precautions are in place to replace supply items when the item can no longer perform as some alert systems are designed to encourage premature replacement.

Continuous Services Improvement (Optimization)

Over time, review total pages printed versus total supplies shipped (and the expected yield). This can highlight potential leakage.

False Positives

Impact:

False positives create unnecessary burden upon the provider's service and administrative groups. Additionally, false positives erode team and customer confidence in the solution provided.

Common causes:

Common causes include monitoring software configuration, monitoring software malfunction, device software/firmware, device configuration, device malfunction, or erroneous customer intervention.

Considerations:

Service Transition (Implementation)

Stay updated on best practices from all software partners, and ensure your software partner is staying up to date.

Consider whether you or an infrastructure partner should perform supply chain management.

Service Operations (Facilitation/Maintenance)

Be disciplined in your review process.

Be sure to identify root causes, and eliminate the cause (e.g., model mismatch, monitoring software, etc.).

Ensure contract profitability review is in place at account- and device-levels.

Create benchmarks, parameters, or other guidelines that help you evaluate how you manage errors. Over time, this can lead you to reconsider technology platforms and processes you may currently use.

Continuous Services Improvement (Optimization)

Consider program to reduce the number of false positives over time. While these may never be fully eliminated, it is important to evaluate which errors have the most impact to profitability.

Over time, review total pages printed versus total supplies shipped (and the expected yield). This can highlight potential leakage due to misinterpretation of false positives.

Handling Multiple Supply Item Requests

Impact:

Provider may receive and fulfill multiple requests for a supply item, resulting in increased program costs, increased dead stock on-site, as well as increased delivery and fulfillment costs.

Common causes:

The most common cause occurs when requests are generated via multiple channels (e.g., monitored device and customer call). Also see False Positives.

Considerations:

Service Transition (Implementation)

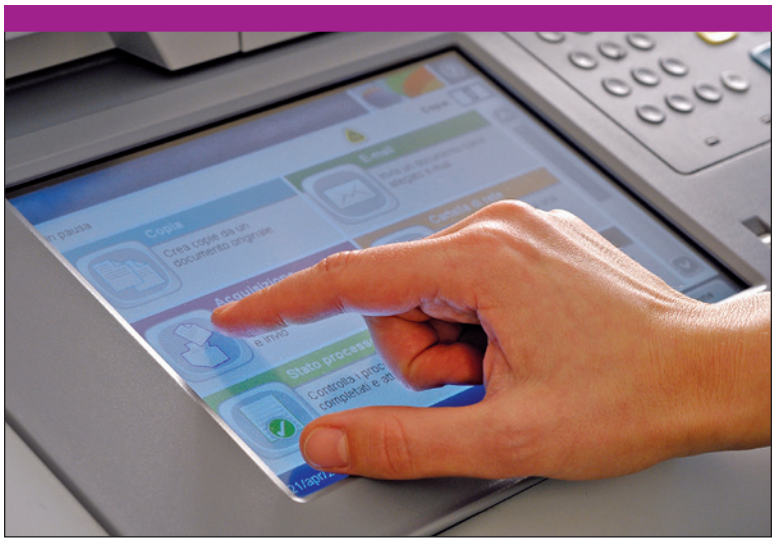
Configure monitoring software to issue a single alert for the event:

- Supply Item Low.
- Supply Item Out.

Monitoring software should be configurable to generate a single request based on defined parameters using consumable levels, alerts, print volume, coverage, and historic usage.

Customer-generated requests: Define a process that provides an easy-to-use, consistent method to request supplies. However, ensure this process accounts for multiple requests. This should ensure supplies have not already been sent, or another request is not in process.

Service Operations (Facilitation/Maintenance)



Validation Process:

- Request/notification received.
- Request logged.
- Determine if request is currently open for the device:

  If yes:

  - Confirm when previous request will be completed.
  - Update service record and customer.
  - Close current request (previous request stays open until fulfilled).

  If no:

  - Confirm if request is valid (based on print volume/historic usage/when last consumable was shipped).
  - If valid request:
    - Act upon request.
    - Update service record and customer.
  - If not a valid request (i.e. significant over use of consumables):
    - Deny shipment and notify customer.
    - Update service record and customer.
    - Close request.

Other considerations:

- All notifications and orders should be tracked by device record.
- No new notification/order can be generated for a supply unless a subsequent notification/order has been replenished (unless new device).
- System should also recognize and flag duplicate orders.
- Order should be marked as complete when replacement supply item is fitted into requesting device.
- Once an order is approved, logged, and processed all subsequent auto-generated requests should be filtered out.
- New shipment should be allowed when system software recognizes that page volumes justify supply item replacement.
- Ideally, the supplies replenishment process should be automated within the provider's management system, and only exceptions to rules should be managed by human interaction.

Continuous Services Improvement (Optimization)

Compare supplies shipped against requests received frequently.

Lost Stock

Impact:

Lost stock is a direct impact to profitability, as it requires the provider to ship duplicate supply items as replacement.

Common causes:

Common causes include substandard practices for shipping, receiving, and distribution of supplies, as well as poor inventory control, mismanaged technology, and shrinkage/loss/theft.

Considerations:

Service Transition (Implementation)

Consider outsourcing supplies management to a distribution partner.

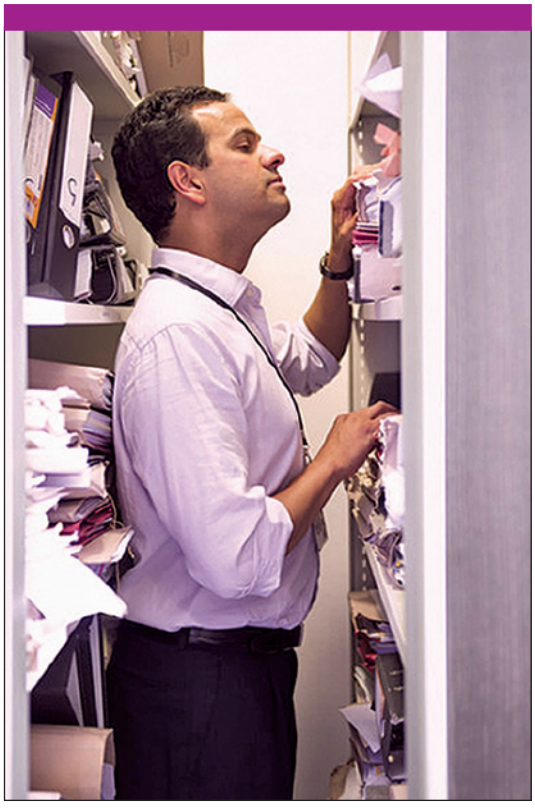
Ensure your customer is educated on your shrinkage/loss/theft policies and protocols.

Ensure your customer advocates your program, and is not a passive bystander.

Provide methods to report suspected shrinkage/loss/theft.

Limit onsite safety stock to required levels.

Determine if the entire fleet is covered in the contractual agreement.



- Review how you are preventing non-contracted devices from leeching supply items.

Service Operations (Facilitation/Maintenance)

Ensure you have a process for handling shipping and receiving.

Ensure you have a strong inventory control process.

Determine how frequently you should conduct inventories of warehouses, truck stock, customer warehouses:

- As a matter of practice, inventories should be conducted at least biannually, and often more frequently in high-turnover environments.

Ensure your ERP's inventory system is managed effectively.

Utilize your ERP system to effectively manage remote stock at customer site or distribution centers.

Determine a process to monitor shrinkage/loss/theft.

Determine your physical security protocols to prevent lost stock.

Monitor the financial impact of lost stock to cash flow and the balance sheet:

- Determine acceptable thresholds.
- Engage in process improvements to identify and correct problems once they are discovered.

Ensure you have a policy for dealing with employees who steal or demonstrate incompetence.

Ensure you have a policy for dealing with customers who steal or demonstrate incompetence.

Determine how to capture lost revenue. If linked to customer negligence, ensure are you able to bill your customer. This will require proper systems and contract language.

- Alternately, instead of charging customers for lost stock, a provider may opt to include some percentage of revenue to cover for potential lost stock.

Continuous Services Improvement (Optimization)

Regularly audit shipping and receiving processes.

Regularly audit inventory control processes.

Regularly review whether your ERP inventory control process mirrors real life.

Toner cartridges shipped and pages printed are the two most common accepted parameters providers can use when discussing 'unexplained' high usage.

It is key to report this problem with the client early so corrective actions are taken.

Providers should monitor usage by account and device basis.

Misdirected Stock

Impact:

Misdirected stock has a direct impact on profitability and can create tension in the relationship with your customer.

Common causes:

Common causes include improper labeling, substandard shipping practices, poor inventory control, mismanaged technology, shrinkage/loss/theft, or inadequate customer training.

Considerations:

Service Transition (Implementation)

Familiarize your customers with your process in this area.

Familiarize your employees with your process in this area.

Service Operations (Facilitation/Maintenance)

Ensure you have protocols for shipping and receiving processes.

Conduct regular inventories of remote inventory locations. Ideally, this would be performed every 3–6 months.

Ensure you understand how to deal with customers who steal or demonstrate incompetence.

Your label should include: customer name, attention to, department/floor, device ID, and tracking information.

Your monitoring system and ERP reconcile with one another to ensure that supplies that are shipped reaches its intended destination and installed into the specified device.

Your customers should have a way to report issues to you that is reinforced regularly.

Establish a process for customers to easily change ship to and device locations when needed.

Continuous Services Improvement (Optimization)

Ensure regular audits of your shipping and receiving practices.

Monitor the financial impact of misdirected stock to cash flow and the balance sheet.

- Set acceptable thresholds and establish a method to identify, correct, and improve issues.

Customer Out of Stock

Impact:

Running out of stock often requires escalated action by the provider, incurring additional costs in labor and shipping, as well as distracting you from other crucial tasks. Additionally, frequent occurrence will erode customer confidence in the solution provider. (Also see Safety Stock.)

Common causes:

Common causes include misunderstood need, unexpected usage spike, supply items shrinkage, misappropriate use, supply chain shortfalls, or weak or failed predictive analytics.

Considerations:

Service Transition (Implementation)

Establish whether on-hand inventory control is the responsibility of the customer or the provider.

Establish proper communication protocols with customers

Establish shrinkage/loss/theft and misdirected stock protocols.

Will the customer utilize centralized stocking location or distributed locations.

Service Operations (Facilitation/Maintenance)

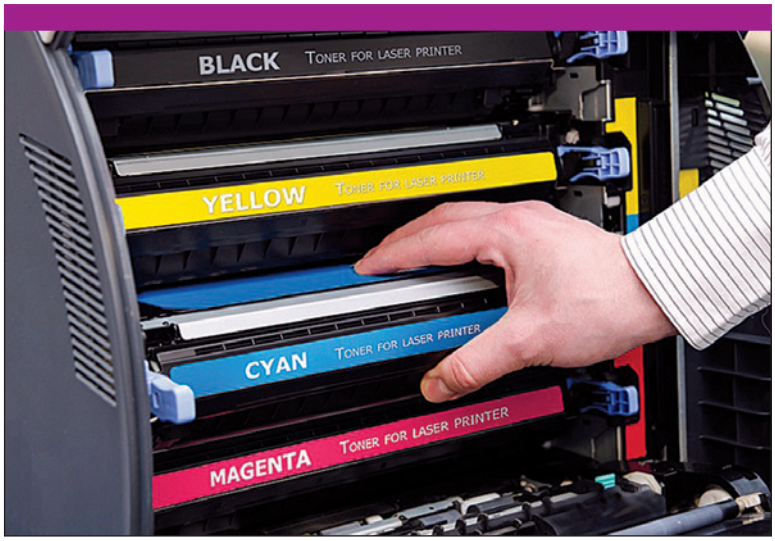
Your technology should allow you to rationalize your supply chain and inventory.

Strong predictive analytics within your remote monitoring and/or supplies fulfillment software tools
is critical to enable you to scale your business profitably.

Evaluate shipping on-demand.

Evaluate allowing on-site stocking? If you do, then your ERP must be able to manage this remote inventory effectively.

Determine which customer representatives are authorized/responsible for supply item ordering.



Determine how stocking levels be handled during peak or seasonal workloads.

Determine how you will, as the provider, offset supply chain defaults.

To prevent outages, consider how output should be redirected to other devices to avoid work stoppage.

Consider substitution of supply items during outage.

Evaluate brands/models prone to have problems.

Completely evaluate new equipment models for technical performance with established supplies fulfillment processes.

Determine the process for an atypical process situation outside of normal service levels?

- Consider how rush shipments will be handled.
- Identify who is responsible for fees associated with rush shipment, which may be different between in-sourced programs and outsourced programs.
- Determine how after-hours or holiday shipments be handled.

Continuous Services Improvement (Optimization)

Evaluate rush shipments every month or quarter, and determine if remedial action is possible to address root issue(s).

Supply Chain Shortfalls

Impact:

Running out of stock often requires escalated action by the provider, incurring additional costs in labor and shipping, as well as distracting you from other crucial tasks. Additionally, frequent occurrence will erode customer confidence in the solution provider. (Also see Safety Stock.)

Common causes:

Common causes include unexpected demand spike, disrupted supply chain, poor demand management by partner, or weak or failed predictive analytics.

Considerations:

Service Transition (Implementation)

Identify course of action should possible situations may occur.

- Prepare customer for substitution or outage
- Address escalation policy with partner
- Address remuneration policy with partner (and customer if applicable).

Identify alternate sources for supplies fulfillment before issue arises.

Service Operations (Facilitation/Maintenance)

Ensure adequate stocking levels are maintained, if not utilizing external partner for fulfillment (see Safety Stock).

Communicate issues to customer.

Continuous Services Improvement (Optimization)

If availability issues persist discuss with distribution partner and amend contract with alternative replacement if necessary.

If partner is unwilling or unable to satisfy your need, then divert orders to willing and able party.

Safety Stock

Impact:

Maintaining adequate safety stock can be important to avoid customer outage and incurring costly rush shipment charges. Safety stock may be used to buffer supply chain shortfalls, defective supply items, or other reasons leading to customer outages. (Also see Customer Out of Stock and Supply Chain Shortfalls.)

Common causes:

Common causes include misunderstood need, unexpected usage spike, defective supply items, supply items shrinkage, misappropriate use, supply chain shortfalls, or weak or failed predictive analytics.

Considerations:

Service Transition (Implementation)

Determine if you, as the provider, are responsible for supplying your customers, or whether you have supplies fulfillment partners that ship on your behalf.

- Determine if any partners have known supply chain issues that can impact profitability and customer perception.
- Determine if you are responsible for rush shipment charges (in-sourced program vs. outsourced program).

Evaluate if the costs of carrying safety stock outweighs the cost of rush shipments (risk and cost analysis).

Determine when you will send a substitute supply item versus a contracted supply item (according to contract terms).

Service Operations (Facilitation/Maintenance)

Understand how strong predictive analytics within your remote monitoring and/or supplies fulfillment partner(s) can impact your profitability. Then, make a determination as to whether this is cost effective for you to implement.

Evaluate whether you should carry safety stock for high-volume or problem brands/models.

Determine if you will allow on-site stocking or remote warehouses.

- If so, your ERP must be able to manage this remote inventory effectively.
- Determine how you will prevent shrinkage/loss.
- Determine how you will ensure toner is being used appropriately.

As part of your inventory control process, you should have a centralized storage facility that is locked or otherwise controlled to prevent loss, theft, or damage. Also, only specific individuals should have access to these facilities to minimize inventory/supplies shrinkages/loss.

Continuous Services Improvement (Optimization)

Set thresholds of safety stock based upon usage.

Review these practices regularly. Optimally, these should be reviewed every 6–12 months.

Evaluate the impact that inventory aging beyond acceptable lifetime has on your balance sheet. Then consider implementing corrective measures if impact becomes significant.

Supply Item Quality (Defective Consumables)

Impact:

While quality defects are expected with any manufactured product, defective supply items can dramatically erode profitability due to diminished yield, additional labor burden, and degraded quality.

Common causes:

Common causes include poor manufacturing processes or excessive neglect during shipment.

Considerations:

Service Transition (Implementation)

Establish a monitoring process to catch defects early, assign responsibility correctly, and take corrective action.

Establish a return policy.

Providers should rely upon their suppliers for failure analysis, and pass on the same failure rate and service levels to their clients.

Identify mission critical devices and ensure there is safety stock in place.

Service Operations (Facilitation/Maintenance)

This process should be part of your return process:

- Identify total returned supply items.
- Identify percentage of returned supply items were defective.

Identify defective items using the following classifications:

- Manufacturer/supplier defects (likely the largest category).
- Provider-owned process defects.
- Customer-owned process defects.

Manufacturer/supplier defects are best identified by having a clear view of expectations and factual data:

- Determine expected failure rates (e.g., Less than 0.5 percent of XX part number will fail before 20,000 prints).
- Collect alerts on failures as early as possible.
- Understand failure modes, environment, contributing factors, data collection/analysis to understand extent of problems.
- Engage distributor and manufacturer resources early to assist in diagnosis and corrective actions.
- Establish a process to purge bad parts from the system/customer site if necessary.
- Ensure warranty procedures are enacted to recover any available funds.

Continuous Services Improvement (Optimization)

Utilize defective classifications to determine corrective action for partners, internal processes, and customer processes.

Supply Item Yield

Impact:

Lower than rated yields in supply items lower profitability and create variations in supply accuracy of predictive replenishment. This can result in fewer pages produced per supply item shipped, higher shipment costs, and higher customer intervention rates.

Common causes:

Common causes include page coverage, supply item quality, lower than rated yields, variations in toner capacity between supply items, and ineffective algorithms in analytics tools.

Considerations:

Service Transition (Implementation)

Choose suppliers with an established brand and reputation.

- Select partner with ISO 9001 certification.
- If possible select partner with many years of ISO certification.
- ISO 9001 certification does not necessarily equate to higher quality, but it does ensure consistency in manufacturing processes.

Review your supplier's yield testing data and return policy.

Avoid the lowest cost supply items. There will always be a cheaper choice.

As part of your contractual agreement, be sure to include:

- Unit of Measure for Pricing (e.g., per page, print coverage, cartridge usage, onsite inventory, number of supply items shipped over time, etc.).
- The right to adjust pricing should this unit of measurement change.

Service Operations (Facilitation/Maintenance)

Measure yield calculations:

- The only undisputable facts in yield calculations are pages printed and toner cartridges shipped.
- Items that impact higher than expected usage are:
  - Supply item yield.
  - Page coverage.
  - Early replacements.
- Configure reporting to alert you when actual yield differs from stated or assumed yield.

As a managed print services provider, variation in yield is your responsibility.

Continuous Services Improvement (Optimization)

Over time, review total pages printed versus total supplies shipped (and the expected yield). This can highlight potential leakage due to supply item quality.

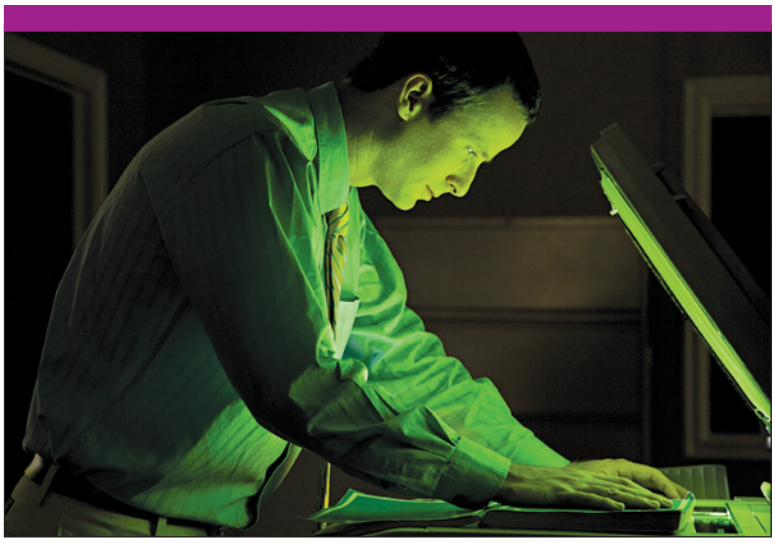
Appoint a Champion

Our final recommendation is to appoint a "champion" to ensure your company implements, adheres to, and improves processes that enhance profitability and customer satisfaction in supplies management. This champion could be a single person or a task force that meets regularly to review issues and corrective actions. Regardless of the configuration you choose, you will find that your success will mirror your focus and commitment.

Conclusion

These best practices are suggested to help minimize your cost exposure and improve customer experience. They offer you—the MPS practitioner—an opportunity to promote overall profitability and create ongoing value in your company and for your customers. Ultimately, the success of your MPS program will rely upon how you choose to apply these considerations throughout the entire lifecycle of your own MPS program.

As with all information, you must determine whether these best practices apply to your specific situation. Therefore, we encourage you, the reader, to consider these best practices as part of the entire body of knowledge made available through the MPSA.



About the Standards and Best Practices Committee

Standards and Best Practices Committee Charter: In pursuit of excellence in the MPS industry and the customers served, the Standards and Best Practices Committee will define industry standards and best practices. This includes the organization, its committees and membership, as well as publishing standards and best practices for broader industry adoption.

Call to join the cause

The Standards and Best Practices Committee was one of the first committees founded in 2009. It has a history of producing quality outputs from some of the Industry's most experienced leaders. If you are interested in joining this committee, or contributing to make our Association and Industry better, please send us an email at info@yourmpsa.org

Glossary of Terms

All-inclusive: MPS offering in which customer pricing includes required software tools, all consumables, and break/fix services. Hardware costs may or may not be included.

ERP: Enterprise Resource Planning software is a business process management software that allows an organization to use a system of integrated applications to manage the business and automate many back office functions related to technology, services and human resources. ERP software integrates all facets of an operation, including product planning, development, manufacturing, sales and marketing.

False positive: An error condition returned by a monitored device where no error condition actually exists. A typical example is a device alerting an MPS provider that it is low in supplies when indeed it has adequate operating levels. Shipping supplies for false alerts can erode margins.

Leakage: These are the consumables shipped for contracted devices that are utilized outside the program and represent a loss to the MPS provider. This may take the form of misdirected stock up to outright theft of supply items

Mission critical devices: Imaging devices that are required to maintain maximum operational functionality.

Page coverage: Amount of ink or toner covering a printed or copied page. Higher coverage translates to higher supply usage. In turn, this depletes the supply item sooner thus translating to higher costs. Most usage models are based upon the stated page coverage of 5 percent per supply item.

Safety stock: Refers to reserve supply stock on the shelf used for immediate replacement upon need.

Shrinkage: see leakage.

Supply item or supplies: Toner and non-toner consumables that have rated yields and can be replaced by the customers. These are also known as customer replaceable units (CRUs) or consumables.