



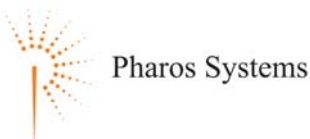
**Pharos Systems**  
*making every print an intelligent decision™*

# Enterprise Print Management Strategy

## American Electric Power Case Study

January 28, 2005

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# Executive Summary

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## The Customer

American Electric Power Company, Inc. (AEP) is a public utility holding company and one of the largest power distributors in the US. Its electric utilities serve nearly five million customers in 11 states and have 38,000 MW of primarily coal-fired generating capacity. AEP currently has over 600 locations throughout the United States, including offices, service centers and power plants. The employee population varies from low, based in remote field service locations, to highly concentrated corporate facilities.

## The Problem

AEP identified an enterprise print management issue by noting the high cost difference between producing output on copiers, fax machines, network and desktop printers. AEP sought to achieve tangible cost savings across the enterprise's copiers, fax machines and printers, while increasing internal customer satisfaction and job efficiency.

AEP faced significant challenges to reduce costs in print:

- Significant expense associated with the widely distributed print output devices.
- No centralized enterprise-wide print management strategy in place
- Only a limited focus on total cost of ownership - the best measurement to reduce and eliminate cost.
- The need for technology to route print to the most efficient output.
- Declining volumes at internal copy/print centers meant that fixed costs were not being fully absorbed.

## The Solution

AEP selected PathForward (acquired by Pharos Systems International in September 2009) to develop an enterprise level document and print management strategy that would:

- Reduce operating expenses in all facets of print, improve end user/customer experience and satisfaction
- Identify the synergies across all departments performing functions related to print
- Benchmark existing costs and processes for each component of the document lifecycle

- Provide implementation guidance for a centrally managed enterprise print management strategy.

PathForward used its proven methodology to assess the spectrum of print capabilities in the enterprise, identify the gaps between current processes and benchmarks for best practices, and then design an optimal future enterprise strategy. Additionally, AEP and PathForward implemented a pilot program to prove the success of the strategy. Finally, PathForward provided AEP with a complete implementation plan, and is aiding AEP to realize results.

## Value Provided

The results that AEP's Enterprise Print Management Strategy should achieve are dramatic: a cumulative savings of almost \$10M over 6 years, and total cost of ownership for print output cut by 40%.

# American Electric Power

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American Electric Power Company, Inc. (AEP) is a public utility holding company that directly or indirectly owns domestic electric utility subsidiaries and varying percentages of other subsidiaries. Besides being a top North American energy trader, the holding company is one of the largest power distributors in the US. Its electric utilities serve nearly five million customers in 11 states and have 38,000 MW of primarily coal-fired generating capacity.

From an administrative perspective AEP currently has over 600 locations throughout the United States. The employee population varies from low, based on remote field service locations, to highly concentrated corporate facilities.

In line with these steps, AEP General Services and Information Technology worked together to pursue “an integrated strategy with other business units for managing print related office equipment throughout the enterprise”.

Office Services is responsible for many of the corporate services in AEP’s 600 buildings throughout the country including all copiers, fax machines, and 10 regional copy centers. Desktop and network printers are managed by the Information Technology organization.

## AEP Challenges in Print Management

The focus of AEP was to identify the needs of the corporation then reduce the cost and quantity of copiers, printers and fax machines. Additionally, AEP wanted to increase internal customer satisfaction and achieve tangible cost savings within current print functions across the enterprise.

AEP was challenged to eliminate or reduce costs due to the following issues:

- Significant expense for widely distributed print output devices (copiers, fax machines, network and desktop printers, and copy centers)
- No centralized enterprise-wide print management strategy in place
- Limited focus on total cost of ownership - the best measurement to reduce and eliminate cost
- Need for technology to enable the routing of print to the most efficient and least cost output capability in the organization
- Declining volume in the copy center, and copiers largely due to dramatic increases in the number of network and desktop printers

The reasons behind the challenge were several issues at the enterprise level, and in each area of print output devices.

## Enterprise Level

- The population of distributed print devices approached 11,000, with this number growing on a daily basis. This population represented an Employee to Device Ratio for designated office workers of close to 1 to 1 - extremely inefficient based on industry benchmarks of 8 to 1 at a minimum, and 12 or even 18 to 1 as a best practice.
- The enterprise level cost per impression was significantly higher compared to industry benchmarks. The range of costs was \$0.0453 to \$9.64 per page - largely due to sub-optimized output devices.
- There was no program to encourage end users to seek out the least cost output device for their printing requirements.

## Copiers

- The average monthly volume was steadily declining since the contract was initiated. This decline in volume was largely attributed to the increase in network and desktop print devices.
- The cost per copy contract allowed for 6.1 million impressions per month with actual usage averaging 4.7 million impressions per month. Contract efficiency was 78%. This meant that AEP was paying for close to 17 million copies per year that it was not using.

## Fax Machines

- The fax machine population was excessive with the largest expense attributed to direct phone line charges.
- Consumables and service for fax machines were purchased separately based on need, with no centralized program management in place.

## Printers

- Printers represented the highest area of excess expense. The network printer population approached 4000, with close to 200 different models and configurations. The desktop/local printer population was similar in size, but with close to 400 different models.
- The average cost per page across the printer population was high, and moving higher, due to the uncontrolled growth in the population. More devices lowers the utilization of each asset and increases the cost per page.
- There was no centralized program management for printers. Although AEP assisted with management of network printers, no one group was responsible for the desktop printers. These devices were purchased under an ad hoc basis, with various leases and contracts with different vendors and different expiration dates.



- End-users printed with little or no incentive to use better, more cost effective alternatives that currently existed within the organization.
- Devices were not shared across workgroups effectively and, were purchased or leased by individual departments, as necessity arose.
- Tracking assets and corresponding expenses for each unit was challenging. Multiple databases must be searched in an attempt to gain consensus on the latest tracking measurement.
- Lack of technology, such as printer management software and audit and tracking software, prevented true knowledge of total costs, enterprise-wide asset count, locations, and volumes, and prevented effective management of these assets.
- Service expense was significant. The services program was managed by a number of disparate components using a multi-tier/multiple subcontracting approach.

## Consumables

- There was no centralized order process for consumables, and departments could requisition supplies at any time through any vendor. Requisition information was not captured in a centralized manner, indicating a lack of leverage for enterprise expense around consumables.

## Copy Centers

- There had been a consistent decline in volume within the 10 regional copy centers in recent years. Total cost per copy was rising due to reduced absorption of fixed costs.
- There was a general lack of awareness of the capabilities of these copy centers in the user population. Although there was a web-based submission for directing jobs to the copy centers, the overall assessment showed that the web-site was not attractive and was not being used.

## External Print Procurement

- Although the expense associated with external print procurement was small compared to other corporations its size, there were over 300 active print vendors, indicating a possible lack of leverage using a highly distributed approach.

## AEP Objectives

According to Jeff Parlet, AEP Director of Office Services, "It was clear that we needed a process and strategy that integrated the functions and capabilities of Office Services, IT, and our business units to coherently manage our print throughout the enterprise. We selected PathForward to help us because they were independent of vendor bias, and could offer top-quality analysis and guidance based on their depth of experience."

AEP selected PathForward to develop an enterprise level document and print management strategy that would:

- Reduce operating expenses in all aspects of print
- Improve end user/customer experience and satisfaction
- Identify the synergies across all departments performing functions related to print
- Benchmark existing costs and processes for each component of the document lifecycle
- Develop and provide implementation guidance for a centrally managed Enterprise Print Management Strategy

# PathForward

(Note: Pharos Systems International acquired PathForward in September 2009. At the time of the engagement with AEP, PathForward was an independent Strategic Business Unit of Standard Register.)

PathForward is a professional services organization dedicated to delivering innovative and impactful strategic document management solutions to optimize the use and flow of documents

PathForward delivers thought leadership around documents and output strategy, software integration and implementation and sourcing management. These best-in-class solutions are based on PathForward’s unique capabilities to address each stage of the business document lifecycle and to provide recommendations based on AEP’s specific business objectives.



## Project Methodology

PathForward employs a project methodology that is grounded in the proven principles of Lean Six Sigma.

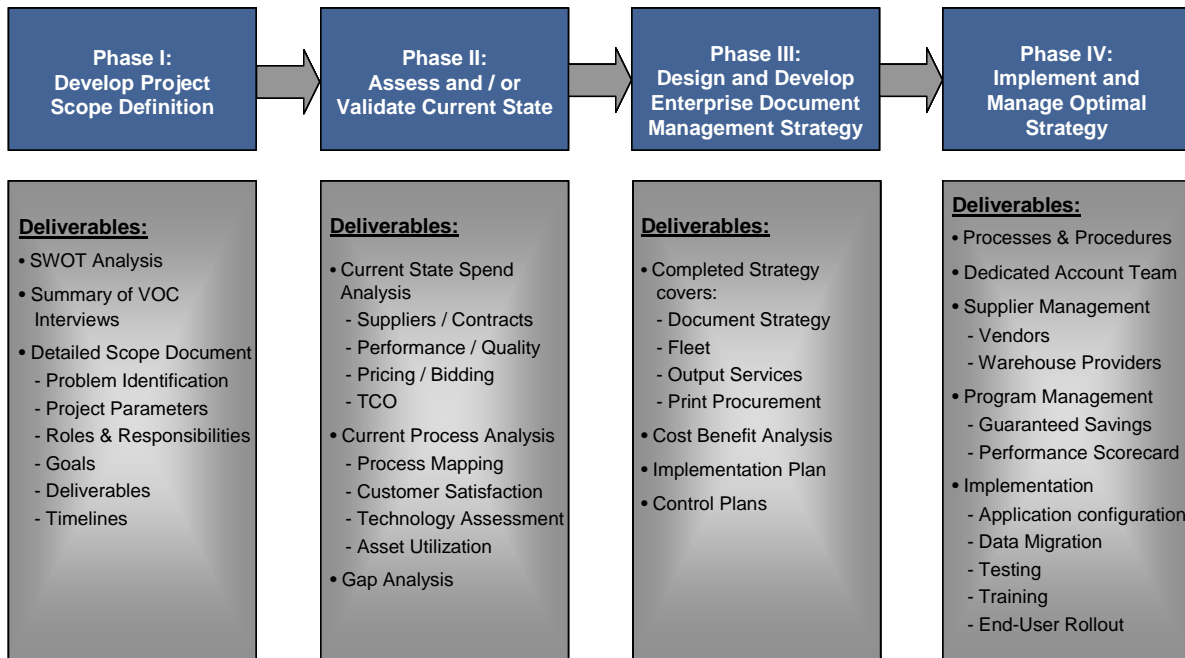
PathForward develops a detailed project scope collaboratively with its clients. This ensures that the project is in line with key strategic goals of the organization and that all objectives and deliverables are clear prior to the beginning of any engagement.

Once the project is defined and approved, a dedicated team begins working with the client to collect all relevant data to effectively measure and analyze the current state of the operation. Statistical analysis

and trending is used to ensure that all conclusions drawn are fact based and provide a solid footing for the development of the optimal enterprise strategy.

To ensure maximum results, the final phase in the PathForward process requires dedication of client resources working together with PathForward professionals to implement the agreed upon solution.

### Methodology for Developing an Enterprise Document Management Strategy



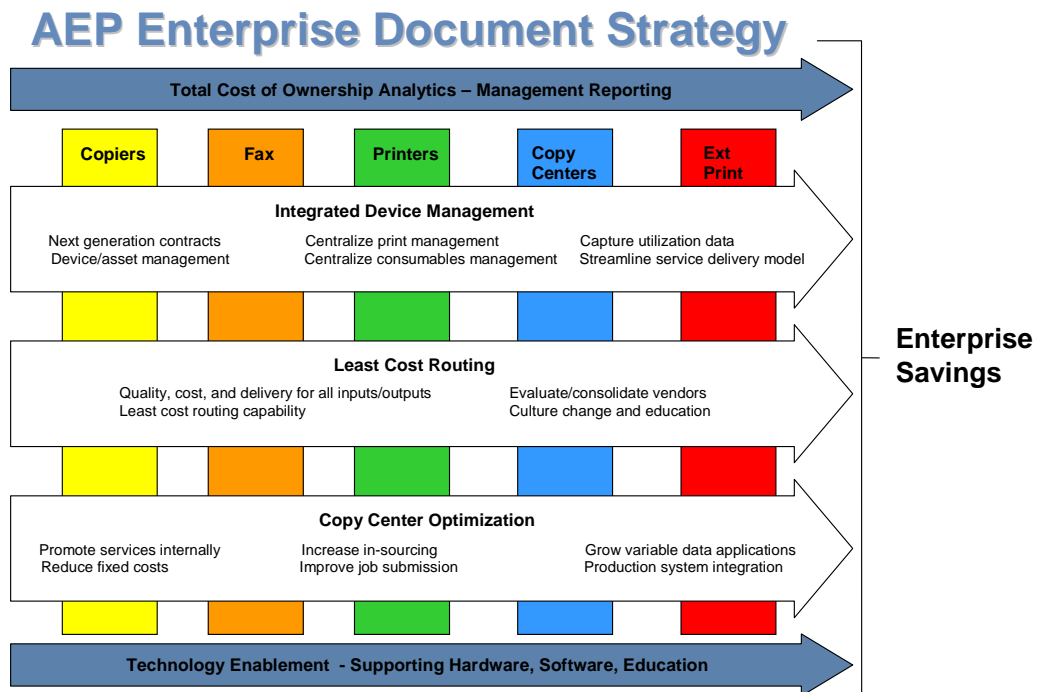
# AEP Strategy Components

The AEP enterprise document strategy was composed of three major components:

- Integrated Device Management - Reduce the total cost of ownership of the copiers/faxes/printers to industry benchmark levels. Provide visibility, accountability and control of the total cost of ownership of print output.
- Least Cost Routing - Implement technology and educational programs to send the right print application to the right output device or to copy centers. Optimize the quality, cost and delivery of printed documents to the end-user and the enterprise as a whole.
- Copy Center Optimization - Increase the utilization of the copy centers and reduce the total cost per copy to the enterprise.

These strategy components were supported by two additional elements:

- Total Cost of Ownership Analytics - Provide a total cost of ownership model for on-going awareness, visibility, accountability and control of all components of the enterprise document strategy.
- Technology Enablement - Implement appropriate technology enhancements that accelerate achieving the goals of the AEP enterprise print strategy, and provide a tool set for on-going efficient workflow, process monitoring, management visibility and control.



## AEP Pilot Program - Proof of Concept

The AEP/PathForward team conducted a highly successful and insightful pilot program from April through June, 2004. This pilot program focused on 6 locations representing a cross-section of the population at AEP, and numbering almost 500 people.

PathForward provided print and asset discovery software to AEP IT, which was deployed on PCs and print servers for the pilot group after evaluation. The software agent unobtrusively monitored both local/desktop and print server based printing, and PathForward continuously analyzed and correlated the activity with the physical print asset inventory at each pilot location.

The AEP/PathForward team identified six multi-function device suppliers (MFD – copy, print, scan, fax) for evaluation. Each vendor presented their solutions around key criteria, and 4 vendors were selected to provide their machines for a trial period beginning in May 2004.

PathForward conducted extensive pre-pilot “voice of customer” surveys and interviews with the population of the pilot group to discover current print habits and knowledge of output capabilities.

PathForward analyzed and summarized both the voice of customer surveys and the actual print data from the pilot group and present this to the AEP project management team. After evaluating physical print assets on floor plans, PathForward recommended devices to be removed, and MFDs to be inserted at each of the pilot locations. This step established a benchmark for current need/use of the devices needed to develop the pilot and final program strategy.

Additionally, PathForward produced a prototype for a Least Cost Routing software agent. The agent analyzed the print jobs being submitted, and produced an informative pop-up message if the print job was not being directed to the most cost-effective device. The final agent was deployed to the pilot groups simultaneously with the deployment of MFDs.

**AEP Imaging Strategy**

The Print Smart initiative has identified that your print job could be produced more cost-effectively on the new multi-function device.

Options  
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- Click on the Print Smart button, go to File/Print from the Application toolbar and select the Print Smart device from your list of printers, or,
- Click on the Continue button to print to the current device.

Thank you for making the right choice.

PageCount:

Current Cost:

Print Smart Cost:  B&W  Color

Job Control

**Print Smart!**

AEP successfully completed reconfiguration of the pilot groups by removing targeted print assets, and appropriately inserting MFDs with the help of the chosen suppliers.

After reconfiguration, the print asset discovery software continued to monitor print habits. PathForward analyzed this data – representative of the potential future enterprise strategy – and summarized the results to AEP management in August 2004.

## Achieving Results

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Key insights gained in the pilot program help guide and refine the final design recommendations of the enterprise strategy. Key elements of the strategy include:

- Submit print jobs based on least cost routing requirements. Deploy education to users to reduce print output in defined areas, but when print does occur, route it to the most efficient capability.
- Deploy a utilization agent to all PCs and print servers. The utilization agent should precisely map assets deployed and print requested. Using this data, the organization should target a 6:1 employee to device ratio in high priority locations and move to a 12:1 ratio over time, by deploying MFDs and removing the most costly printers.
- Implement an enterprise level print asset management program to aggregate and report print requirements via on-line, readily accessible and meaningful mechanisms for management use.
- Reduce the printer population by 75% and standardize a vastly reduced number of models and configurations – all available from the existing inventory of printers; no new investments should be needed.
- Standardize and restrict the available catalog of consumables so that users can only order pre-negotiated and identified consumable products. The consumable supplier should supply regular reports in defined format so that the print asset management solution can aggregate and correlate this information for management reporting.
- Deploy email to fax capability to reduce hard copy fax input/output. Reduce the existing population of fax machines to nearly zero by deploying MFD appropriately.
- Deploy a centralized print management responsibility that coordinates the efforts between key internal stakeholders: Office Services, IT, business units.
- Examine potential MFD suppliers through a formal RFP process, targeting a flat cost per impression rental inclusive of supplies and maintenance.
- Seek to make printer maintenance part of the contract with the future MFD supplier to achieve a distributed total asset management solution and simplify maintenance of the printers. Seek an MFD supplier who can be responsible for continuing reconfiguration of the all output devices to meet user requirements within defined business objectives.
- Leverage the relationship with existing consumables suppliers to define a restricted catalog around toner, paper, etc.

With these actions, and others defined in a comprehensive implementation plan provided by PathForward, AEP should expect to achieve these results from its enterprise print management strategy:

Key Measurement	Impact of Strategy
<b>Employee to Device Ratio</b>	Changed device to employee ratio from 1:1 to 6:1 as an initial step, evolving to 12:1 over time.
<b>Total Cost of Ownership</b>	Reduced 40%
<b>Total Cost Reduction</b>	Approximately \$10M over 6 years

## In Conclusion

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Many factors complicate the landscape of print output for businesses today:

- A proliferation of technology
- Desktop printing
- Facilities management options
- Computers and software for document creation
- Print vendors mergers and acquisitions
- Need to service mobile professionals, etc.

Many companies are unclear about their true enterprise-wide costs, counts, locations, and volumes of distributed output devices, dedicated output services and procurement of print.

The PathForward approach offers clients an objective, consultative, and fact based approach to making a clear and critical decision relative to the purchasing, utilization and management of document lifecycle components. PathForward provides a clear picture of what the client does and does not know, including total cost of ownership, a vision of the optimal future state, including a comprehensive cost benefit analysis and the comprehensive roadmap to get them there.