

ecowiseSM: Environmentally-Friendly Mailstream Optimization Accelerating Efficiency, Improving Sustainability

Best Practices for Realizing the Future
of Carbon-Conscious Mail Today

WHITE PAPER



Table Of Contents

Executive Summary

Issues and Trends

From Traditional Mail to an **ecowise** Environmentally-Friendly Mailstream Optimization

The Traditional Mail Process

The Mailpiece Life Cycle

Carbon Emissions and the Mailstream

Opportunities for an Environmentally-Friendly Mailstream

Implementing an **ecowise** Mailstream solution—a Suggested Approach

ecowise *Assess*. Initial Assessment and Analysis.

ecowise *Plan*. A Practical and Verifiable Roadmap.

ecowise *Create*. Implementing an Environmentally-Friendly Mailstream.

ecowise *Validate*. Validated Evidence of New **ecowise** Performance.

ecowise *Brand*. Promoting **ecowise** Recognition Across Multiple Channels.

Value Benefits of an **ecowise** Mailstream

Why an **ecowise** Mailstream Is Good Business

Summary

The Future of Carbon-Conscious Mail

Executive Summary

Issues and Trends

Environmental stewardship is an issue that is generating increasing attention around the world—among policy-makers, business leaders, environmentally conscious companies, and concerned citizens. It is an issue that impacts virtually every aspect of life—business, economics, our natural resources, and the well-being of future generations. As the sustainability movement gains momentum, more consumers and businesses are demanding evidence of sustainable business practices when they choose prospective business partners. As they do, it is becoming clear that sound environmental stewardship is not only good public policy, it is sound business practice.

The growing focus on environmental responsibility is reflected in the development of initiatives. These include the Dow Jones Sustainability Index, established in 1999 to track the performance of forward-thinking companies that lead sustainability efforts around the world, the Carbon Disclosure Project, and the U.N. Global Compact, to name a few. Environmentally conscious companies are taking action to be listed on these indexes and to comply with environmental requirements, regulations, and company standards.

The mailstream is no exception. Forward-thinking print-to-mail operations are optimizing traditional mail processes to improve efficiencies, eliminate waste, and minimize environmental impact at every touch point. Given the rising tide of concern about climate change and carbon footprints, the pressure is on to provide high-quality, environmentally-friendly mail, to reduce emissions, improve energy efficiency, and create more strategic mailings that engage audiences while minimizing waste and ecological impact.

Modern print-to-mail operations are migrating to environmentally-friendly processes for a variety of reasons. The adoption of sustainable business practices builds a higher level of customer trust. It enables greater corporate and social responsibility. It can even help change public perceptions about the environmental impact of mail. Moving to more sustainable practices can help improve productivity and minimize downtime, while enabling companies to meet corporate social responsibility and compliance requirements. For example, the Carbon Disclosure Project (CDP) requires companies to disclose carbon emissions to provide empirical evidence of sustainable business practices. However, while more and

more companies are eager to obtain CDP ratings, most have limited experience and understanding of how to achieve that compliance.

The reality of climate change has fundamentally changed the way businesses strategically manage their resources, most importantly the resources and costs of labor and energy. Businesses, products, and services will be subject to carbon taxes or carbon trading in the near future, and therefore must understand and prepare for these eventualities.

This white paper explores the trends driving an intensifying focus on respect for human and natural resources, environmental stewardship, and environmentally-friendly business practices. It examines traditional postal network processes, CO₂ emissions at various touchpoints in the mailstream including upstream and downstream processes, opportunities for optimization, and a suggested approach to a more environmentally-friendly print-to-mail process. Finally, it describes the value benefits that can be realized by implementing a Pitney Bowes® ecowiseSM mailstream solution.

From Traditional Mail to an ecowiseSM Environmentally-Friendly Mailstream Optimization

Extending Best Practices Throughout the Mailstream The Traditional Mail Process

The traditional mail process is a cost-driven model that was originally designed with a focus on improving productivity and cost efficiency. Historically, the print-to-mail process was a labor-intensive, time-consuming manual construct. With the advent of sophisticated output management systems and automated document factories, print-to-mail operations were able to automate processes and centralize control. These capabilities enable mail operations to improve quality and process visibility, eliminate defects, minimize bottlenecks, manage capacity, and get output to market faster and more profitably. However, while output management and automation solutions are market-transforming initiatives in terms of productivity and efficiency, one area of print-to-mail optimization has been largely overlooked—environmental performance and its costs and impact.

The Mailpiece Life Cycle

In a traditional mail workflow, documents are designed, created, and composed in the document creator/owners' environment. Once created, paper and envelopes are sourced, printed and sometimes reprinted, often on different platforms, devices, and even locations, which complicates the process. In many cases, the next step is to transport the documents to inserting equipment, prepare them for mailing, and then transport them again to a postal facility for processing. Often the documents are transported to yet another facility for outgoing sorting. Once sorted, the mail is typically transported via ground or air to an incoming sorting facility, then to a delivery office, and ultimately delivered to the intended recipient.

In this workflow, paper production and transportation clearly accounts for the lion's share of carbon emissions. And, while mailers have little control over inter-postal logistics and paper production, there are still rich opportunities to remap their own processes in this space to minimize environmental impact. Like many others, the print-to-mail market faces a new reality that's challenging accepted ways of doing business. Transforming the mailstream to a more carbon-conscious process represents a shift in focus from a cost- and efficiency-driven model to a holistic model that combines cost, quality, productivity, compliance, increased communication effectiveness and environmental performance in one highly efficient construct.

Carbon Emissions in the Mailstream

When it comes to optimizing the mailstream for environmental performance, the best place to start is with an understanding of where carbon emissions are generated throughout the mailpiece life cycle. Various components of the production mail process create different levels of carbon emissions. By pinpointing where those emissions are created, companies can optimize processes to reduce emissions and their related costs and business risks throughout the mailstream.

As mentioned earlier, one of the two key areas where the majority of carbon is emitted is in the transportation—of paper, envelopes and inserts to the mail facility; of printed output to inserters; from inserters to sortation equipment, and, of course, in inter-postal transportation. While much of the postal logistics process is beyond the mailers' control, there are opportunities to incorporate new processes and technologies that minimize reliance on carbon-intensive transportation. In addition, paper production is a big component of the equation. However, there are opportunities to bring in state-of-the-art technologies in this space to reduce carbon emissions.

Companies that invest in green strategies and practices will also find a competitive advantage as environmental standards and certifications evolve for the mail industry.

Opportunities for an Environmentally-Friendly Mailstream

Case in point—

1. Multi-channel delivery is a highly popular distribution option that complements the postal network as a distribution medium.
2. The TransPromo phenomenon—consolidating multiple documents in one envelope by combining transactional and promotional messages minimizes paper consumption as well as the volume of mail that is printed and transported.
3. Choosing manufacturers of raw materials in closer proximity can reduce transportation requirements.
4. The issue of returned mail.

There are opportunities to reduce carbon emissions in other areas of the mail process. Starting with design and address cleansing, as well as tackling the issue of returned mail. From an environmental perspective, returned mail generates unnecessary handling, wasted paper, energy, labor and postage costs. Reducing the volume of misdirected mail is a great way to reduce one's carbon footprint.

Optimizing the Production Process

As for print production, most manufacturers of printing equipment are engineering sustainability and energy efficiency into their products. In addition, print operations can take action to improve environmental performance in many ways—whether it’s using recycled or Sustainable Forestry Initiative (SFI)-certified paper and environmentally-friendly toners, chemicals, and inks; choosing energy-compliant devices; or printing in duplex or multi-up to decrease waste, paper consumption, and emissions.

For print-to-mail operations using older devices that weren’t designed for optimal paper usage, lower emissions, energy conservation or reusable components, there is an opportunity to adopt newer technologies that reduce waste production, carbon emissions and energy consumption.

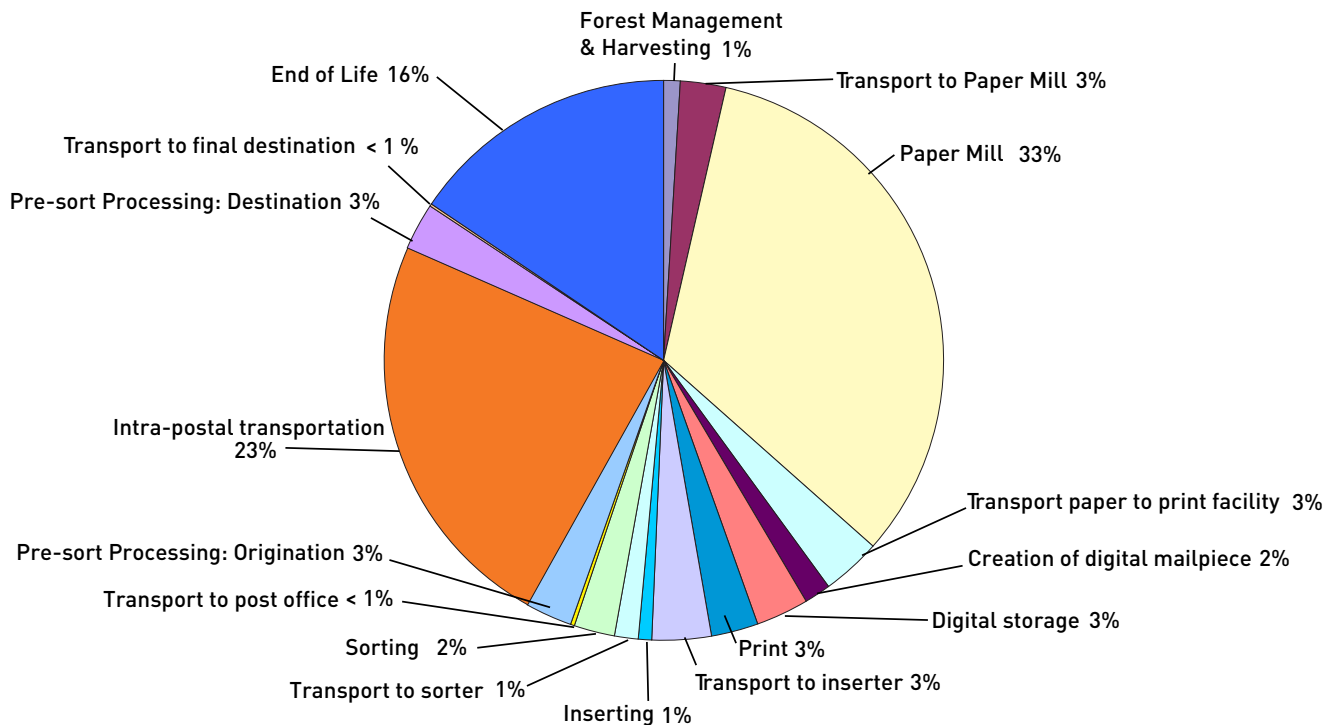
Rethinking traditional processes by taking advantage of new technologies also offers opportunities for improvement. For example, many black-and-white transactional applications still combine formatted variable data with pre-printed offset shells that contain static and corporate/branding messaging in black-and-white or color. The printed stock/stationery is loaded into the input feed tray of a black-and-white cut-sheet

printer or pre-printed on a roll that is fed into a black-and-white continuous feed printer. With the advent of powerful new highlight and full-color continuous feed digital printing systems, mailers can replace costly pre-printed forms-based processes with a total white-paper-in solution in two ways:

- » Redesign/refresh and compose print applications to include the color form in the print stream, optimized for digital color printers
- » Overlay forms electronically on top of the variable data before printing on a digital color printing system

These options eliminate the need for pre-printed offset forms, not only saving printing and warehousing costs, but providing sustainable benefits. From an **ecowise**SM solution perspective, the white-paper-in process minimizes the need to transport the shells and maintain and then dispose of large inventories of obsolete forms. Given the enormous volume of transactional documents printed today, these two options can potentially deliver high levels of ROI, while minimizing the carbon footprint of every document produced.

Percentage of CO₂ generated across the Mail Life Cycle



Disclaimer: All data related to this study is based on available published information that was compiled by Pitney Bowes, includes estimates for all mileage-related data. Results will vary by production facility geography and actual processes that are deployed and are subject to change.

Managing Emissions in Inserting and Finishing

As for insertion, there are certainly opportunities to reduce emissions. For example, many mailers produce inserts at remote, off-site locations and then transport them to the print-to-mail facility, an approach that can generate unnecessary transportation requirements. Sourcing inserts closer to the point of insertion reduces carbon emissions.

This is where the TransPromo approach offers considerable benefits. In this approach, highly targeted, database-driven marketing messages are delivered as text and images that are printed inline on a bill or statement or delivered via a mix of inserts and “TransPromo” or insert marketing. In many cases, mailers can reduce emissions output through a combination of variable inserts and/or sourcing inserts closer to the point of insertion.

The finishing phase of the traditional mail process also offers opportunities for improvement. Many print-to-mail operations use devices that were not designed to meet U.S.-based ENERGY STAR standards and use excess amounts of energy, floor space, and heating and cooling requirements. In addition to migrating to energy-efficient devices and sourcing inserts closer to the point of insertion, mailers can also integrate all aspects of the finishing process closer to the point of insertion. This process improvement reduces transportation and storage requirements, and thereby lowers carbon emissions. Finally, there is an opportunity to implement more capable devices that are both energy-efficient and Restriction of Hazardous Substances (RoHS) compliant.

A Leader in RoHS Compliance

Pitney Bowes is leading the way in meeting the requirements of the European Union’s Restriction of Hazardous Substances (RoHS) directive, which requires that electronic products be free of lead, mercury, cadmium, hexavalent chromium, and brominated flame retardants. Employees across our operations collaborated to achieve RoHS compliance. Today, we have more robust processes, better supplier relationships and a range of RoHS-compliant products.

Paper or Digital Storage?

From a storage perspective, many mailers continue to maintain large inventories of printed forms, books, and materials stored in physical spaces that must be heated and cooled. As mentioned earlier, many mailers are replacing pre-printed materials by producing entire documents electronically on digital color printing systems. By digitizing the entire document, they can then store the files electronically. Eliminating the need to store the materials in a warehouse reduces the volume of hard copies stored, along with floor space and warehouse space. It also reduces the resulting energy consumption and carbon emissions.

Given the potential benefits, optimizing the mailstream for efficiency, cost benefits and environmental performance is clearly an idea whose time has come.

Transforming the Print-to-Mail Process

A good mailpiece delivers its message efficiently and with maximum quality and integrity. A great mailpiece delivers that same message with maximum customer impact and minimal impact on the environment. For print-to-mail operations, this means looking at every touchpoint in the mailstream to identify opportunities to decrease energy use, waste, and carbon emissions. By transforming traditional mail processes into sustainable processes, mailers can provide high-quality mail at the lowest cost, making the most efficient use of transportation, postage, labor, materials and consumables.

Implementing green practices delivers both direct and indirect benefits. Many businesses find that when they increase awareness and focus on environmental performance, they also operate more efficiently, capitalize on more market opportunities, and capture new revenue streams. Green business not only helps reduce the overall carbon footprint, it can result in better financial performance, spur revenue growth, reduce operating costs, boost customer trust, and increasingly, deliver an edge over the competition. In fact, those companies that do not develop a green strategy may find themselves at a disadvantage as customers seek out business partners committed to reducing energy consumption, emissions, and waste.

Implementing an **ecowise**SM Mailstream

A Suggested Approach

As protecting the earth's natural resources becomes a leading priority, Pitney Bowes is committed to helping print-to-mail operations adopt best practices that minimize environmental impact. Pitney Bowes is a recognized leader in the area of environmental stewardship and continues to make sustainable growth a priority. We know from experience that examining, improving, and leveraging eco-friendly business practices can deliver more than superior environmental performance. In fact, it can deliver such significant business results that it is no longer a nice-to-have—it's becoming a business imperative.

To help you assure customers and stakeholders that you are committed to the issues that matter most to them, Pitney Bowes has developed the **ecowise** solution, a validation program designed to help print-to-mail operations connect with the future of environmentally-friendly mail today whether it's calculating, understanding and reducing your carbon footprint in and beyond the mailstream; converting paper into metric tons of carbon equivalent emissions; consolidating mail pieces; responding to Carbon Disclosure requests, or filing reports for the Dow Jones Sustainability Index, the **ecowise** program provides a practical, verifiable roadmap for improving environmental performance through five essential stages.

ecowiseSM *Assess*—An initial assessment and analysis Pitney Bowes **ecowise** program experts can work with you to analyze your current mailstream processes and determine your current level of eco-performance. These specialists analyze the findings using an estimator tool and prepare a gap analysis that identifies opportunities for improvement and potential value benefits.

ecowiseSM *Plan*—A practical and verifiable roadmap In the **ecowise** Plan phase, our specialists develop a best-fit strategy for lowering your carbon footprint, based on the data collected in the assessment phase. This roadmap details specific actions to be taken, along with steps, best practices, processes, procedures, and technology to create an **ecowise** mailstream by remapping processes and leveraging eco-related hardware and software solutions.

ecowiseSM *Create*—An implementation of the **ecowise** Plan A green mailstream is a smart mailstream. This phase delivers a solution and applies a value to the benefits of the **ecowise** roadmap. **Ecwise** program specialists then work with you to implement the roadmap by revising existing processes and tracking environmental gains.

ecowiseSM *Validate*—Validated evidence of the new **ecowise** performance.

Each customer receives a certificate of completion that documents its eco-performance level. This validation and certificate provides a platform for communicating the company's commitment to environmental responsibility and sustainability of the mailstream. It also establishes a baseline for continuous improvement and future validations

ecowiseSM *Brand*—Promoting **ecowise** recognition across multiple marketing channels.

The **ecowise** program permits validated mailers to publicly highlight their investments and environmental performance through traditional and innovative approaches. Validated mailers will be able to imprint endorsed **ecowise** program logos and messages on Web sites, brochures, articles and presentations.

Why an **ecowise**SM Environmentally-Friendly Mailstream Optimization Is Good Business

There's no doubt about it. Taking an active and responsible approach to both corporate citizenship and environmental issues can make a successful company even stronger. Today, more than ever, it makes good business sense to demonstrate a commitment to sustainable business practices and to environmental and social responsibility.

Implementing an **ecowise** mailstream program delivers both immediate and long-term benefits. With an **ecowise** environmentally-friendly mail validated operation, customers can not only reduce carbon emissions and environmental impact: they can produce more accurate, effective, auditable and targeted mailpieces using the most efficient production techniques, technologies and processes.

From an environmental perspective, minimizing the environmental impact of the mailstream enables customers to take a leadership role as responsible corporate citizens and environmental stewards. With our mailstream optimization tools, equipment, and **ecowise** program validation, customers can improve operational and energy efficiency, capture new revenue streams, and reduce costs—while reducing transportation and fuel usage, postage, labor, energy usage, material and consumables consumption, waste and carbon emissions.

One of the most outstanding benefits of instituting an **ecowise** program validated mailstream is that mailers can promote the investment made in environmental performance and better understand and manage the impacts of carbon tax or carbon trading which are on the horizon. For these reasons and more, designing and implementing an **ecowise** mailstream is a smart business decision that delivers lasting returns.

Summary

The Future of Carbon-Conscious Mail

In today's business environment, the rewards of an **ecowise** mailstream program couldn't be greater. A commitment to environmental responsibility and sustainable business practices can mean the difference between winning a customer and losing one.

Pitney Bowes offers end-to-end experience and expertise in developing and implementing an **ecowise** mailstream program that transforms traditional, mail-intensive processes into more carbon-conscious processes that can help minimize environmental impact. For more than 87 years, the world's leading mailers have relied on us for effective mailstream solutions. We have continually added skills, capabilities, technologies, and intelligence to the mailstream to keep pace with changing priorities and requirements. Improving environmental performance is one of the next essential areas of focus. As the emphasis on sustainability grows, customers can rely on Pitney Bowes **ecowise** solutions to position them for the future of carbon-conscious mail.

In summary, the integration of sustainable business processes and **ecowise** mailstream optimization practices promises to transform the print-to-mail process, enabling responsible businesses to improve their position with stakeholders and constituents, while delivering infinitely higher levels of efficiency, cost savings, business value and profitability.

Pitney Bowes is a leader in end-to-end integrated mail solutions.

Our leading-edge hardware, software and services can help you grow revenue, cut costs and strengthen customer loyalty, to drive your long-term profitability.



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