Moving toward sustainable in-plant printing.

Together, we’re working to protect our environment.
Today’s in-plant printing operations may be greener than you think, with a number of ways that they’re reducing their environmental impact.

Implementing sustainability best practices can help your in-plant printing operations focus on what matters most: delivering value to your organization. It means doing things in a way that’s repeatable and that uses resources efficiently. Because that’s good for your organization. Good for your in-plant. And good for our environment.
A sensible way of doing business.

In-plant operations are developing greener practices while at the same time reducing their costs and delighting their customers. At Xerox, we’re proud to be part of the solution. Our customers have benefitted from our sustainable practices for more than 40 years:

- Targeting our products and supplies with efforts to eliminate toxic materials, enable recycling, and reduce waste.
- Pioneering the reuse, remanufacturing, and recycling of imaging equipment.
- Providing supplies recycling programs that have kept more than 145 million pounds of waste out of landfills over the last 20 years.
- Developing green solutions as a top priority in our research and development efforts.
- Reducing our company-wide carbon footprint with a 31% reduction in greenhouse gas emissions (from 2002 through 2010).
- Helping to shape the EPA’s ENERGY STAR® program for imaging equipment, and continuing to meet increasingly stringent requirements for energy-efficient products.
- Certifying all of our major manufacturing sites to ISO 14001, an international standard for environmental management.
- Applying environmental requirements in our paper sourcing, as well as offering Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC) Chain of Custody certification.

Sustainability is a journey.

We’re committed to helping our in-plant customers every step of the way. Our production solutions incorporate sustainability initiatives in multiple ways so that they can focus on what matters most:

Delighting their customers by offering environmentally responsible applications and services while still delivering the desired quality and visual impact.

Producing more jobs using sustainable practices that help them streamline with Web-to-Print and maximize the effectiveness of each printed page.

Reducing their costs through less waste, automated workflows, lower energy consumption, and more.

Growing their business with better-for-the-environment production and cross-media capabilities that they can leverage to market their services and acquire new work.
Driving the trend toward smarter printing.

**In-plants are limiting unnecessary printing—while also cutting costs and adding value—with the help of digital printing.** Using short-run, on-demand printing can reduce environmental impact versus large-run, offset operations, due to more efficient processes, automated workflows, and more effective output using one-to-one communications.

**Just-in-time, on-demand production.**

With the speed, quality, and cost-effective short-run capabilities enabled by today’s digital presses, it’s possible to print only the number of copies needed, when they’re needed. So instead of having to anticipate needs and print a year’s worth at one time, jobs can be produced to precisely satisfy current demand—then efficiently reprinted as needed.

**Shorter runs, less paper**—Excess quantities don’t need to be printed simply to justify offset printing setup costs. Customers can order and receive only what they need.

**Less waste due to obsolescence**—With smaller quantities printed more frequently, materials are less likely to become outdated and, therefore, enter the waste or recycling streams.

**Reduced warehousing**—Printing on demand eliminates the need to store and manage inventory, and the associated energy required to run a warehouse.

**One-pass printing**—Documents that used to require offset shells can be printed digitally with highlight or full color in one pass. So the environmental impact of the offset process is eliminated on these jobs, as well as the need to warehouse the preprinted shells.

**More effective communications**—Materials can be updated and improved regularly, so they have greater relevance and will more likely be used rather than disposed of.

**Using variable data for targeted communications.**

With digital printing technology, printed pieces can be personalized so that they are highly relevant to each recipient. This not only makes them more effective, but also can result in the need for fewer and smaller pieces, requiring less paper, printing, mailing, etc.

**Better response rates with fewer pieces**—Personalization is proven to generate results. Mailings are more likely to be opened, read, and acted upon rather than being treated as “junk mail.”

**Smaller, more targeted documents**—Using variable information, only what is relevant to the recipient is printed. As a result, fewer pages and/or a smaller size can be produced.

**More efficient, automated workflows.**

The environmental benefits of digital printing are found not only in the resulting output, but also in the workflow processes used to achieve it.

**Online ordering for a paperless workflow**—Print jobs can be electronically ordered, submitted, and tracked.

**Soft proofing for lower environmental impact**—Customers can receive and approve proofs of their jobs via the Internet and email, reducing paper usage as well as the energy required to send multiple rounds of paper proofs via ground transportation.

**Distribute and print**—Reduce the carbon impact of transporting printed materials by electronically distributing a job to the print location closest to the print requester.

**Less waste in production**—With digital printing, there is no make-ready. So every page that is output is part of the final order. An automated workflow helps the in-plant operation get it right the first time, as well as to enhance efficiency of its production equipment.
By shifting from traditional to digital printing, in-plant operations can reduce toxicity, pollution, and other negative effects as compared to offset printing. They’re making the transition to fewer chemicals and emissions while taking advantage of multiple opportunities for energy efficiency, reuse, and recycling. Plus, digital printing delivers the quality that their customers desire.

Replacing offset inks.
Traditional offset inks are petroleum based, resulting in the emission of volatile organic compounds (VOCs). By substituting soy oil for part of the petroleum oil, soy-based inks reduce VOC emissions. In contrast, digital printing solutions from Xerox use dry-ink toners composed of plastics, colorants, and small quantities of functional additives—so emissions of VOCs during printing should not be a concern.

Non-toxic toners—Xerox equipment uses non-toxic, dry-ink toners, which are not federally regulated as hazardous waste in the U.S. or Europe.

Improved indoor air quality—Digital printing results in lower emissions than traditional offset printing. With Xerox equipment, emissions such as ozone and dust are strictly controlled and well below regulatory requirements.

 Efficient application—With a transfer efficiency rate of nearly 100 percent, Xerox toners limit waste and cleanup requirements.

Lower energy consumption—Xerox Emulsion Aggregation (EA) toner, when available, requires approximately 20% less energy per page for manufacturing and printing as compared to conventional toners.

Minimizing impact.
In addition to the benefits of using toners, digital printing provides other environmentally responsible opportunities.

Supplies recycling—When recycling locally is not an option, Xerox pays for 100% remanufacturing/recycling of all genuine Xerox-branded supplies returned to our authorized recycling partner Close the Loop®. Xerox also pays for single-return shipment on selected items, and for all return shipments using the Xerox Eco Box or pallet return programs. See www.xerox.com/gwa for more details.

Equipment energy savings—Upgrading old equipment to more efficient products can save energy. The ENERGY STAR-compliant Xerox Nuvera® EA Digital Production Systems and many Xerox® DocuColor® products, for example, automatically shut off or power down when not in use, significantly reducing electricity usage.

Non-toxic glues—Available for most binding techniques, these products eliminate toxic fumes and waste-management issues.
In their efforts toward greater sustainability, in-plant printers are working with suppliers who can provide recycled papers and remanufactured equipment. In-plants recognize that their environmental responsibility goes beyond just their own production operations. Suppliers like Xerox recognize and embrace this obligation as well.

Greener papers.
Today’s expanded options for Xerox paper with recycled content deliver quality results with the brightness and machinability that in-plant printers and their customers demand.

Environmentally responsible paper suppliers—Companies that provide paper to Xerox for resale must meet stringent requirements. Xerox sources its paper from companies committed to sound environmental, health, and safety practices and sustainable forest management in their own operations and those of their suppliers.

FSC paper—Papers with the Forest Stewardship Council (FSC) certification label give added assurance by designating that they have been produced in a supply chain that adheres to internationally recognized standards for sustainable forestry.

Making wise equipment choices.
Reuse can reduce waste from going to landfills—a principle that can be applied to many devices used in the in-plant printing operation.

Remanufactured equipment—Xerox offers a range of products built with remanufactured parts and components that have the same quality standards as new devices.

Planning for equipment end of life—Much of the equipment manufactured by Xerox is designed for end-of-life remanufacturing and recycling. It’s built for easy disassembly and durability, with fewer parts and tight control of chemical content.
In-plant printing operations work to be green by design. Here are just a few ways that they help their customers to incorporate environmental considerations into their print jobs.

Choosing recycled paper.
Options now available provide the desired visual results but with less environmental impact. Using the FSC certification logo also tells the world about your environmental standards.

Making the medium fit the message.
Put another way, why print a booklet when a postcard will do? In-plant printers can help solve communication challenges with tactics that fit the desired goals.

Optimizing page real estate.
Two-sided prints and copies are just the beginning. Cost-effective and efficient layouts are based on printing as many images as possible on a sheet, and taking advantage of the optimum sheet size.

Doing double duty with TransPromo.
This type of application combines two documents—transactional and promotional—into one, cutting print and mail volume, paper usage, and delivery-related carbon emissions.

Deploying cross-media campaigns.
Integrating print and online components can boost response rates, while providing another way to control print and mail volumes.

We can do more.
Sustainable development is a race with no finish line. So it’s important that in-plant printing operations, customers, and suppliers team up for the future. To learn more about smarter ways to be greener, visit www.xerox.com/environment.
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