

THE GREENING OF DESIGN AND PRINT

The World Commission on Environment and Development defined the term sustainable development as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

Whether pushed by customer demand, industry regulation or motivated by personal conviction, designing and printing "green" is an accelerating trend.

In today's age, we are led to think about how we can continue to live, work and eat without harming our environment, while keeping it healthy for future generations. As a corporation, Adobe takes its role as sustainability steward seriously, defining corporate responsibility as the ability to achieve commercial success while honoring ethical values, respecting people, communities, and the environment.

Below are a few simple tips from Adobe on how you can make some healthy contributions to sustainability. These tips will help turn your design and print-related activities into eco-friendly choices, while maintaining the high quality of your projects.

ADOBE'S TIPS FOR REDUCING YOUR ENVIRONMENTAL FOOTPRINT

1) Conserve a tree, institute a PDF workflow.

It goes without saying that Adobe's Portable Document Format (PDF) and Adobe Acrobat have solved numerous problems for the design, print and publishing industries. Essentially, Acrobat and PDF have helped reduce paper use by giving people the ability to create and send electronic documents back and forth via e-mail, rather than printing hard copies and mailing. With Acrobat, users can also create forms, view and publish review comments online, collaborate with each other, implement a soft-proofing review cycle, and attach information electronically about how a file should be printed and finished through the Job Definition Format (JDF) – much more than simply creating a PDF file. With everything that Acrobat and PDF can offer designers, printers, and publishers, this leads to a reduction in paper and energy used, which means reduced emissions and lower costs for you.



For more information on Adobe PDF Workflows, visit:
www.adobe.com/products/acrobat/solutions/creative/.

2) Recycle, reduce, reuse.

Think of the hundreds of times a day we touch paper – newspapers, cereal boxes, toilet paper, water bottle labels, parking tickets, streams of catalogs and junk mail, money, tissues, books, shopping bags, receipts, napkins, printer and copier paper at home and work, magazines and to-go food packaging. The average American consumes more than 700 pounds of paper a year. China, India and the rest of Asia are the fastest growing per-capita users of paper, but they still rank far behind Eastern Europe and Latin America (about 100 pounds per person per year), Australia (about 300 pounds per person per year) and Western Europe (more than 400 pounds per person per year)*.



Source: www.thedailygreen.com

To help lessen the waste impact on our environment, Adobe recommends using high post-consumer non-chlorine bleached recycled paper and recycling the already used paper from around the office. Studies reveal that recycled paper is equivalent to virgin paper in performance and many are competitively priced*, yet recycled paper accounts for less than 10 percent of the paper market. Only products deemed acceptable by the Chlorine Free Products Association are granted Processed Chlorine Free (PCF) and Totally Chlorine Free (TCF) emblems. Look for the symbols when purchasing recycled paper.



Source: www.alocalprinter.com/uk/recycled-paper/

Leading this effort is one of the nation's largest printers, Quad/Graphics, who is on the cutting edge of technology and running a 100 percent digital workflow for all prepress processes. For more than 35 years, Quad/Graphics has been a pioneer in green-printing practices, from reducing ink and paper waste to making sure print-shop air quality far surpasses legal guidelines. The company recycles more than 98 percent of its waste and has won numerous awards for environmental leadership.



3) Create a Web portal for your customers to submit print jobs online.

It's easy to create a branded Web-to-Print solution for your customers through your company's Web site, which allows customers to order collateral, request an estimate and submit jobs online. With online job submission, you can simplify and streamline the process of ordering, purchasing, producing, proofing, approving, and reordering print jobs. Not only does this speed the production process and avoid unnecessary errors, it helps reduce the amount of paper consumed – currently estimated at 10,000 sheets per office worker per year*.

Source: www.comodo.com/products/fax/

For example, when Consolidated Graphics Group established an online job submission solution based on Adobe PDF templates and the Job Definition Format (JDF), it saved them 15 minutes of prepress time per job by eliminating preflighting, which enabled them to accept more jobs monthly. Through automation, they greatly increased their job ordering and submission efficiencies, reduced job ordering entry errors, and decreased their dependency on paper.



4) Optimize production techniques through JDF to eliminate scrap, error and waste.



Other industry standard formats have enabled information exchange – but whereas Adobe PostScript was used to describe *pages* and Adobe PDF describes *documents*, Job Definition Format (JDF) describes *jobs*. JDF content sent from the designer's desktop can contain the total number of pages in the job, the paper stock to be used, the run length, client contact information, and delivery details. Further downstream at the print production site, the JDF would be used to gather manufacturing details as the job goes through the workflow – an incredible time-saver when jobs are ganged, as is more and more the case for this market segment. Essentially, JDF automates the process – speeds throughput, reduces errors, conserves paper and energy and lowers your production costs.

For more information on JDF, visit: www.adobe.com/products/jdf/.

5) Forego paper proofs for online proofing and approvals.

Traditional methods of securing proof approvals to review color and copy involve printing the job numerous times, deciphering customer comments, tracking and archiving detailed records, overnight mailing and couriers, audit trails, faxing and time spent shuffling the job back and forth. All of this can be overcome through online proofing, where a reviewer can receive a proof as an e-mail attachment, from a server-based review, download a proof from a branded online job submission or FTP site instantaneously, or create a proof seamlessly using the print profile of their print service provider. Online proofing is an interactive process combined with an element of communication that enables you to not only view a document or image onscreen, but to make comments and mark-ups, and return an approval status.

By integrating Adobe PDF JobReady with its full commercial print service, the New Haven Print & Copy company rewards its customers with quality, convenience and efficiency. Since incoming print jobs often lacked all the necessary fonts and correct printing specifications, or contained graphics in the wrong color space and resolution, they selected Adobe PDF JobReady software to make online proofing easy for creative professionals.



To meet client needs, New Haven Print allows its customers to create print-ready PDF files on the fly, proof those files, and submit them for production directly to New Haven Print and Copy. New Haven Print and Copy's clientele proof everything from copies of manuals and booklets to polished dealer training material --- eliminating the need for hardcopy proofs.

"With Adobe technologies, our customers can easily generate print-ready Adobe PDF files. It's convenient for them and it saves us time in print production," says Craig Dellinger, president and general manager of New Haven Print & Copy.

For more information on PDF JobReady, visit: www.adobe.com/products/pdfjobready/.

6) Cut down on junk mail with variable data publishing for more targeted marketing.

It takes about 68 million trees per year to produce the piles of no-name mail that Americans receive annually.* Nearly half of this mailbox clutter is thrown out unopened. Variable data publishing (VDP) is a value-added service that will offer your clients a more effective way to convey their messages to their customers with greater certainty, clarity, and impact. VDP has emerged as a key enabling technology that makes personalized communications a reality, producing a customized message for each recipient. By giving print and email customers a personality, VDP will cut down on anonymous junk mail, help save a tree or two, and increase response rate/ROI.

Source: Solid Waste Management Division: <http://sw.data3m2.com/recycle/reducemail.htm>

TREKK CROSS-MEDIA

Ahead of the pack in VDP services is Trekk Cross Media, where personalization extends beyond names, addresses and local promotions. "Think predictive modeling," says M.J. Anderson, Trekk's vice president for creative services. "We use the consumer's history and demographics to match them with products they might be predisposed to buying, and then use Adobe Creative Suite design tools to customize the piece with images and copy related to those products." VDP currently represents 30% of Trekk's business.

To learn more about Variable Data Publishing, visit: www.adobe.com/vdp.

7) When leaving the office, be sure to power down your equipment.

Make sure to use energy-saving features built into systems, setting printers and copiers to “standby” mode after 20 minutes of non-use. Simply activating the power-save features on desktops can save 50 or 60 percent of the energy wasted when computers are left on, and idle, for 24 hours a day. Dimming the monitor, spinning down the hard disks and putting the drive to sleep are all simple steps that help reduce valuable energy.

Source: *Green Computing at Google:*

http://www.greenercomputing.com/reviews_third.cfm?NewsID=34965

Take for example Adobe customer Monroe Litho, a premier graphic communications company that uses clean electricity to power their print projects. While hydro, geothermal, solar, nuclear and wind sources can be more expensive, they can reduce your carbon footprint substantially. Monroe is unique in that 100 percent of its electricity comes from clean, renewable, wind-generated sources. Monroe Litho’s annual wind power purchase will offset approximately 2.5 million pounds of carbon dioxide (CO₂) that would have been released into the atmosphere through conventional power generation. They are also the seventh graphic communications company in the country to be certified by the Forest Stewardship Council (FSC).



8) Sustainable Packaging – Choose environmental friendly paper and adhesives.

Discarded packaging represents more than 30 percent of the solid waste buried in U.S. landfills each year.

Source: *Green 08: http://green08.org/?page_id=7 and HealthGoods.com:*

http://www.healthgoods.com/Education/Environment_Information/Solid_Waste/alternatives_waste_management.htm

We can reduce the size of our carbon footprint by adopting packaging and business practices that conserve resources and lessen environmental impact. By choosing the right paper, we save wood, water, energy, and cut pollution and solid waste. Be sure to look for papers containing pulp made from agricultural residues such as wheat straw or rice straw.

Also, any bindings, adhesives, foils, and plastic bags used in printing or packaging printed material can render paper unrecyclable. Eco-friendly design means using only water-based adhesives on envelopes and mailing labels, making certain that they do not contain chlorinated organic compounds, many of which are persistent, toxic chemicals.*

Source: *Environmental Defense Fund: <http://www.edf.org/article.cfm?contentid=39>*



Packaging printer Schawk, known for its work with top brand owners such as Target, Wal-Mart, General Mills, Procter & Gamble and Sony Universal is committed to creating the best brand imaging solutions in a manner that manages the world’s natural resources and benefits the local and greater communities. Together with Coca-Cola, Procter & Gamble and Adobe, Schawk has formed the Intelligent Packaging Consortium to establish industry standards for packaging production workflows.

Other organizations such as the Sustainable Packaging Coalition (SPC) are focused on raising awareness of the sustainability issues related to packaging, as well as fostering the development of tools and resources, partnerships and strategies to address them. The SPC is committed to eco-friendly packaging production and encourages other companies to be more environmentally active. Curtis Packaging, Kraft Foods, Unilever and Procter & Gamble are all members of the Sustainable Packaging Coalition.



9) There's no need to fly to meetings if you can join online.



Business travel is a major expense and source of greenhouse gas emissions. Why fly when you can collaborate with colleagues and clients in real-time, thereby avoiding costly flights by hosting meetings with Web conferencing technology? By joining meetings online, a small group collaborating between New York and San Francisco will realize a 98 percent travel cost savings and eliminate more than 44,500 pounds of CO2 emissions that would have resulted*, had this meeting taken place in person. Take steps to reduce carbon emissions through the use of virtual meetings using technology like Adobe Acrobat

Connect.

Source: *Unknown*

For more information on Acrobat Connect, visit: www.adobe.com/products/acrobatconnect/.

10) Print Only What You Need.

Eliminate unused and wasted publications by printing on demand. Did you know that 50% of the contents in landfills is comprised of paper and packaging?* Print on Demand (POD) is a highly developed digital technology that allows you to print content as you need it. Printing on demand produces more timely and targeted information, and reduces printing, storage, and shipping costs, as well as pollution and waste.

Source: *Unisource* : http://www.go2pmg.com/media/pdf/recycle_paper_facts.pdf

Leading the cause is Adobe customer and InDesign User Group leader, Kenneth B. Chaletzky, president of Copy General. They have made it possible for their business customers to post their marketing and training materials in an online digital storefront, replacing inventories of outdated documents with current, high-quality, materials. Copy General also prints short-run books for a variety of self publishers, an option that would not have been cost effective with conventional printing.



11) Spare the Ozone; Review Your Print Projects Digitally.



Reduce your carbon footprint by marking-up your projects online with Adobe Acrobat 8 Professional. Reviewing documents, plans, presentations and concepts online can reduce the need for transportation costs and printing hardcopy documents that need to be circulated for review. This is especially important in the wintertime. As cooler temperatures and reduced sunlight diminish ozone problems, particulate matter (PM), becomes the pollutant with the greatest impact on air quality. One major source of PM is heavy trucks such as those used by major courier and delivery services.*

Source: *Spare The Air*: www.sparetheair.org

Helping fight PM pollutants is Adobe print customer, Montage Graphics. They use Adobe Acrobat 8 Professional to send drafts to clients online, and comment directly on the project with the built-in annotation tools.



In the marketing field, most product plans, collateral design drafts and project schedules require team input and review. A problem tend to arise when staff inputs information in different formats – on paper, phone messages, word documents – and tries to integrate it all into one final document.

For SmartPath, Inc., a software company focused on lowering marketing costs, they faced similar challenges. Since turning to Acrobat 8, the company now creates, combines, and controls documents for easy, more secure distribution, collaboration and data collection online. This not

only shortens the turn-around time on jobs and reduces communication errors, but also eliminates the need to print proofs and mail them overnight to clients.

For more information on Adobe Acrobat, visit: www.adobe.com/products/acrobat/.

12) Choosing Eco-Friendly Inks.

By using ink settings that are low in Volatile Organic Compounds (VOCs), you can greatly minimize potential health risks to yourself and others. The National Association of Printing Ink Manufacturers says that the replacement of petroleum oils with soy and other vegetable based inks will reduce our environmental impact. In fact, 90 percent of daily newspapers use them routinely for color printing.



Heading the effort in using eco-friendly inks is Adobe customer, Hemlock Printers. Their inks, most of which are vegetable and soy-ink based, contain limited ozone-damaging petroleum distillates and minimal (VOCs). "Green" inks also help maintain color integrity, which is critical to good color management.

Metallic inks have the greatest impact on the environment, so to the degree that they can be avoided, or substituted, is a plus. Also, it's important to stay away from any inks that contain added arsenic, antimony, cadmium, chromium, lead or mercury. Ink powder contains cyanide-based chemicals that pollute water and solids when dumped in landfills.

Hemlock became the first printing company in the Pacific Northwest to receive the Forest Stewardship Council chain-of-custody certification. This FSC certification promises print customers that the path taken from forest to consumer - including all stages of processing, transformation, manufacturing and distribution - is environmentally safe.



13) Be Creative, Consistent and Cost-Efficient.

Bring a consistent look and feel to every project while reducing cost and complexity with Adobe CS3 software. Leading the charge in sustainable creativity and cost-efficiency is Nike. The company's innovative design and special projects team recently designed two sustainable shoes that are great performers in many ways – fast and green.



The team used materials derived from the waste of manufacturing footwear outsoles, as well as materials from recycled used sneakers to create the Air Jordan XX3. Also, the Nike Zoom running shoe for women looks just like a regular sneaker; with laces made from 100% recycled polyester and the body is from 32% recycled materials.

According to Nike, the perfect sustainable product would be one that delivers premium design, maximum performance and zero waste – at every stage of its lifecycle. The company's sustainable responsibility helps generate awareness of creative costs for other businesses, and shows the benefits of making fewer, more significant, longer lasting designs.

Source: Nikeresponsibility.com

14) Distribute and Print.

Ensure that materials are produced closest to the end user by implementing a distribute-and-print model. Rather than printing jobs that have to be shipped to their final destination, try printing them close to or at their final destination. This reduces the environmental impact of trucking printed materials.

Edwards Brothers works to lower their customers' total cost of doing business, and helps the environment at the same time. Some of their clients have Edwards Brothers equipment on site to print books on demand at the customer's locations, rather than have them shipped from Michigan.



15) Electronic Communications: Consider the environmental impact of your direct mail campaign.

Varnishes, laminates and coatings are often not recyclable and will divert your direct mail piece to the landfill rather than return it to a paper mill. Marketers often request these special finishes in order to improve the mail piece's survivability during delivery, however, there are no guarantees.

Mail pieces can be designed to avoid scuffing and damage to critical content areas without the use of varnishes. Talk to your local Postal Business Center to get a tour of their handling facility, and test some of your mailings with them to learn more about where the damage occurs and how to design around it. Visit: <http://www.usps.com/businessmail101/> to learn more about designing for the mail.

16) Use Biodiesel In Your Delivery Fleet.

Delivery trucks consume large amounts of fuel and emit greenhouse gases. More efficient turbo-diesel engines combined with biodiesel fuel transform your fleet into a sustainable asset.



Biodiesel is the name of a clean burning alternative fuel, produced from domestic, renewable resources, which contains no petroleum, and can be blended at any level with petroleum diesel to create a biodiesel blend.

It's simple to use, biodegradable, nontoxic, and essentially free of sulfur and aromatics. The next time you need to transfer a project from one office to the other, ask your delivery fleet driver to think about using biodiesel. It has lower emissions compared to petroleum diesel, is less toxic than table salt and biodegrades as fast as sugar. Since it is made in the USA from renewable resources such as soybeans, its use decreases our dependence on foreign oil and contributes to our own economy.

Source: <http://www.biodiesel.org/>

17) Working Smarter: Content Management.

If you separate the design, the content and the structure processes within the marketing lifecycle, your company will have more flexibility, speed and options for developing cost-effective, integrated marketing campaigns.

Reusing content across multiple mediums repeatedly and consistently will result in a win:win situation for the entire value chain and stakeholders. A world leader in enterprise content



management solutions is EMC Documentum, providing an ECM platform that enables people to collaboratively create, manage, deliver, and archive the content that drives business operations — from documents and discussions to e-mail, Web pages, records, and rich media — using one common content platform and repository.

With Adobe forms and the EMC Documentum platform, organizations can increase productivity and efficiency by automating forms-driven business processes. Integrating Adobe Acrobat software within the Documentum environment results in a solution that simplifies collaboration

across the extended enterprise. EMC Documentum is also an OEM partner for Adobe Distiller Server and Adobe Graphics Server software.

Source: www.emc.com

18) Lighten up: Replace your light bulbs with eco-friendly, longer lasting alternatives.

Help reduce the overall energy budget. Replace conventional light bulbs with energy-efficient ones. One of the simplest things you can do to save energy and pollution is to swap out your old incandescent bulbs for compact fluorescent lights (CFLs). Today's high-tech bulbs come in decorative shapes — and radiate a warm, rosy glow.



If you're not ready for a full-house makeover, resolve to start by changing just one light. If you replace just one out of four of your light bulbs with fluorescents, you can save about 50% on your lighting bill.

Source: EPA

CFLs don't use a hot filament, so they require a lot less electricity. A 15-19 watt CFL will produce the same amount of light as a 60 watt incandescent. That's a 75% cut in global warming pollution. By using CFLs, you are saving money, as well as helping to save the planet.*

Source:

EnergyStar.gov:

http://www.energystar.gov/ia/partners/promotions/change_light/downloads/Fact_Sheet_Mercury.pdf

A fluorescent or incandescent lamp claimed to be full-spectrum can cost several times as much as one with a nearly identical spectral power distribution (SPD) that is not identified as full-spectrum. What benefits does a consumer get for that extra money? NLPiP reviewed the promotional claims for full-spectrum light sources from manufacturer and retailer web sites, and found a diversity of claimed benefits, including:

- Improves color perception
- Improves visual clarity
- Improves mood
- Improves productivity
- Improves mental awareness
- Improves retail sales
- Improves plant growth
- Improves results of sleeping disorders
- Improves results of light therapy in treating seasonal affective disorder (SAD)
- Improves scholastic performance of students

For more information on the benefits of full-spectrum lighting, visit:

<http://www.lrc.rpi.edu/programs/nlpip/lightingAnswers/fullSpectrum/benefits.asp>



® We're practicing what we preach. Adobe diverts up to 95 percent of its waste (computers, batteries, printer toner, fluorescent lamps, etc...) from landfill projects, placing the company in the top percentile nationally. In June 2006, Adobe became the first company to receive 3 platinum awards from the nonprofit U.S. Green Building Council under its current Leadership in Energy and Environmental Design Standards (LEEDS). That makes Adobe's San Jose headquarters the greenest corporate building on record in the United States.

Just for fun, take a look back with us at the way office workers used to do business, before Acrobat was introduced to the world in 1993: <http://www.youtube.com/watch?v=qRrpyY8KPWE>