REDUCE *printing*
COSTS *while*
BUILDING sustainability

HIT **PRINT**
INTELLIGENTLY

Setting a strategy to reduce costs, improve workflow, and meet your sustainability goals

Enterprise businesses often perceive challenges in reconciling sustainability and cost-cutting initiatives. Corporate decision makers must balance the economic needs of stakeholders with concerns for the environment. They need to be convinced that new technology solutions can deliver returns on investment for their enterprise.

IT professionals surveyed by Forrester Research, Inc., confirm this hesitation: Those without a comprehensive plan for implementing green IT cited too many competing priorities and a lack of ownership or clear business case for green initiatives as their top reasons for not adopting green IT.[1]

Today, three trends or concerns are converging to make green IT once again a high priority. The first is the rise in energy costs. Finding ways to reduce energy costs tops the list of reasons companies are adopting green IT, according to approximately 67% of IT professionals in separate surveys by both Forrester and IDC.[1,2]

Second is the building—or rebuilding—of companies' technology infrastructure as enterprises look to drive growth while investing in future innovation. That requires more computing power, which demands even more energy.

Third, the monumental escalation of data volume further compounds this need for computing power and storage. IDC estimated that, in 2011, the "digital universe" of information and content will further expand by almost 50%—to almost 2 trillion gigabytes.[3]

These three trends—concerns over energy costs, infrastructure, and data—are making the business case for green IT more compelling. As IDC notes:

"As data continues to grow and develop in complexity, companies are required to develop a means of controlling their energy usage; otherwise their cost becomes wildly unfeasible. Since green IT focuses on efficiency to receive the same capabilities with far less financial and environmental impact, industries are relying on energy-efficient green technologies to combat enhanced energy demands and the hefty price tag associated with data and infrastructure growth."[2]

Other research indicates that imaging and printing is an area ripe for energy savings. "Distributed IT assets, such as PCs, monitors, printers and telephones, consume 55% of IT's total energy footprint. Nearly 70% of organizations have consolidated their printing environments, reducing energy consumption by 50% while eliminating e-waste by lessening demand for new hardware."[4]
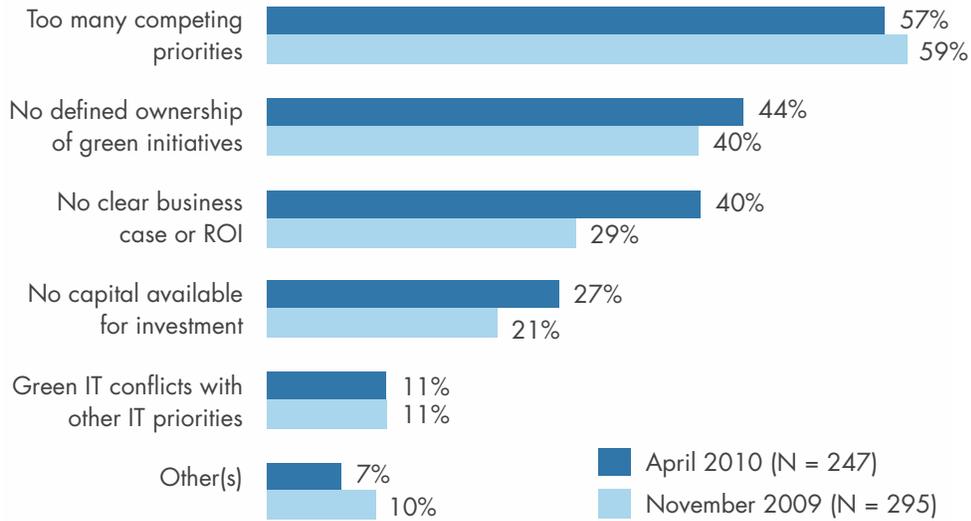
REDESIGNING INFRASTRUCTURE FOR COST SAVINGS AND SUSTAINABILITY

One way companies are doing more with less is by outsourcing the management of printing. Managed print services providers like HP help their customers succeed in balancing business growth, cost-cutting, and sustainability initiatives. They do so by optimizing the infrastructure—placing the right number of printers exactly where they are needed, and often

Reason	April 2010 (N = 247)	November 2009 (N = 295)
Too many competing priorities	57%	59%
No defined ownership of green initiatives	44%	40%
No clear business case or ROI	40%	29%
No capital available for investment	27%	21%
Green IT conflicts with other IT priorities	11%	11%
Other(s)	7%	10%

dramatically reducing the number of devices in the process. Another strategy is to better manage the environment by adjusting printer settings to reduce energy and paper use, ordering the right amount of supplies automatically, and capitalizing on usage reports that let companies deploy color printing and other capabilities only where they're needed. Other managed print services strategies seek to improve workflow by making imaging and printing more secure, as well as digitizing paper-based processes and linking them to key business applications to create efficient information workflows.

To meet this demand for cost-effective, sustainable imaging and printing infrastructure, HP has developed the industry's leading managed print services offering. HP Managed Print Services (MPS) is a comprehensive suite of imaging and printing services designed to help organizations meet important business and sustainability goals. By using HP Managed Print Services, an enterprise can lower its costs, simplify its printing management, streamline recycling and disposal, cut its paper consumption, and reduce its carbon footprint.

TWO WAYS MPS IS GOOD FOR YOUR BUSINESS

Consisting of hardware, software, supplies, services, and solutions, MPS benefits your enterprise in many ways. This paper discusses two especially important perspectives for today's enterprise-level organizations— information workflows and environmental sustainability.

1. MPS enables your organization to optimize its imaging and printing infrastructure, streamline and standardize printing management, and improve workflows by automating end-to-end document management.
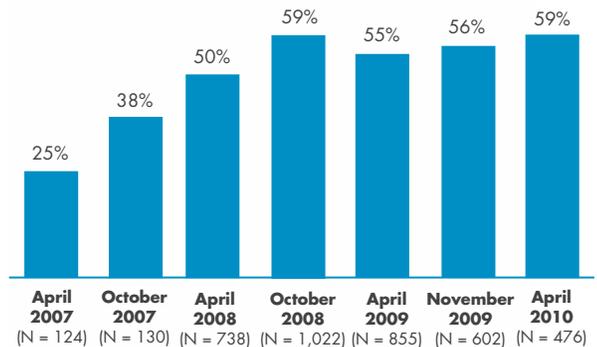
2. From a sustainability perspective, your organization can diminish the carbon footprint of printing by cutting energy consumption, reducing paper usage, and simplifying recycling and end-of-use disposal of hardware and cartridges.

GREENING YOUR IT INFRASTRUCTURE AND BOTTOM LINE

Using a professional service to manage printing has become standard practice for large companies and enterprises in the last 20 years. More recently, using such services to simultaneously "green" the organization has also become the norm.

"Has your company included environmental criteria (greener manufacturing, operation, and/or disposal) in its evaluation and selection of IT purchases?"

Companies including environmental data

	April 2007 (N = 124)	October 2007 (N = 130)	April 2008 (N = 738)	October 2008 (N = 1,022)	April 2009 (N = 855)	November 2009 (N = 602)	April 2010 (N = 476)
	25%	38%	50%	59%	55%	56%	59%

Source: Forrester Research, Inc.[1]

Base: IT professionals at global enterprises and SMBs (multiple responses accepted)

According to Forrester, as of April 2010, "Nearly three-fifths of companies now include green environmental criteria in their evaluation and selection of IT equipment." Businesses are driven to make their IT infrastructures more sustainable, partly by increased regulation and partly by pressure to comply with the

2

sourcing standards laid out in their corporate sustainability strategies and goals.[1]

Although many companies state that they want to "do the right thing," recent studies show the main reason for implementing green IT is to reduce costs by using less energy, paper, and other supplies. A September 2010 Gartner study found that "Thanks to the downturn, new customers of all kinds decided to reduce their office printing spending by 10% to 30% and adopted MPS [managed printing services] to make that happen."[5]
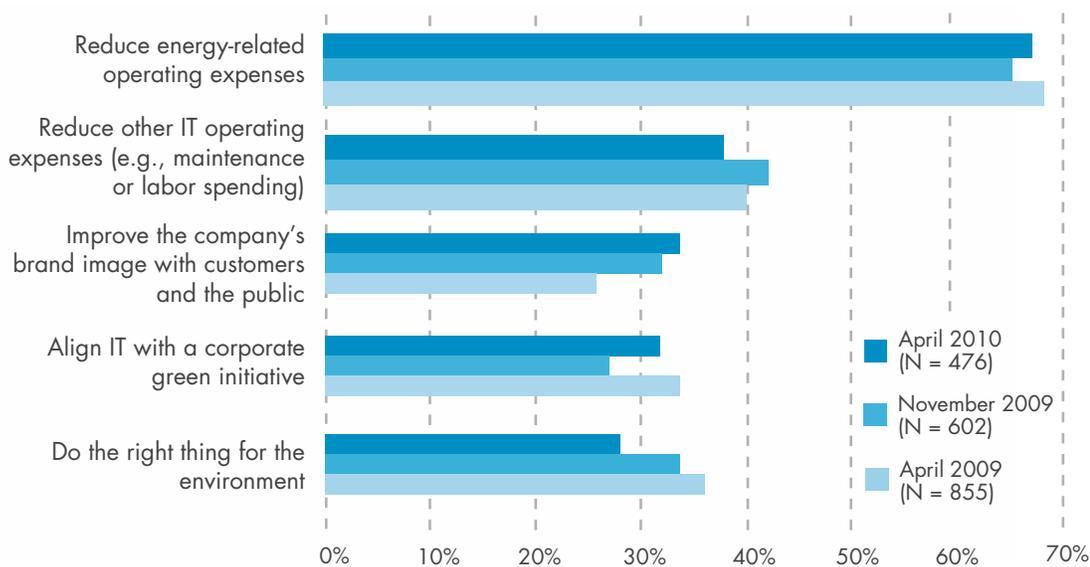
BUSINESS AND SUSTAINABILITY BENEFITS

HP measures the costs and other characteristics of our customers' imaging and printing operations before and after implementing HP Managed Print Services. This analysis reveals that HP Managed Print Services has helped companies achieve:

• Cost reductions of up to 30%

• Energy savings of 30% to 80%

• Paper reductions in the millions of pages for individual companies

• Efficiency and productivity improvements

• Decreases in their carbon footprint from printing[6]

• More responsible disposal with asset recovery and recycling strategies for devices at end of use

• Easy, consistent, and responsible recycling of HP toner and ink cartridges with a trusted recycling partner

Recycling with HP Planet Partners program

"What are your organization's top three motivations for pursuing greener IT operations?"

Categories (top to bottom):
- Reduce energy-related operating expenses
- Reduce other IT operating expenses (e.g., maintenance or labor spending)
- Improve the company's brand image with customers and the public
- Align IT with a corporate green initiative
- Do the right thing for the environment

Legend:
- April 2010 (N = 476)
- November 2009 (N = 602)
- April 2009 (N = 855)

X-axis: 0% 10% 20% 30% 40% 50% 60% 70%

3

Optimize your infrastructure– when less is more

A thorough assessment of HP customers' imaging and printing infrastructure typically reveals two findings: Companies have too many devices and a lack of standardization among them. These issues can lead to duplicated effort, redundant support, and wasted time, money, supplies, and energy.

Assessments are key to identifying what processes are needed to make your imaging and printing infrastructure as cost-effective, eco-efficient, and productive as possible. We use this information to provide you with a view of the full costs of your imaging and printing environment, as well as recommendations for improvement.

- The HP Industry Benchmark Assessment helps you compare the cost of your imaging and printing environment against a series of industry-specific benchmarks and provides recommendations for improvement.

- An HP Managed Environment Assessment helps identify opportunities for fleet rationalization, cost reductions, increased business efficiencies, and environmental improvements. The assessment helps you develop a future-state architecture and recommendations for ongoing practices that maintain optimization and reduce staff workloads. This assessment also helps illustrate the business case for engaging HP in a managed print services arrangement.

- The HP Eco Printing Assessment helps you understand the environmental impact of your imaging and printing fleet. Using this information, you can develop a roadmap for reducing your carbon footprint through changes in your infrastructure, management, workflow, and employee behavior, as well as quantify the financial and environmental benefits of going green.

- The HP Security Assessment evaluates your company's current printing systems and equipment, reviews your security plan, and analyzes potential security breaches across the organization.

CONSOLIDATION AND ASSET RECOVERY

A common recommendation that comes out of an initial assessment is to consolidate printers, scanners, copiers, and fax machines with fewer, faster, more energy-efficient, and more strategically placed printers, including multifunction devices. Consolidation and standardization enable you to right-size for your organization's actual needs, reducing waste, redundancy, and energy use.

This strategy can also present challenges to your environmental ambitions. After all, what do you do with all the equipment you're replacing? HP offers leading solutions to address these challenges.

As part of HP Managed Print Services, HP Asset Recovery Services accepts any HP or non-HP brand of hardware. Disposition is managed responsibly and in accordance with applicable laws, which can vary around the world. You may even be able to realize some financial gain for the value of any remarketed devices. HP Asset Recovery Services can be integrated with your HP Managed Print Services strategy. It is also available as a standalone service you can use as a continuing long-term solution to equipment disposal.

CASE STUDY:

MERCK[7]

Objective:	Assess infrastructure; make it more manageable, reduce print costs, and achieve environmental benefits in the process
Approach:	Global HP Managed Print Services
Benefits:	• Reduce footprint through consolidation, 80% device reduction.
	• Reduce power consumption through consolidation and integration of ENERGY STAR® printer models.
	• Leverage duplex printing to reduce print output by approximately 30%.
	• Recycle 100% of print cartridges through the HP Managed Print Services program.
	• Significant cost savings from printer consolidation, reducing previous 1:1 employee-to-printer ratio to approximately 12:1.
	• Training from HP Education Services instructors helped clients use and adopt new print features and functionality.
	• Integrated new capabilities within SAP deployment leveraging HP Output Server.
	• Immediate and continued workflow improvements from HP technology, such as scan-to-email and electronic expense management.

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Manage your environment to lower costs, conserve resources, and shrink corporate carbon footprint

HP is actively engaged in the ongoing sustainability of your imaging and printing environment. Following the initial HP Managed Print Services implementation, we continually assess and evaluate your environment to ensure that your customized cost savings and resource conservation strategy remains in place. HP helps you gain greater visibility into usage trends, capacity, and expenditures by applying industry-leading network management practices and technologies to your fleet management, supplies provisioning, and support.

Once we've implemented the strategy, your HP MPS account team generates regular status reports on network printer performance, usage, and costs. These reports provide you with a clear view of your expenses and give our team the information necessary to make recommendations for continual improvements toward efficiency and environmental sustainability.

HP NETWORK INFRASTRUCTURE MANAGEMENT SOFTWARE

In many enterprise organizations, managing the printing infrastructure is a local responsibility. Local managers acquire, supply, maintain, and support their devices according to the needs of the immediate end users. This approach appears sensible on the surface, but it can lead to duplication of tasks and insufficient disposal and recycling practices.

HP provides two network printer management tools, the HP Web Jetadmin application and the HP Universal Print Driver, in our expanding portfolio of fleet management solutions to help you lower printing costs, save resources, and shrink corporate carbon footprint.

An HP MPS strategy encourages not only device optimization but also ongoing oversight and guidance.

From a single, standard web browser, HP Web Jetadmin enables you to install, configure, troubleshoot, and manage your networked imaging and printing devices (including all HP devices and many non-HP devices). You can use the optional HP Web Jetadmin Database Connectivity Module to create HP Eco Solutions reports to measure environmentally relevant capabilities, settings, and use patterns for capabilities such as two-sided printing and power-saving features.

IT staff can then use the reports to spotlight opportunities to decrease energy and paper consumption—for a printer, a group of printers, or an entire fleet. Doing so can enhance efficiency and provide environmental benefits at the network level, such as setting printer sleep and wake modes to reduce your entire printing fleet's energy use.

Likewise, HP Universal Print Driver can help you reduce paper consumption—again at the network level. Using a single driver to access your organization's printers, you can make two-sided printing a default setting. Because it takes 10 times more energy to produce a sheet of paper than to print on it,[8] these savings are critical to an overall green IT strategy.

To reduce energy consumption and costs, HP designs innovative technologies such as HP Auto-On/Auto-Off Technology and Instant-on Technology in its HP LaserJet devices, which can deliver up to 50% energy savings over traditional fusing methods. HP Auto-On/Auto-Off turns printers on when needed—,off when not. HP Auto-Off consumes 26 times less energy than traditional sleep mode. Many new HP printers and MFPs include these features.[10]

"Across the company, including our Enterprise IT, Disney seeks the best solutions to help deliver on its environmental promise. That's exactly what we expected when we brought in HP and a Managed Print Services (MPS) solution, and the results have lived up to expectations."

—Charlie Weiner, senior vice president, Enterprise Infrastructure Services, Disney

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Objective:	Implement a new approach to managing print needs that would align with environmental citizenship goals
Approach:	Disney worked with HP to develop its Document Output Management Program using HP Managed Print Services
Benefits:	• Reductions of more than 18% in energy usage
	• Pages printed reduced 1.5 million sheets per month on average from duplexing
	• Energy CO_2 emissions reduction of an estimated 407,000 lb
	• Paper CO_2 emissions reduction projected at more than 500,000 lb over 36 months from duplexing
	• 100% recycling of toner cartridges through HP Managed Print Services
	• 89% reduction in device models
	• Approximately 90% reduction in vendors
	• 59% reduction in the number of devices

CASE STUDY:
DISNEY[9]

HP MANAGED PRINT SERVICES ACCOUNT MANAGEMENT

A successful, long-term HP Managed Print Services strategy includes tapping into expertise that helps you address needs locally and globally. One way we provide this expertise is through a dedicated account manager who can consult with you in the analysis of your current infrastructure; the design and implementation of your new, optimized infrastructure; and ongoing maintenance, supply, and support needs throughout your MPS agreement.

"We are confident that implementing HP IPM [Intelligent Print Management] will result in significant environmental benefits and long-term cost savings by allowing us to create custom printing rules that will benefit the entire enterprise."

—Victor Ruiz Ruiz De Villa, MicroIT Global Operations Manager, Endesa

Improve workflow to streamline document-intensive processes

HP Managed Print Services can help you deliver a more efficient, environmentally sustainable strategy for capturing, securing, managing, and sharing critical business information—whether your employees are in the office, at home, or on the go.

If your organization wants to improve business-critical, paper-intensive processes, an HP Workflow Discovery Assessment may be a smart first step. It analyzes your current practices and recommends alternatives that leverage functions found in HP multifunction printers, such as scan-to-email, scan-to-folder, and scan-to-fax. These digital-to-digital transfers of data reduce the need for traditional hardcopy versions—whether printed, copied, or faxed—and accelerate your overall business processes.

An HP Workflow Discovery Assessment can also help determine whether implementing solutions will help improve security and meet stringent privacy and auditing regulations and can reduce wasteful printing by implementing solutions such as pull printing. HP Access Control Printing Solutions combines the cost management and security features that enterprise customers need with the ease of use that employees require to be productive.

The various components of a multifaceted HP MPS strategy—everything from device optimization and the digitization of paper-based processes to efficient waste reduction and effective imaging and printing security solutions—combine to form a strong foundation for your company to fully realize a streamlined and seamless end-to-end workflow environment.

CASE STUDY: ENDESA[10]

Objective: Endesa (Spain's largest electric company) wanted to improve its printing cost and environmental footprint by achieving more efficient maintenance and usage of its imaging and printing fleet.

Approach: Endesa entered into a 5 year Managed Print Services (MPS) contract with HP.

Benefits:
- Energy consumption reduced by 39%.
- Carbon emissions are forecast to be reduced by nearly 1.3 million kg over 5 years.
- Improved digitizing and reporting capabilities have streamlined workflows and business processes and have reduced copy volumes by 63% due to making staff more "print aware."
- Print volumes have fallen by 25% overall, producing a paper savings of 36%, or more than 132,234 kg per year.
- More than 9,230 toner cartridges recycled through the HP Planet Partners program in the first year.
- Carbon savings equate to the annual CO_2 emissions of 559 cars, the consumption of 562,048 liters of gasoline, or the CO_2 associated with electricity used in 1,045 households for a year.

HP ECO SOLUTIONS PROGRAM

ENVIRONMENTAL LEADERSHIP RECOGNITION

HP has a long-standing commitment to environmental responsibility. In 1957, global citizenship—which includes environmental stewardship—became an HP corporate objective. In 1987, HP became the first technology company to start a hardware recycling program, and a formal Design for the Environment program that has been in place since 1992. HP continues to be recognized for environmental leadership:

- Ranked first among technology companies and fifth overall on Interbrand's 2011 listing of the 50 Best Global Green Brands
- Selected as technology provider for 2010 UN Climate Change Conference
- Selected as one of the 2010 Top 12 Green-IT vendors by *Computerworld* magazine
- In 2010, climbed to No. 2 in the Climate Counts Scorecard and was No. 1 in the Electronics sector for the second year in a row
- Named as a leader in the Computer Hardware and Electronic Office Equipment sector of the 2010 Worldwide and North America indexes
- Topped *Newsweek*'s Green Rankings of America's 500 largest corporations in 2009

GOOD FOR BUSINESS. BETTER FOR THE ENVIRONMENT.

HP's Managed Print Services program has long been recognized as a valuable way for an organization to

Recent environmental leadership milestones	
2006	International climate change initiative launched with World Wildlife Fund (WWF)
2007	Reached initial goal of recycling 1 billion pounds of computer hardware and print supplies
2008	Developed process to use recycled Original HP inkjet printer cartridges in the manufacturing of new Original HP inkjet printer cartridges
2010	Reached milestone of producing 1 billion HP ink cartridges containing postconsumer recycled plastic
2010	Recovered 121,000 tonnes of electronic products and supplies for recycling, and recovered 30,000 tonnes of hardware for reuse and remarketing[11]
2011	Exceeded goal of reducing the energy consumption of HP products by 40% from 2005 levels by the end of 2011. As of March 2011, HP products today are on average more than 50% more energy efficient than they were 5 years ago

streamline its infrastructure and reduce costs, centralize its management, and simplify support, maintenance, and supply functions. Now it's also appreciated for what it can do for an organization's environmental efforts. Paper conservation, decreased energy usage, and intelligent disposal and recycling strategies make an HP Managed Print Services program doubly effective—and valuable—to any enterprise's global operations.

HP believes that partnering on a managed print strategy is a wise decision on many levels, and provides the expertise, services, and solutions that propel your environmental stewardship forward efficiently and effectively. To discuss the opportunities HP presents for your organization, please contact an HP sales representative or visit **www.hp.com/go/mps** to learn more. In the meantime, here are some other steps you can take to get started:

YOUR PRINTING ENVIRONMENT SELF-ASSESSMENT

Just as HP recommends an assessment of your printing infrastructure as part of a Managed Print Services strategy, you can perform a preliminary self-assessment by evaluating your situation on the basis of the following questions:

1. Do you know your organization's true burdened cost of printing? Have you benchmarked it against industry norms?
2. Is your organization interested in reducing its carbon footprint? If so, have you quantified the impact imaging and printing has on your carbon footprint? Are you aware of potential energy savings?
3. Have you established metrics and goals for your imaging and printing environment?
4. Have you determined, gathered, and analyzed the data needed to help you build a plan and a business case for change?
5. Have you built a plan to prepare your people for the changes you seek? Does your plan address environmental sustainability?
6. Do you have a roadmap and a partnership with your vendor(s) that integrates print management initiatives into your IT strategic imperatives?
7. Are you enlisting the expertise and experience that will ensure your imaging and printing environment is optimized and well managed over time?
8. Are your IT resources maximizing the power of available network print management tools?
9. Are you regularly using key tools to track your progress against environmental goals?
10. How effectively is your organization using its imaging and printing environment as a digital "on ramp" and "off ramp" to its applications?

INVITE HP TO DELIVER AN IMAGING AND PRINTING STRATEGIC CONSULTATION

Learn more by inviting HP to deliver an Imaging and Printing Strategic Consultation at your business. These strategic planning sessions begin a dialogue with you and a team that can best represent your enterprise needs, so that HP Managed Print Services professionals can better understand your goals and challenges related to your imaging and printing environment.

Please contact an HP sales representative or visit **www.hp.com/go/mps** to learn more.

TRY OUR CARBON CALCULATOR

The HP Carbon Footprint Calculator for printing estimates a printer's energy consumption during operation, the CO_2 produced by the generation of that electricity, and the CO_2 produced by the manufacture of the paper consumed during printing. It also calculates the costs of the power and paper the printer consumes based on electric rates and generation facilities in more than 146 countries (**www.hp.com/go/carbonfootprint**).

READ OUR GREEN IT ACTION PLAN

Uncover ways to increase efficiency and reduce the environmental impact of your printing. The HP Green Action Plan for Office Printing can help you further examine your office printing environment and identify ways to save money by reducing energy consumption and paper use (**www.hp.com/go/greenITplan**).

1   Forrester Research, Inc. Daniel Krauss. "Market Update: The State of Green IT Adoption, Q2 2010," July 12, 2010.

2   IDC. Vernon Turner. "Fourth Annual Green ICT and Sustainability Survey: Proof Points That Energy Projects Need Executive Management Support," Document #225494, November 2010.

3   IDC. Frank Gens. "IDC Predictions 2011: Welcome to the New Mainstream," Document #225878, December 2010.

4   Forrester Research, Inc. Doug Washburn. "Green IT Plans and Activities Persist in 2010 Despite Lack of Formal Budgets and Priorities," July 27, 2010.

5   Gartner, Inc. Ken Wellerstein, Cecile Drew, and Yulan Li. "Magic Quadrant for Managed Print Services, Worldwide," September 22, 2010.

6   Carbon footprint decreases associated with estimated CO_2 from electricity production and CO_2 from paper production.

7   This customer's results depended upon unique business environment, the way it used HP products and services, and other factors. These results may not be typical; your results may vary. The full case study is available at **h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-3610ENW.pdf** or **h71028.www7.hp.com/enterprise/us/en/ipg/merck-campaign.html.**

8   **www.epa.gov**

9   Customer's results depended upon unique business environment, the way it used HP products and services, and other factors. These results may not be typical; your results may vary. The full case study is available at **h20195.www2.hp.com/V2/GetPDF.aspx/4AA1-1986ENW.pdf**.

10 Customer's results depended upon unique business environment, the way it used HP products and services, and other factors. These results may not be typical; your results may vary. The full case study is available at **h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-3893EEW.pdf**.

11 As of September 2010. Many Original HP ink cartridges with recycled content include at least 50% recycled plastic by weight. Exact percentage of recycled plastic varies by model over time, based on the availability of the material.

To learn more, visit

www.hp.com/go/ecoprinting
www.hp.com/go/mps
www.hp.com/go/greenITplan

www.hp.com/go/carbonfootprint
www.hp.com/hpinfo/environment
www.hp.com/large/campaign/guarantee

HP three-part approach

HP works with you to assess, deploy, and manage an imaging and printing environment tailored to meet your business needs, while helping you reduce costs, conserve resources, and simplify document-intensive processes. HP's three-part approach:

Optimize infrastructure	Manage environment	Improve workflow
HP can help you achieve a balance between your total cost of printing and your needs for user convenience and productivity.	Working together, HP can help you maintain your optimized infrastructure while improving business efficiency and tightening security.	By streamlining your document-intensive processes, HP can help you deliver a more efficient environment for capturing, managing, and sharing information.

HIT **PRINT**
INTELLIGENTLY

4AA2-5908ENW, Rev. 1, September 2011