

A decorative graphic on the left side of the page features a large green circle partially overlapping a dashed black circle. Below these, several thin, concentric grey lines curve downwards and to the right. A small solid green circle is positioned above the dashed circle.

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## Marketing Bulletin

# Seagate Sustainability in 2.5-Inch Hard Drives

## Smart, Green and Built for the Future

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### **Broadening the Scope of Sustainability**

Without delivering strong business sustainability, environmental or *green* sustainability is not likely to find complete acceptance by companies. But when organisations succeed in combining business and environmental sustainability, they can be extraordinarily successful in an economic and competitive sense and realise environmental benefits that are of value to themselves and the communities where they work.

Definitions and discussions of sustainability have mostly focused on environmental considerations, such as the goal of using natural resources conservatively, without depleting them, so that they can renew themselves and remain available to larger communities and future generations. Restricting the scope of sustainability to environmental ideas does not take into account what it requires for businesses—including manufacturers and technology providers—to practice and enable environmental sustainability: Companies need to implement sustainable business practices that ensure long-term viability, profitability and productivity.

### **Making Sustainability Practical, Meaningful and Productive**

Seagate takes a broad view of sustainability, practicing and enabling business and environmental sustainability. Seagate designs and manufactures storage products and technologies that enable users in homes and businesses to reduce their environmental impact with long-lasting, dependable hard drives that are engineered for minimal electricity consumption and efficient materials and resources usage.

The advantages are compelling:

- System builders and other partners who develop, build and market systems that incorporate storage can count on Seagate to develop and propagate storage that meets current and long-term solution requirements. What's more, Seagate designs storage with features to keep deployments affordable and maintain the long-term value of customers' investments. Consumers, in turn, can enjoy high-performing, reliable storage products that let them experience the value of their digital assets and support their environmental convictions at the same time. Given the proven dependability of Seagate storage, replacing or upgrading storage should not be significant concerns for consumers.

# Seagate Sustainability in 2.5-Inch Hard Drives

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Lending substance to sustainability, Seagate storage products, including Seagate® Momentus 2.5-inch hard drives for notebooks and other applications, are smart, green and built for the future.

## Environmental Sustainability

For system builders, ecologically and economically sustainable Seagate hard drives provide a valuable competitive differentiation: They can demonstrate technology leadership with storage solutions that support stringent environmental standards and high levels of resource efficiency. The combination of sustainability features in Seagate hard drives also increases and accelerates the return on investment (ROI) of storage spending.

Using Seagate storage products, system builders can help environmentally aware individuals and companies practice their values by using hard drives with minimal environmental impact. Customers can reuse drives easily and often, reduce the expense and effort of recycling and repurposing drives, cut electricity costs and allocate spending to longer-lasting, more dependable storage.

## Innovating Beyond Regulation

Wherever Seagate does business, it follows governmental and industry standards for sound environmental practices. These standards include:

- Restriction of Hazardous Substances (RoHS) and Waste Electrical and Electronic Equipment (WEEE) directives—standards that originate in the European Union but are practiced industry wide
- Joint Industry Guide (JIG 101) for materials with environmental impacts that are used in the electronics industry
- IPC 1752 industry standard for materials declaration by Association Connecting Electronics Industries
- Industry restrictions for low halogen in brominated flame retardants and polyvinyl chloride plastic.
- Recyclability—on average, more than 70 percent of the materials used in Seagate hard drives are recyclable.

In addition, Seagate innovates to develop environmentally sound technology that delivers a range of green and business-productivity benefits:

- **Seagate Secure™** technology includes such capabilities as secure erase and disposal, which causes hard drive data to be automatically inaccessible when the drive's full disk encryption key is eliminated or changed without a valid password. This feature makes it easy to repurpose hard drives without compromising sensitive data and can save technology administrators and companies significant resources, time and money.
- **Seagate power management features**, including PowerTrim™ and PowerChoice™ technologies, help minimise power draw and reduce the costs of electrical power and cooling in data centres and other environments where a large number of drives are present.
- **G-Force Protection™** technology on the Momentus notebook drives locks up the drives' moving parts in case they undergo free fall, preventing damage both to data and drive components. G-Force Protection technology maintains the value of the investment, saves money on repairs and replacements (especially in organisations that own many laptops), safeguards information and reduces the utilisation and waste of drive materials and power.

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## Business and Economic Sustainability

Seagate storage is a smart, sustainable investment for individual consumers and business technology users. It also makes good sense for system builders to build their sustainability strategy with Seagate storage products. Those products include advanced, versatile capabilities, encourage profitable innovation by technology providers, and enable a rapid ROI. In this context, the following are key features of Seagate drives:

- **Self-encryption** in the Momentus drives maintains drive-level security, protecting customers from unauthorised exposure of the data in their laptops and storage systems. Seagate offers system builders additional revenue-generating opportunities associated with the ability to meet customers' security needs. System builders can connect with independent software vendors who support the Seagate Secure™ security initiative to develop and market specialised solutions based on self-encrypting drives. They can use drive configurations preset in the factory to simplify deployment.
  - Many of the Momentus hard drives and other products operate at **7200 RPM**, providing fast performance for all applications, including multimedia applications, thereby giving technology solutions increased relevance and a longer life span. Seagate focuses on making the best-performing 7200-RPM drives possible and boosts this effort with its global resources, which also helps to reduce the drives' cost.
  - The **2.5-inch Momentus hard drives** take minimal system space and are easy to integrate into notebooks and a variety of RAID and other multidrive systems where space is at a premium. The small size of the drives also helps to reduce their power draw.
  - The latest **Serial ATA (SATA) interface** from Seagate enables system builders to make a sustainable commitment to the interface standard and work with it through several design cycles in confidence, maximising their returns on design and engineering. Seagate firsts with Serial ATA include SATA 1.5Gb/s, SATA NCQ and SATA 3Gb/s. Look for the next generation of Seagate SATA to become available soon.
- The Seagate commitment to a **common platform code** gives Seagate a way to practice continuous improvement of the code, which assists system builders in reducing design costs by making it easier to build and integrate solutions.

These *smart* capabilities of Seagate storage products help system builders reduce the costs and complexities of developing and marketing solutions with technology that advances sustainable innovation. Using Seagate storage, technology providers can share the advantages of technological leadership and business sustainability with their customers:

- Business customers in general can look to system builders to deliver storage solutions that boost efficiencies, minimise complexity, contribute to lower costs and help reduce administrative overhead.
- Individual consumers can rely on dependable, economical Seagate storage in their notebooks, desktop computers, mobile devices and backup drives to enable a high-performance, rewarding experience with content and applications. And they can consider technology companies that offer Seagate storage as sustainable, credible providers that provide outstanding value and innovation at a reasonable expense.
- For chief information officers and chief information security officers in larger companies, the business sustainability enabled by Seagate storage translates into easily integrated, streamlined systems and processes with consistently strong data security and integrity, and fosters business intelligence. Information protection enabled by Seagate Secure technology can save companies the potential risks, costs and loss of face related to compromised data security.

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## Present and Future Sustainability

By definition, sustainability looks toward the future, and sustainability advocates always question what the environmental, economic and social impact of today's behaviors, practices and technologies will be if they persist. In this regard, Seagate delivers storage technology that promotes long-term sustainability for businesses, technology users and the environments in which they live and work.

## Shaping the Storage Market

Current trends in the demand for digital storage are more than maintaining themselves—they are on the increase. For example, analyst and research firm IDC states "Demand for storage capacity continues to grow at a rate of nearly 60 percent per year."<sup>1</sup> With global reach and tireless innovative drive, Seagate aims to provide its technology partners and their customers with the dependable, high-performing storage they need.

Seagate is often the first storage technology manufacturer to pioneer technologies that eventually turn into industry-standard capabilities. Examples include the SATA hard drive interface, perpendicular recording, free-fall sensors in notebook drives and self-encrypting drives. Participation in standards-setting bodies gives Seagate technologists a strong voice in ensuring the viability and consistency of storage technology.

## Increasing Storage Value

System builders can rely on the sustainability of Seagate storage technology to create innovative storage products and be among the first providers to address emerging customer needs. Typically, such new solutions permit high margins and represent a valuable profit opportunity. Eventually, when the new technologies find general adoption, costs decline, which benefits customers and technology providers.

For customers, the Seagate track record of sustainable innovation means that they can commit to an investment in storage technology in confidence. They acquire technology that is viable, supported and upgradeable in the long term, and helps them achieve better performance, less complexity and a higher ROI during the entire life cycle of the solutions.

## Building Momentum Behind the Seagate Strategy

Industry observers and analysts frequently confirm the Seagate approach to making sustainable storage technology broadly available. For example, speaking of information protection, Ron Ouellet from the Gartner Group notes, "Many organisations are considering drive-level security for its simplicity in helping secure sensitive data through the hardware life cycle from initial setup to upgrade transitions and disposal." And, in a discussion about SAS, a drive interface to which Seagate is dedicating substantial research and development resources, IDC comments that it expects "70 percent of all enterprise-drive shipments to be SAS by 2011."

<sup>1</sup> IDC, *Worldwide Storage 2008 Top 10 Predictions: New Paradigms*, Dec. 2007

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## Business Sustainability as a Winning Strategy

By urging companies to adopt more strategic and comprehensive approaches to sustainability, individual consumers and households are playing a key role in bringing about sustainability in environmental, technological and business contexts. System builders need to understand that they can incorporate Seagate storage in their offerings to help meet customer demand for sustainable technology.

Seagate product development, manufacturing and distribution incorporate the guiding principles of environmental and economic sustainability. What's more, Seagate can provide expertise and resources to help its system builder partners develop and market sustainable technology solutions. Small, fast, versatile and dependable, the Momentus family of hard drives can be a significant contributor to sustainable technology. Although the Momentus drives are perfect for notebooks, they are also easy to integrate in a wide variety of multidrive and external backup systems.

In summary, sustainable storage from Seagate can help system builders:

- Realise healthy profit margins
- Maintain an innovative, competitive profile
- Enhance their brands with sustainable values
- Pass on economic and environmental benefits to their customers

Driven by both economic and environmental considerations, the momentum for sustainability will continue to build. Today, technology providers can demonstrate leadership and do profitable business by capitalising on the many opportunities sustainability presents.

## For More Information

- Seagate Momentus hard drives: [www.seagate.com/www/en-us/products/laptops/momentus/](http://www.seagate.com/www/en-us/products/laptops/momentus/)
- Seagate products and the environment: [www.seagate.com/www/en-us/about/global\\_citizenship/products\\_environment/](http://www.seagate.com/www/en-us/about/global_citizenship/products_environment/)
- Seagate Partner Program: [spp.seagate.com](http://spp.seagate.com)
- Contact Seagate: [www.seagate.com/contact/index.html](http://www.seagate.com/contact/index.html)

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