

tyco



Store Intelligence. Retail Excellence

environmentally
responsible retailing:
a systems approach

Executive summary

Tyco Retail Solutions, and its parent company Tyco International, consider protection of the environment a top corporate priority. It is a responsibility shared with our suppliers, retail customers, and shoppers—the ultimate beneficiaries of our products and services. We believe that environmental responsibility is good business as well as a social obligation, and make sure that our actions serve the long-term interests of our customers and our world.

The interconnectedness of the environment demands that we take a systems approach to create solutions that reduce the impacts not only of our individual products, but of the supply and distribution chains to which they contribute. Tyco is taking the lead in developing disciplined, metrics-driven technologies and processes that minimize environmental impacts to deliver cost-effective solutions for our customers and the shoppers they serve.

The environment: a shared responsibility

Environmental responsibility encompasses many different efforts and initiatives, both individual and corporate: recycling, protecting endangered species, conserving water, and hundreds more. But they all resolve to the responsibility of individuals and organizations not to damage or waste the resources they share with others—what we call the environment. Tyco Retail Solutions protects the environment in three fundamental ways:

- **Conservation** means limiting our inputs—we conserve energy by designing resource-conserving devices and processes for our customers, keeping our own operations and facilities efficient, and using renewable energy sources where possible. We conserve materials by reducing packaging, and designing systems that deliver the same effectiveness with lower materials content.
- **Waste reduction** means limiting our outputs—cutting emission of greenhouse-gasses and waste water from our facilities, keeping our fleet of service vehicles energy-efficient, and offering local sourcing and service so we make fewer and shorter trips.
- **Recirculation and recycling** cut waste by converting outputs into inputs, either directly by recirculating goods for re-use, or through intermediaries by using recycled materials in products and packaging, and recycling waste that can't be eliminated.

It's easy and tempting to focus on a single responsibility or activity—narrow initiatives are easier to launch, and their impacts will be easier to achieve and measure. Plus, it's generally good business sense to focus and specialize. But it's the wrong approach for the environment, where interconnections between actions and consequences are typically deep and complex, and nothing takes place in isolation.



Security.
Protection.
Solutions.
Responsibility.

Tyco International, parent company of Tyco Retail Solutions, is a global leader in environmental, health, and safety protection.

Protecting the environment is a top priority at Tyco. It's the primary focus of our corporate policy that guides our environment, health and safety management system and employee training programs. We are proud of our steady record of improvement with our environmental efforts, but we always strive to do more. We constantly monitor performance across the facilities and vehicle fleets we operate around the world, seeking out opportunities for improvement, to deliver on our commitment to environmental protection—for our employees, for our customers and for the planet.



Vital World
Many Steps. Greener Future.



“Shoppers expect retailers to offer products and services that reflect concern for the environment. Our retail customers can do exactly that, with Tyco’s environmentally responsible in-store systems backed by global processes that cut waste and raise the quality of shoppers’ experience.”

*Scott Clements
President, Tyco Retail Solutions*

The systems approach

The systems approach takes into account the interconnectedness of the environment, including all the consequences of our actions to preserve it—direct and indirect, and over both the short and long term. For Tyco Retail Solutions, the systems approach means applying solutions that work for all participants up and down the value chain from manufacturers to customers— not just for our own products in isolation, but including the systems that supply or depend on them, and throughout their useful lives.

It also means collaborating with industry partners, customers, and communities to meet shared goals: as one of 100 global companies in the Climate RESOLVE initiative through charitable-giving efforts at the corporate and individual level, and in customer collaborations that take on environmental issues neither partner could solve alone.

Considering the environmental impacts of production, purchase, and service decisions sets a high standard, but as the leader in retail performance and security solutions, and part of Tyco International—a global leader in environmental and safety products—it’s a standard we are called to meet. We also believe that environmental responsibility is good business.



Tyco Retail Solutions environmental responsibility efforts include these broad initiatives:

- **Networked, interconnected devices**—Tyco is integrating in-store devices, once managed separately, into smart systems that can be managed at the enterprise level so retailers can monitor the health and status of each device and optimize their programs accordingly.
- **Robust solutions that work in the real world**—In EAS, analytics and inventory intelligence, Tyco Retail Solutions knows how to collect valid retail data reliably and efficiently. That translates into more cost effective solutions for retailers, like fewer EAS pedestals at store fronts, and RFID readers that work in the toughest retail environments.
- **Efficient global processes**—Eight source tagging certification centers on four continents, high-capacity automated tag recirculation, and remote system diagnostic capabilities make our technologies as friendly to your business as they are to our environment.
- **Multi-functional solutions**—Our emerging technologies build upon existing infrastructures, reducing the need for more hardware and creating a network of devices that offer a wider range of benefits.

Win-Win-Win

Like any business plan, our systems approach to environmental responsibility depends on objective measurements, so we can base our decisions on facts and trends, not just hopes and good intentions. Our Environmental, Health, and Safety (EHS) initiatives are subject to the same rigorous reporting, compliance, and audit standards we insist on for all Tyco business information. Key metrics, performance, and trends are summarized in our EHS scorecard.

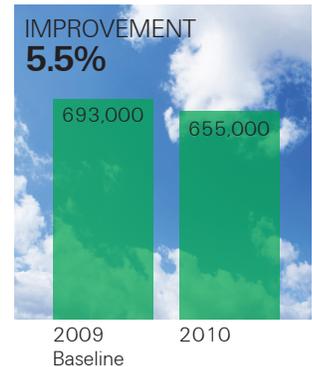
Tyco International's Vital World™ environmental program sets and tracks environmental goals using explicit metrics for water consumption, waste generation, and emissions of all six greenhouse gases covered under the Kyoto Protocol.

TYCO'S ENVIRONMENTAL GOALS

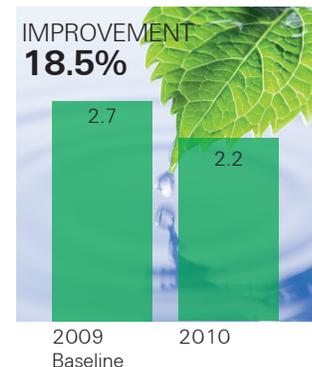
REDUCE 25%

At the heart of the Tyco's Vital World program is our company-wide goal to reduce greenhouse gas emissions, water use and waste generation, supporting our vision of a greener future for everyone, everywhere.

GREENHOUSE GAS EMISSIONS (in metric tons)



WATER CONSUMPTION (in billion liters)



“We engineer the latest technologies into Tyco solutions to conserve energy and materials. But we take environmental responsibility one step further by designing systems that work with one another up and down the value chain for greater business effectiveness and lower environmental impact.”

*Robin Hensley
Chief Technology Officer
Tyco Retail Solutions*



Of course, there are transition costs between old, resource-intensive technologies and processes and our new low-impact solutions—but they are short-term. Over the long run, lower rates of resource and energy consumption deliver lower costs and sustainable competitive advantages for Tyco and our customers.

When a company meets its environmental responsibilities, it conserves materials, reduces waste, and optimizes its supply and distribution channels for efficiency. Short-term cost disadvantages from conversion capital equipment or redesign of complex business processes give way to long-term savings. In the long run, environmentally responsible business is simply good business—a win-win-win proposition for our company, our suppliers, and the environment, and with effective protection at lower total cost of ownership, a sound business decision for our retail customers.



A Proven approach to sustainability: EAS solutions

The business purpose of EAS systems is to reduce shrink by deterring thieves without inconveniencing legitimate shoppers. The business case for EAS is well established—it is one of the most cost-effective and least obtrusive ways to protect retail store merchandise against theft. Our goal here is to examine the environmental consequences of EAS, using a systems approach that considers not just static impacts of a technology, but upstream and downstream effects, over both the duty cycle and lifecycle of the technology. It's a more complex story, but one that more closely reflects real environmental issues, and leads us to better-informed, more responsible decisions.

Labels and tags

Our small, lightweight Sensormatic acousto-magnetic EAS labels are styrene or ABS and metal. The ferrous content of our tags separates magnetically during the recycling process, and all plastics content is recyclable as well. Acousto-magnetic labels are the only EAS labels that can be turned on and off, so they can be re-used when products are returned. Several different environmental standards govern their material and chemical content, and our Sensormatic labels meet all of them. In addition, the tags have been certified by hundreds of Tyco source-tagging partners, who must meet environmental and safety regulations for their products—including the tags—in every one of their global markets. In fact, our certifications include participation in Nintendo's and Sony's green partner programs, among the most stringent standards in the world.

EAS "hard tags" are the standard for high-integrity protection of soft goods. They are completely reusable and recirculatable—millions of our Sensormatic tags have been in continuous circulation for more than 30 years. Sensormatic hard tags have traditionally been applied, removed, and re-used in the store. New recirculatable visible source tags are applied at the source, removed at the store, and then processed and returned for reapplication by product manufacturers.

Recirculation: at the source or in the store?

Tyco Retail Solutions has launched an ambitious global recirculation and source-tagging initiative that combines the recirculation advantages of hard tags with the business benefits of source tagging. With the recirculation program, products arrive in stores already protected against shoplifting and ready for sale. Tags are consistently placed on garments, improving store aesthetics and speeding the tag removal process.

Returning tags to the source introduces transportation impacts, but these are inconsequential when using established shipping routes. The Low-Carbon Leaders Project, under the supervision of the UN Global Compact's Caring for Climate initiative and in cooperation with the World Wildlife Fund, rates container shipping by far the most energy-efficient way to transport goods over long distances. CO₂ emissions associated with container shipping range from 10 – 40 grams per metric ton per kilometer—about 1/10 of emissions generated per ton of air freight. For a benchmark, driving a compact car on a 20 km round trip to the store produces 18 times more CO₂ than shipping a pair of shoes 18,600 km from Hong Kong to Rotterdam. Truck and rail range between 30 and 150 grams per metric ton per kilometer—higher than container ships, but still quite reasonable for lightweight items like hard tags.

As long as tag recirculators make reasonable modal choices and follow established shipping routes, the impact of recirculating hard tags all the way back to manufacturing sources is trivial. From a systems perspective, recirculating hard tags to manufacturing sources is an excellent alternative to disposable tags from both an environmental and a business standpoint.

Detector systems

With EAS detectors, system effects are more significant: a well-intentioned effort to reduce power consumption or materials content in one area may create significant cost increases and environmental impacts elsewhere. Sensormatic EAS solutions have been designed to minimize environmental impacts system-wide, without compromising efficiency or security.

- **Energy consumption & range:** Look for detector solutions that use efficient power supplies, not just smaller ones that may limit sensitivity, range, or pedestal service life. Our EAS systems cover wide exits, and work effectively even with challenging products in demanding retail environments. Conversely, pedestals with shorter range require more pedestals per entrance, reversing energy savings and giving store entrances an intrusive, low-end appearance.
- **Energy-saving configurations:** Tyco engineers are designing EAS detectors with higher efficiencies. When compared to earlier versions, the latest generation of Sensormatic EAS systems deliver wide exit coverage and equivalent system sensitivity, while consuming 50% less power. Energy consumption is reduced even further when in “Power Save” mode. In addition, our latest systems utilize 35% less plastic and 25% less packaging than earlier designs.
- **Interference:** Store entrances are challenging electronic environments for many EAS systems. For example, sliding entrance doors are among the best energy-saving solutions you can install—and some jurisdictions already require them—but they interfere with some EAS systems, and short-range pedestals can’t span their width. Conversely, Sensormatic acousto-magnetic systems work with other components at retail entrances, including automatic sliding doors.
- **Concealment:** Our detector systems may be embedded into walls and floors at store entrances for sensitive detection, extending their service lives by protecting them from damage and wear, and significantly reducing their plastics content because there is no need for a protective external housing.
- **Duty cycle:** Detector systems that time out into low-power standby mode based on time or traffic can use 30% less energy per 12-hour store day. Our EAS device managers power down systems after a preset idle interval, and built-in directionally sensitive people-counters put pedestals into a low-power state when traffic is low.
- **Lifecycle:** Our detectors are extremely durable, saving manufacturing energy and materials from less frequent replacement. Lifecycle design—from selection of materials to end-of-life management, reduces environmental impacts over the long term.
- **Efficiency by design:** All Sensormatic hardware is compliant with the European Union Restriction of Hazardous Substances (RoHs) Directive, and printed-circuit boards use low-power processors. In addition, most power supplies and circuit boards are backward-compatible with products already in the field, reducing solid waste from scrap, and reducing power consumption of serviced units.
- **Service impact reductions:** Higher reliability reduces the total environmental impact of service “truck rolls,” and remote diagnostics enable a further reduction of up to 25% of all calls. When on-site service is required, the local presence of service teams keeps trips short, and careful fleet management keeps impacts low. Tyco International is replacing more than 4,000 full-size vans with smaller vehicles to cut greenhouse gas emissions by more than 20,000 metric tons every year.
- **Safety:** Electronic products from Tyco Retail Solutions are certified by regulatory agencies in all countries in which we operate. Solutions are compliant with UL, CE, FCC and Directive 94/62/EC guidelines, so that retailers can rest assured that our systems are safe for both employees and shoppers. In addition, our products comply with global EHS and chemical management standards like RoHS, WEEE, REACH, CONEG, CPSIA, and JIG Annex A & B, reflecting our commitment to using the safest materials and to reducing waste.

The environmental advantages of longer-range, embeddable, remotely-managed Sensormatic detector solutions are clear, but the business benefits are just as compelling: more open, attractive store entrances, fewer false alarms to irritate shoppers and staff, fewer impediments to store traffic, and better security from less downtime.

Global strength. Local expertise. At your service.

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Tyco Retail Solutions—responsible solutions for our environment

As part of a global environmental and safety leader, Tyco Retail Solutions understands that protecting the environment is a global issue, not addressable by fragmented solutions. We look continuously for new technologies, business processes, and collaborations that will reduce resource consumption, emissions, and waste in our own operations, and yours.

As the leading manufacturer of end-to-end retail solutions for loss prevention, life safety, inventory intelligence and traffic intelligence solutions, Tyco offers not just state-of-the-art point solutions, but global environmentally-responsible system solutions, such as our pioneering source-tag recirculation program, integrated loss-prevention and store traffic management, and remote and local service options.

Today's shopper cares about protecting our environment. When you include Tyco Retail Solutions in your Green Retailing or Sustainability initiatives, it makes a strong statement about your own environmental commitment. And Tyco Retail Solution's environmentally responsible, industry-leading suite of products and services are a solid investment in your business future.

Leverage our strength and experience

Tyco Retail Solutions, a unit of Tyco International, is a leading global provider of integrated retail performance and security solutions, deployed today at more than 80 percent of the world's top 200 retailers ranging from single-store boutiques to global retail enterprises. Operating in more than 70 countries worldwide, Tyco Retail Solutions provides retailers with real-time visibility to their inventory and assets to improve operations, optimize profitability and create memorable shopper experiences.

The Tyco Retail Solutions portfolio for retailers is sold through ADT and authorized business partners around the world. For more information, please visit www.tycoretailsolutions.com.

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