

White Paper

OUR RETAIL SUSTAINABILITY STORY OF SENSORMATIC SOLUTIONS BY JOHNSON CONTROLS

Responsible Retail is at the Heart of Everything We Do



Executive Summary

Sensormatic Solutions, the retail portfolio brand of Johnson Controls, is composed of products, solutions and processes. Johnson Controls strongly believes that the actions and steps taken towards Retail business operations – from the supply chain to the shop floor – will contribute to a stronger, healthier tomorrow.

Our strategic approach towards sustainability starts from within and extends beyond our facilities to our customers, creating an opportunity for retailers to position technology at the core of their own sustainability objectives. Thus, driving more value and cementing shopper and brand loyalty.

There's no better time than now to rethink sustainability strategies. After all, COVID-19 accelerated retail trends, such as a move towards unified omnichannel commerce and alternative shopping methods like Click & Collect, causing a greater need for precision retail and data analytics across the enterprise, and much more. As change happened, businesses transformed and people became even more connected to their communities, it also presented a chance to reimagine the role of the store and its operations within the current landscape and trends, and how sustainability can become a more vital part of growth and resiliency through recovery.

That said, sustainability is no longer a 'nice-to-have' among businesses, it's mission critical. Our collective vision of a thriving planet with an inclusive society begins at the individual level; but, with this common goal in mind, the future is bright.



Pressure Mounts for Sustainable Products, Solutions and Practices in Retail

Responsible Retailing has reached a tipping point. It's a conversation that has made its way into mainstream headlines, into the agendas of Retail's most important events and trade conferences, and into the boardrooms. That's because as consumers increasingly embrace social causes, they seek products and brands that align with their values.

A 2020 report by [IBM](#) in association with the National Retail Federation to better understand how consumer preferences and priorities keep changing, includes the results of a research study of 18,980 consumers in 28 countries. Findings include:

- Nearly six out of 10 consumers surveyed are willing to change their shopping habits to reduce environmental impact
- Nearly eight out of 10 respondents indicate that sustainability is important for them
- And for those who say it is very/extremely important, over 70% would pay a premium of 35%, on average, for brands that are sustainable and environmentally responsible

Additionally, the COVID-19 pandemic sparked more interest among consumers as they viewed the world through a lens of increased need for health and well-being not only of people, but of the planet as well.

The pandemic revealed the vast interconnectedness of the world and how meaningful change starts with one person or action, thus renewing consumers' desire for businesses to take a stronger stance on sustainability. According to a 2021 report by [Capgemini Research Institute](#):

- 67% of consumers said that they will be more cautious about the scarcity of natural resources due to the COVID-19 crisis
- 65% said that they will be more mindful about the impact of their overall consumption in the 'new normal'
- 78% of consumers believe that companies have a larger role to play in society
- A majority (over 53%) prefer to engage with Consumer Products and Retail (CPR) organisations that showcase strong sustainability credentials and embody a sense of purpose



The concept of Responsible Retail has always been at the heart of everything we do. In fact, it's been that way for decades.

The consumer perspective on the topic of sustainability is evident in Latin America, where going green(er) is good for business, according to a [2021 Kantar report](#). Key findings are based on a study that shows how brands may improve their perceived image through their environmental actions. Environmentally committed shoppers – classified as Eco-Actives and Eco-Considerers – are already a majority in Latin America. And this segment is larger than the global average. Sustainability in packaging is a key focus of a [McKinsey & Company report](#) on environmental concerns for consumers in emerging Asia. Viewing sustainability issues as a key factor in strategic planning will enable packaging companies to determine how sustainability can be used as a differentiator to attract consumer interest and drive growth. Sustainability is a personal commitment and emotional connection for consumers. At Johnson Controls, it's a key driver for our offering Sensormatic Solutions, and our priorities, but it's nothing new.

A Legacy of Providing Expertise in Sustainability

Sensormatic Solutions is an award-winning offering in the retail solution category of Johnson Controls, a leader in the building space for more than 135 years. Johnson Controls works tirelessly towards:

- Empowering our customers
- Innovating for a sustainable future
- Delivering environmental impact

As the leading global retail solution offering of Johnson Controls, sustainability is an integral part of the vision and values of the retail solution category.

Since its inception in 1966, Sensormatic Solutions has set sustainability as a focused driver forward. It's woven into the Johnson Controls retail solution category across processes and facilities, products, solutions and services, and it's rooted in an inclusive culture of like-minded people who want to make a difference.

Johnson Controls: A Pioneer in Sustainability

Johnson Controls is taking significant steps to drastically improve its environmental impact while empowering customers and future generations to consume less energy, conserve resources and identify pathways to achieving healthy, net-zero carbon communities.

Johnson Controls is ranked in the top 12 per cent of climate leadership companies globally by CDP and was recently named on the World's Most Ethical Companies® Honoree List and one of Corporate Knights' Global 100 Most Sustainable Companies.

George Oliver, chairman and CEO of Johnson Controls, is Chairman of the [Business Roundtable Energy and Environment Committee](#), where he is driving policies that preserve the environment and maximise sustainable energy options.

This year, Johnson Controls announced that [the Science Based Targets Initiative \(SBTi\)](#) approved its ambitious emission reduction targets. Emissions from the Johnson Controls value chain are in line with industry best practice.

Sustainability Commitments include:

- Set science-based targets consistent with the most ambitious 1.5°C Intergovernmental Panel on Climate Change scenario
- Reduce Johnson Controls absolute operational emissions by 55% and reduce absolute customers' emissions by 16% before 2030
- Achieve net-zero Scope 1 and 2 carbon emissions before 2040, in line with the United Nations Framework Convention on Climate Change Race to Zero and Business Ambition for 1.5°C criteria
- Invest 75% of new product development R&D in climate-related innovation to develop sustainable products and services
- Achieve 100% renewable electricity usage globally by 2040
- Create a supplier sustainability council with cohorts of suppliers and their tier-one suppliers, and provide suppliers with training on sustainability best practices and OpenBlue digital tools to meet ambitious public sustainability goals



Johnson Controls Launches OpenBlue Net Zero Buildings 'As a Service'

OpenBlue Net Zero Buildings 'As a Service' will provide a one-stop shop for companies looking to achieve net-zero carbon and renewable energy goals. The 'As a Service' model looks to provide customers with guaranteed outcomes and risk transfer models to achieve emission reduction commitments that ultimately lead to healthier buildings, people, places and the planet.

The OpenBlue Net Zero Buildings 'As a Service' portfolio includes a full spectrum of sustainability offerings tailored to schools, retail, campuses, data centres, healthcare facilities as well as commercial and industrial buildings.

- Johnson Controls Net Zero Pulse Survey among a large group of building professionals shows acceleration of net-zero goal setting – over 90% have significant goals to reduce carbon emissions and energy consumption by 2030+, far ahead of the goal set out in the United Nations Paris Climate Agreement.
- New offerings include turnkey access to net-zero building roadmaps, impactful OpenBlue sustainability innovations and real-time performance dashboards and reporting that analyse energy, water, and greenhouse gas emissions.

Delivering on Sustainability Goals

Helping our Customers (Retailers) and their Shoppers (Consumers)

The strategy of Johnson Controls for its retail portfolio brand – Sensormatic Solutions – benefits and enhances the sustainability goals of our customers (retailers), shoppers (consumers), and within our own organisation's facilities and processes. The following pages will examine the sustainability impact in those three areas.

For the Retailer



Positioning Technology at the Core of Sustainability Initiatives for Retail Sustainable Innovation & Sensormatic IQ

Launched in January 2021, Sensormatic IQ represents a complete suite of connected solutions and services built on an intelligent operating core that leverages cutting-edge IoT technology and combines our 135 years of building expertise with our 55 years of retail expertise to deliver impactful sustainability outcomes for optimised retail store operations and experiences. SaaS applications built on an open platform are designed to enable digital-first, secure, agile and innovative operating models.

Johnson Controls has 1,795 retail patents with ~600 pending. In 2020, alone, Johnson Controls filed for Sensormatic Solutions a record 70 patents for innovative retail technology solutions, and 55% are emerging future technologies for its retail solution offering.

Services and solutions through the retail solution category will help retailers to accelerate their digital transformation and support their sustainability initiatives through a variety of avenues, such as energy efficient products, cloud-based troubleshooting and remote diagnostics, to keep wheels off the ground and reduce emissions from unnecessary or wasted shopper trips due to a lack of precision, as well as much more.

At its essence, the Sensormatic Solutions portfolio allows retailers to act on prescriptive data-driven outcomes to Fast Forward Retail and confidently move towards a healthier future.

Loss Prevention EAS Systems

The latest generation of Electronic Article Surveillance (EAS) systems consume 50% less power than earlier models. These systems feature a 'power save' mode based on time or traffic, which can result in 30% less energy used per 12-hour store day. Likewise, our cloud-based loss-prevention platform, Shrink Management as a Service, monitors, manages and remotely services connected EAS systems. This allows our service team to respond faster and provide remote troubleshooting with fewer on-site visits, helping to minimise carbon emissions with fewer lorries needed on the road.



Source Tagging and Recirculation Programme

Our Visual Source Tags Recirculation (VSTR) initiative, launched in 2010, stemmed from the existing Sensormatic source tagging programme, where products arrive in stores already protected against theft and ready for sale, reducing labour costs and minimising retail shrink.

Through the VSTR programme, manufacturers apply the hard tags before shipping merchandise to retail locations, to eliminate the time-consuming need for in-store tagging. Once removed in-store during purchase, the tags are conveniently returned to the warehouse using the same lorry that makes stock deliveries to the store. Returning tags to Sensormatic recirculation centres using established shipping routes and containers has proven to be the most energy-efficient way to transport goods over long distances.

Once returned, the tags are quality-checked, cleaned and re-certified using the most environmentally friendly methods, including green electricity, the use of recycled or sustainable products whenever possible, and processes that ensure any waste or scraps are handled with the best environmental standards. When tags reach the end of their life, after multiple reapplications, they are scrapped and recycled via recirculation sites that are ISO14001 certified.

Over the last year, the Sensormatic Solutions VSTR programme achieved the following results:

- 1.5 billion tags recirculated (11.4 billion tags have been recirculated since the programme's inception)
- On average, retailers return over 90% of their tags
- 79.74 million kg (175.8 million lbs) of plastic recycled from tags since the programme's inception
- Over 280,000 MWH of electricity saved, which amounts to 26,000 homes' annual usage (1,800,000 MWH of electricity saved [which equates to 165,000 homes annual electricity usage] since its inception)
- 38,935 tonnes of CO2 discharge avoided (260,000 tonnes of CO2 discharge avoided since its inception)

Sustainability Awards and Recognition

Sensormatic Solutions has been recognised and awarded for sustainability on multiple fronts. The Business Intelligence Group (BIG) named the Johnson Controls retail offering for its innovative Visual Source Tag Recirculation (VSTR) programme a Sustainability Service of the Year for its significant strides towards reducing waste and emissions. When VSTR was launched by Johnson Controls under the Sensormatic retail brand in 2010, the offering created a scalable framework within which retailers can smoothly return used tags for cleaning, sorting and reuse. The initiative reduces plastic waste by ensuring that working hardware is reused rather than discarded. Today's global scale and our full control over recirculation allows for strategic shipping and supply chain management, to reduce greenhouse gas emissions as the tags are routed through the process.

Johnson Controls has been honoured by Supply & Demand Chain Executive with its Women of the Supply Chain accolade, which honours executive women within the company for their work on sustainability. This recognition showcases the company's passion for sustainability and for helping to guide its retail portfolio brand through the uncertainty of the pandemic, while also maintaining the company's commitment to responsible retail.

Perishable Food Safety

Sensormatic Solutions is uniquely positioned as the retail offering of Johnson Controls to reach essential retailers, like supermarkets/grocers and pharmacies, as well as restaurants and food service providers. We also know that roughly 1.3 billion tonnes of edible food – equivalent to a third of global food production – is wasted annually in the world, according to the Food and Agriculture Organization of the United Nations.

That's why in our Operational Effectiveness Solution, we offer food safety compliance packages. Our cloud-based, digital food safety package provides remote, real-time data to monitor, protect and alert, in order to ensure that food is safe in the cold chain. Digital solutions can help to reduce food waste, and in turn reduce our carbon footprint.

Inventory Intelligence

Our Inventory Intelligence solution delivers accurate, real-time insights that not only help to reduce waste, carbon emissions and energy use throughout the entire supply chain, but also help retailers to assess and optimise internal processes and supply chain flows. This solution leverages radio frequency identification (RFID) to give retailers a single view of item-level inventory across their entire enterprise, helping to:

- Provide optimal stocking levels to help reduce transportation and related CO2 emissions from wasted shopper visits to the store
- Optimise use of warehouses and distribution centres, helping to lower the environmental impact of operating these spaces
- Avoid over-production and material waste by having the right items in the right place at the right time, simultaneously reducing wasted trips for shoppers

Retailers can also see sustainability efforts reflected in our supply chain intelligence package, which leverages real-time data to optimise processes and eliminate the sort of inefficiencies that have negative environmental impacts, like shipping incorrect items, inefficient transportation methods or generating avoidable waste.

Insights for Efficient Shopper Journeys

Our Shopper Experience solution provides retailers with a comprehensive understanding of their shoppers' behaviour to help make smarter decisions about stores and properties, for example, when to adjust hours for maximum occupancy, which could save energy and water. We also help to reduce CO2 from wasted trips to stores that are not properly staffed or where inventory is unavailable.

Shopper Insights can also help reduce emissions by optimising staffing for Click & Collect services, thereby reducing the number of customers idling in the car park.



For the Shopper



A Seamless and Sustainable Shopping Experience

Earlier, we discussed the importance of sustainability to the consumer, and how they are looking for businesses that positively impact the environment. The acceleration of shopping trends like Click & Collect, due to COVID-19 coupled with the renewed interest in healthy people, healthy places and a healthy planet, do not need to be addressed separately. In fact, retailers can address both aspects in tandem, and achieve great results, by leveraging connected technologies.

After all, the shopper experience hinges on perfectly timed moments of truth or 'precision retail' – engagement on the customers' terms, providing the right item at the right place at the right time. It includes those moments between customers, stores, associates and merchandise opportunities for retailers to positively impact the brand experience and execute seamless unified commerce, all with sustainability in mind.

For example, with Click & Collect, the item level inventory ensures that a shopper's trip is purposeful, knowing that their item will be in stock or ready for collection. This avoids increased emissions stemming from a wasted or additional trip if an item is out of stock or unaccounted for, or idling in the car park while waiting for a product to be delivered.

Furthermore, data integration from shopper insights can help to visualise both staff service level and shopper time dedicated to transactions, determining efficient shopper journeys and reducing wasted trips to stores where staffing levels are not aligned to demand of services. All of this and more directly benefits shoppers and, with the right positioning, retailers can demonstrate how these technologies are not only creating a seamless shopping experience, but a sustainable one as well.

For Sensormatic Solutions

Committed to Sustainability from the Inside-Out

We believe that to make a positive change in the world, it must begin within ourselves. With processes in place, our dedicated staff continuously review our operations, facilities and fleets to improve our environmental performance and energy management, by identifying and reducing every excess. Here are four focus areas:

- ISO 14001 and ISO 50001: sustain energy management certifications at global manufacturing facilities. Priorities include reduction of water and power consumption, greenhouse gas emissions and waste to landfills.
- Sustainable Materials: use recycled material such as green styrene, wherever possible, by adding post-industrial recycled material, and implement eco-friendly packaging by eliminating printing on current packaging and using biodegradable plastic bags.
- Service Truck Fleet Energy Efficiency: reduce operational emissions by managing and servicing customers' connected devices remotely from the cloud and keeping wheels off the ground.
- Responsible People: Johnson Controls attracts, empowers and deploys the people, technology and integrated processes to make change possible, and support efforts for volunteerism and philanthropy.

Our work on sustainability for retailers, shoppers and ourselves is never done. It's a long-term commitment and a pledge we take very seriously to ensure tomorrow's healthy people, healthy places and healthy planet.



An aerial photograph of a dense, lush green forest. The trees are vibrant and varied in height, creating a textured canopy. A semi-transparent blue rectangular box is overlaid on the upper and middle portions of the image, containing white text. The text is centered and reads: "Johnson Controls Commitment to Volunteerism and Philanthropy". Below the title, there are three bullet points detailing the company's commitment to sustainability and community support.

Johnson Controls Commitment to Volunteerism and Philanthropy

- Globally, more than 80% of Johnson Controls volunteering ties to one of the 17 United Nations Sustainable Development Goals (SDG), with 33% to Sustainable Cities and Communities and 25% to Quality Education. Through the programme, Johnson Controls seeks to better connect our philanthropy and volunteerism, leveraging the impact of both.
- Since 1952, the company has regularly contributed to the Johnson Controls Foundation to ensure robust philanthropic support for the community. In the last ten years, Johnson Controls Foundation has funded more than US\$77 million to support US charitable organisations. The Foundation is a separate entity from Johnson Controls and has its own board of directors.
- Volunteerism is aligned with the company's overall philanthropic focus of building safe, smart and sustainable communities where our employees live and work. Corporate philanthropy efforts resulted in contributions of more than US\$8.2 million. In addition, our employees gave in excess of US\$2.6 million.

Connect with Us

For more information on our Sustainability initiatives, please go to [Sensormatic.com/Sustainability](https://sensormatic.com/Sustainability). You can also follow us on [LinkedIn](#) and [Twitter](#), using #SensormaticSustainability, or check out our [YouTube](#) channel.

About Johnson Controls

At Johnson Controls (NYSE:JCI) we transform the environments where people live, work, learn and play. As the global leader in smart, healthy and sustainable buildings, our mission is to reimagine the performance of buildings to serve people, places and the planet. With a history of more than 135 years of innovation, Johnson Controls delivers the blueprint of the future for industries such as healthcare, schools, data centres, airports, stadiums, manufacturing and beyond through its comprehensive digital offering OpenBlue. With a global team of 100,000 experts in more than 150 countries, Johnson Controls offers the world's largest portfolio of building technology, software and service solutions, working with some of the most trusted names in the industry.

For more information, visit www.johnsoncontrols.com or follow [@johnsoncontrols](#) on Twitter.

About Sensormatic Solutions

Sensormatic Solutions is the leading global retail solutions portfolio of Johnson Controls, powering operational excellence at scale and enabling smart and connected shopper engagement. Our intelligent digital operating platform – Sensormatic IQ – combines the full Sensormatic Solutions portfolio, including third-party data to deliver unmatched insights into shopper experience, inventory intelligence, loss prevention and operational effectiveness with advanced technologies, like AI and Machine Learning. This enables retailers to act on prescriptive and predictive data-driven outcomes to confidently move into the future.

Please visit [Sensormatic Solutions](#) or follow us on [LinkedIn](#), [Twitter](#) and our [YouTube channel](#).



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