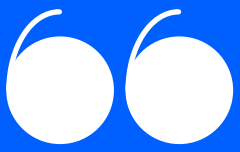
Körber Supply Chain

Körber Supply Chain Perspectives

Sustainability

Achieving new sustainability goals by taking a holistic approach to warehouse operations

KÖRBER



Sustainability and what it means is a hot topic all over the world, especially in recent years – and rightly so. The urgency of solving the climate crisis has never been higher, and people's awareness of their impact on the planet is growing. Global forces are imposing more and more regulations on businesses to become more sustainable. But as the supply chain makes efforts to cut their CO_2 emissions and carbon footprint, it also needs to keep demanding customers satisfied.

We are also seeing change in the end customers, who are now being more responsible in where they're shopping and how. Trying to become more sustainable, they're paying more attention to companies who are doing the most for the environment, preferring them to others – this is what we call "the conscious consumer." This is creating a new, highly competitive market for businesses. But to stay ahead, they must approach sustainability from a new, more comprehensive point of view.

Sustainability is more than the environmental impact as we know it. The economical and societal impact also contribute to making a business more sustainable. That's why the supply chain must start taking a more holistic approach to their operations, both in and out of their warehouse.

Körber Supply Chain Perspectives Sustainability

Defining sustainability

According to the latest Intergovernmental Panel on Climate Change (IPCC) report, "It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred."[1] These changes can lead to catastrophic consequences, some of which we've already seen happening in the past years – sea levels rising, extreme hot waves, heavy precipitation, agricultural and ecological droughts, as well as tropical cyclones.

With this level of urgency, it's no surprise that "sustainability" has quickly become a buzzword. It can be found pretty much anywhere; companies consistently advertise the ways in which they're becoming more sustainable – from proposing new green initiatives to announcing their commitment to lowering their CO_2 emissions and their carbon footprint.

However, to define sustainability is to look beyond what green initiatives can achieve. As the climate crisis worsens, businesses are called upon to do more. They must now look more closely at their daily operations, both inside and outside their warehouse, to find new ways in which they can make their impact more sustainable – environmentally, socially and economically.

What is sustainability?

In 1987, the United Nations Brundtland Commission defined sustainability as "Meeting the needs of the present without compromising the ability of future generations to meet their own needs."[2] Over thirty years later, the conversation around sustainability is growing louder, with global sea levels and CO_2 levels being the highest on record.[3] The battle to find new sustainable ways to keep offering more and different products, while also lowering the impact it has on the planet, is growing more challenging – and it's only set to get worse as global resources continue to deplete.

By adding the concept of "development," sustainable development means not only that humankind should satisfy its current needs without compromising the ability of future generations doing the same. Along with it also comes an idea of societal progress and an increase in quality of life across the globe.[4]

Sustainable development

To help companies achieve real change, world leaders have come together to create a list of 17 sustainable development goals to preserve our people, and our planet, as part of their 2030 Agenda for Sustainable Development.

Among the many initiatives backed by the United Nations, the most well-known within supply chain is the 2015 Paris Agreement. Its aim is to achieve both economic and social transformation through a set of regulations imposed on businesses around the world, to create real change and lower their CO_2 emissions.

However, the agenda includes other sustainable development goals too, such as reaching gender equality, eliminating poverty, and creating decent work and economic growth – showing there is more to sustainability than just our environmental impact. To become more sustainable, supply chain operations should take a wider look at what this truly means.

Sustainability in the supply chain

With global forces pushing more sustainability goals, pressure is growing on companies to find new ways to meet them. A good way to approach this is widening our understanding of what sustainability is, and our knowledge of how to make impactful changes.

A business should consider the full lifecycle of a product in their supply chain operations – and what that means in terms of sustainability. As we know, the product lifecycle has four stages:

- Pre-manufacturing
- Manufacturing
- Use
- Post-use

To make a production more sustainable, businesses should aim to place materials in this lifecycle more than once, avoiding "single use."

To achieve this, companies should start looking beyond what we know as "reduce, reuse, recycle." This expression was coined by the United States Environmental Protection Agency in the '70s – but today, we know we must do more than those three words suggest. Supply chains should start using the "6R perspective" instead, which includes "recover, redesign and remanufacture."

The 6R perspective

6R is the: "Reducing use of materials, energy, water and other resources; reusing of products/components; recovery and recycling of materials/components; remanufacturing of products; and redesigning of products to utilize recovered materials/resources."[5] Its aim is to keep materials and products in use beyond a single life cycle.

Adopting the 6R perspective does not mean avoiding waste completely. Some loss of material and product is inevitable. However, the focus should be on reducing – i.e. relying on fewer materials and products moving forward, and lowering carbon footprint as businesses take on a multi-lifecycle perspective. This makes it possible to preserve resources, meaning businesses can serve customers' needs with less, as the population continues to grow.

Triple bottom-line

In 1998, in his book *Cannibals with Forks*, American author John Elkington introduced the notion of the "triple bottom line." At the time, it was a new sustainability management system for companies to measure their impact more holistically.

From a business perspective, we know companies are mostly focusing on the economic impact of finding sustainable alternatives, often reducing it to an issue of profit or loss. However, in his book, Elkington suggests that companies should instead take a more comprehensive look at what sustainability really means, highlighting two more aspects: the environmental and societal, as well as the economical – that the triple bottom line is made up of.

The goal of becoming more sustainable is not only about creating a better economy, but also improving the environment we live and work in, while building a happier workforce and community. Keeping staff morale high means better efficiency and more productivity. Businesses should use the triple bottom line to assess profit not only from an economical perspective, but a societal and environmental one too.

Environmental sustainability

A company's direct impact on the environment. Managing, monitoring and reporting consumption, waste and emission can help control a business' environmental impact[6] and decide what actions to take, depending on results.

Social sustainability

A company's impact on its employees and local communities. Alongside improving the overall sustainability of the community and region, social sustainability also means paying employees fair wages, and making the workplace a more positive and motivating environment.[3]

Economic sustainability

Economic sustainability is not just about corporate capital. It questions whether a business is strengthening the economy and contributing to the overall economic health of its support networks and communities.[3]

Looking at a product's lifecycle makes the supply chain not only responsible for getting products to the market, but also in terms of recovery, remanufacture, reuse, and recycling. And this can significantly help improve business' environmental impact. However, the triple bottom line adds more layers to sustainability, broadening business' responsibility even further. And while this adds new challenges to the supply chain, it also offers new, more efficient ways to truly become more sustainable.

Facing sustainability challenges

Becoming more sustainable is challenging – even more so when introducing the triple bottom line. Sustainability is a much wider conversation than lowering CO_2 emissions – which is already a complex subject to tackle.

To add to this complexity, customers are demanding more product choice. This leads to more complex operations, which need more staff and bigger facilities. At the same time, the same customers are choosing businesses that are more eco-friendly and eco-conscious. All of this puts even more pressure on the supply chain to meet every standard.

As we move away from the bricks and mortar retail model, businesses need bigger warehouse spaces and more workers to keep up with growing online deliveries. This means operations are becoming more complex, with the number of SKUs, returns and customers' demands increasing every day.

"What we're seeing now is a tremendous shift, creating economic, environmental, and societal burdens. As we talk about more traffic, more pollution, more packaging, gig economy – there are a lot of worries about what this new economy means to sustainability. It's very challenging."

Tom Goldsby
Professor James A Haslam, II Chair of Logistics at The University of Tennessee Knoxville

Particularly, the most urgent challenges affecting supply chain are:

Labor shortages

This has been a growing problem for a number of years, and particularly affects warehouses during peak times, such as holiday periods. Labor shortages slow down operations, and compromise efficiency. This is due to not having enough people on the floor, and using valuable time to train new team members.

With the COVID-19 pandemic, and subsequent need for social distancing in enclosed spaces, hiring and retaining staff has become even more difficult. Ensuring people's safety is one of the key elements for a sustainable work environment, which means warehouses must find new ways to keep their operations going.

Returns culture

Online shopping is fast becoming the preferred way to purchase products. It's quick, easy, and often offers a wider variety of choice. Customers tend to buy more online, with the intention of returning what doesn't fit or doesn't satisfy them as they hoped. For the supply chain, this means a large share of shipped products come back to warehouses. Roughly 30% of all products sold are returned, making it that much more important that we start looking at expanding their lifecycle to avoid waste.

Some businesses are often the ones encouraging returns, pushing customers to buy more variety without committing to the spending, or "try before you buy". From a sustainability point of view, this often leads to an excess in production, and more waste in circulation. The back and forth of items between customers and warehouse also means a higher carbon footprint due to transportation.

Larger warehouse facilities

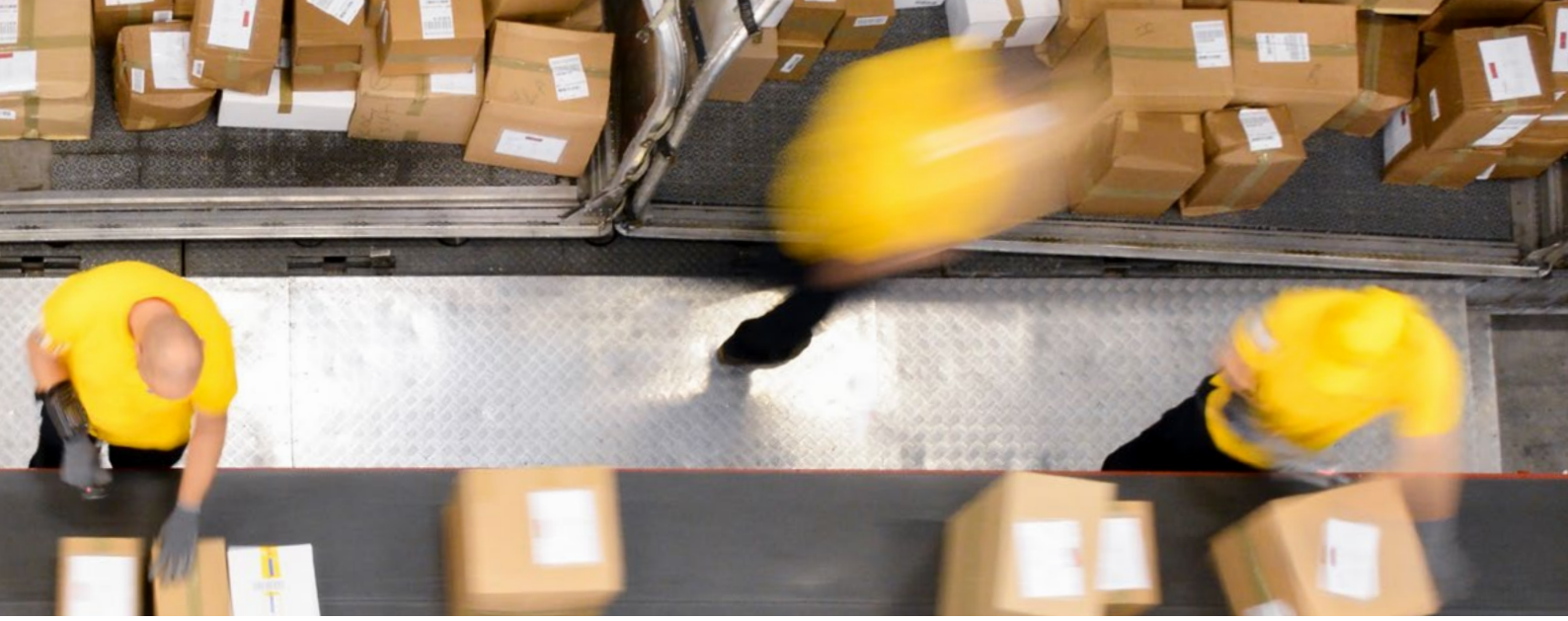
To accommodate more complex operations, facilities must expand too. As a result, warehouse and storage account for 17% of all commercial buildings, and 18% of total commercial building floorspace[7] in the United States, as accounted for in 2020. Between 2012 and 2018, it registered a 26% growth in terms of space and usage.[5]

However, according to City, University of London, warehouses are one of the major causes of industrial emissions and the progressing of environmental pollution.[8] Furthermore, within the supply chain, cold storage facilities not only require more energy to sustain the low refrigeration temperatures, but they also count for 10% of the total warehouse space – using up to 16% of all energy consumed by warehousing.

Record keeping

While it may be the least obvious, record keeping has become a real challenge for the supply chain in recent years. With customers demanding transparency when purchasing services and products, accounting and record keeping requirements have tightened.

All of this leads to a higher volume of paper trail, which ultimately ends up in waste.



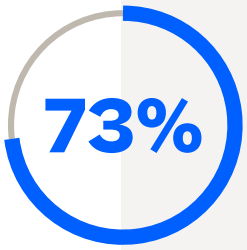
Customers' demands vs the conscious consumer

Today's customers want variety – whether it be different packaging, sizes or colors. We know this already presents a substantial challenge to the supply chain, and has for a while, as manufacturers must keep producing more and more goods. In turn, this has led to the need for more labor, and larger facilities to store more products.

Customers have come to expect a larger variety of products, and that these products will be delivered to them the next day, or even on the same day. This means warehouses must learn how to fulfill a higher mix of products faster, and to do so within a labor-constrained environment.

But, as people's awareness around sustainability grows, they are also demanding more sustainable products. This change in customers' mentality means they're happy to spend more money on more eco-friendly products, and often choose a supplier or brand based on their overall commitment to being "greener."

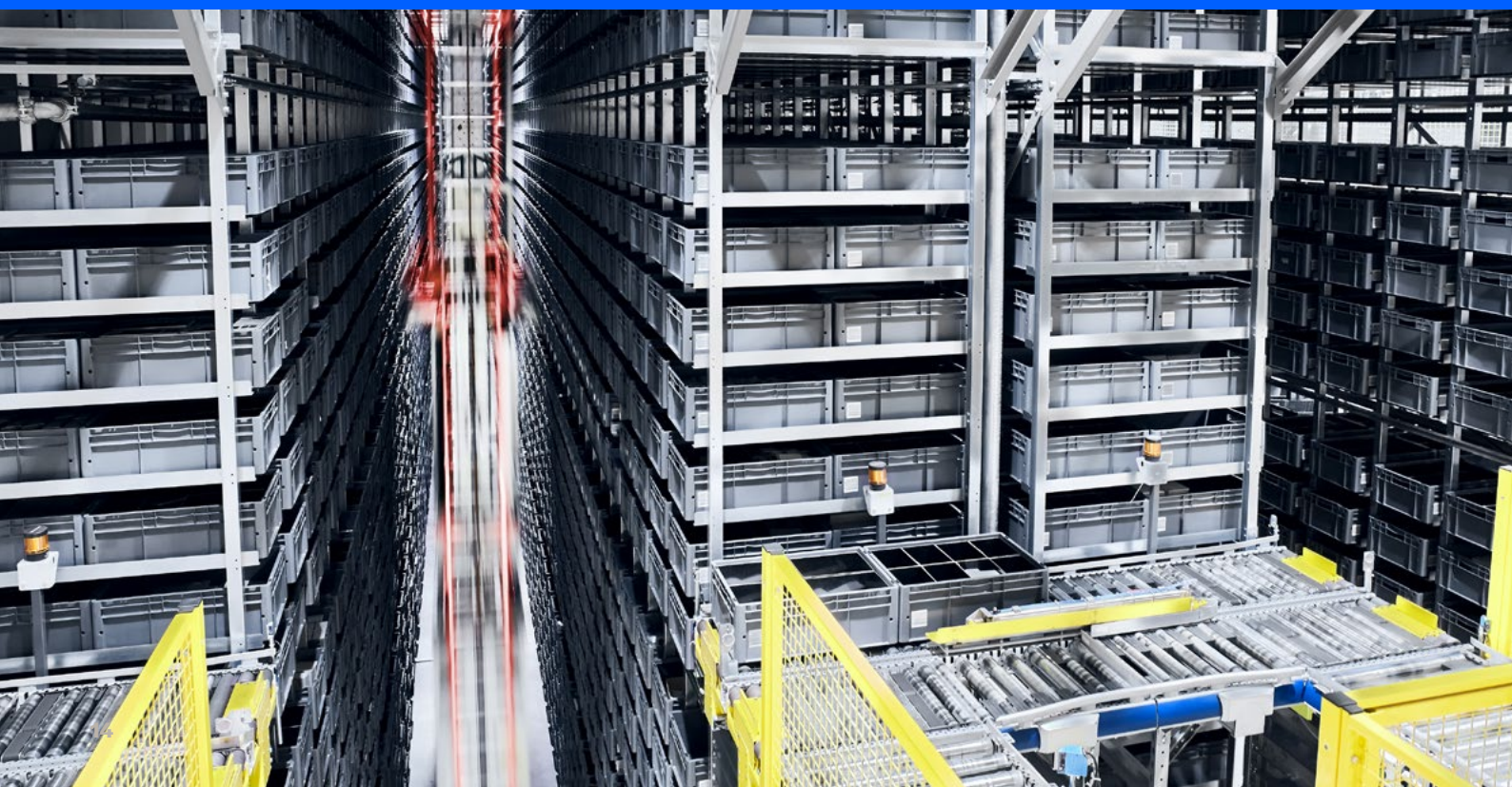
Today's customers are demanding. They want product variety, speedy delivery and free shipping – but they're also starting to question companies' commitment to sustainability. It can be hard to find a balance between the two. As a result, pressure is high for companies to find a way to fulfill customers' rising demands, while also making the conscious consumer happy. But there are ways to achieve both, by giving customers the right product, in the right place, at the right time, and at the lowest possible cost.



of consumers would either definitely or probably change consumption habits to reduce the impact on the environment.[9]

Reframing the problem

To provide a great service to its customers, each business must find new opportunities to be cost-efficient and competitive in the sustainability realm. This means moving from a two-dimensional approach: how to be cost-efficient while meeting customers' demands, to a three-dimensional one: how to do all of that, in a sustainable way. To do this, businesses need to take a more holistic view of their entire operation – using the three bottom line system.



With utilities costs at US$2.10 per square foot[10] and sustainable practices estimated to reduce between 9% to 16% of the cost,[11] warehouses can cut between $3 and $5.5 bn expenditure in the US alone.

A holistic view of the warehouse

Taking a holistic approach does not mean compromising on costs, or on customers' demands. On the contrary, it helps identify specific bottlenecks within operations that could be improved to achieve sustainability goals faster.

Making a warehouse more sustainable can lead to cost and time savings, as well as reducing carbon footprint, CO_2 emissions, creating a better working environment and less waste. To achieve all of that, businesses can use the three pillars of warehouse management sustainability as a starting point.

Pillar 1: layout and equipment

The first pillar concerns warehouse design, and, more specifically, the technical equipment – where it is, how it works and how efficient it is. Designing the optimal system for warehouse operations means looking at places where businesses can increase efficiency and profitability, while also saving energy. Replacing old equipment with new, for example, could improve energy consumption.

Pillar 2: energy efficiency

There are many areas in a warehouse where energy could be saved – from replacing lighting with LEDs, using solar panels, and having consistent equipment monitoring, to automating some labor-intensive tasks. All of these examples could lower the environmental impact, while also having some benefits for employees.

Pillar 3: automation

Automating some of the most labor-intensive tasks can not only cut waste and maximize efficiency, but it also improves health and safety for all workers. A fully or partially automated warehouse can also minimize the movement of goods, maximizing the use of space and operations visibility – which makes it easier to identify possibilities for even more improvement.

Just by using these three pillars as a guide, there is a great potential for saving energy in warehouses. In the UK, for example, energy-efficient equipment investments in warehouses can save more than £180 m.

The role of digitalization

Introducing new technology is one of the most popular ways for warehouses to reach that balance between sustainability and cost-efficiency. But where to start?

A good place is digitalization, as it can give helpful insight into operations, allowing businesses to:

See

Technology can give businesses the ability to see beyond the confines of what they already know. This is key to achieving more efficient operations, which don't always require a huge investment. More cost-effective solutions can give better end-to-end visibility – such as improved connectivity. This allows businesses to better identify where they need to act to improve their sustainability levels.

Think

Once businesses have a clear picture of the product and process flows across the enterprise and throughout the entire supply chain, it's time to think. Smart warehouse management systems use artificial intelligence to make connections between the problems and their solutions. They can be more efficient in the supply chain design, for example, which leads to needing fewer facilities – leading to a smaller carbon footprint.

Do

Thinking leads to doing, and actually implementing new solutions. Autonomous mobile robots (AMRs), 3D printing and other forms of automation can improve operations, leading to achieving better sustainability goals.

"We're getting really excited about the implementation of descriptive and predictive analytics to again be smarter, maybe even anticipate an uncertain future."

Tom Goldsby
Professor James A Haslam, II Chair of Logistics at The University of Tennessee Knoxville

A tailored solution

Before investing in new technologies, businesses must first understand their unique needs. AMRs, for example, would be ideal for someone moving into an e-commerce space, to optimize operations and perhaps replace paper record keeping. However, it would not be as helpful for a furniture distributor.

The first step is analyzing warehouse processes. These can vary vastly from facility to facility due to size, technology, and the amount of manual labor required to operate. This is where a holistic view of the operations is most important. If businesses are looking to lower energy consumption, for example, they will need to analyze specifically where the most energy is spent, or wasted.

Once they have the data, they can plan an effective strategy to reduce energy waste. The level of automation required to reach their goals will depend on their specific needs. It isn't wise to plan for a fully automated warehouse before beginning automating. It's best to start small, and evolve alongside those first solutions. As more and more automation is introduced, the need for human labor, for example, will lessen, and strategies could change as a result.

Taking small, incremental steps is key to becoming more sustainable. These can be as simple as replacing the lighting in warehouse facilities with LEDs, paper with smart devices, adding mobile robots – the options are many. But whatever is the first step, it must make sense for the business. Applying the "see, think, do" approach can help gain a more holistic view and find out what that first step is.

Introducing technology

As technology advances, more businesses are using it to improve their operations. And today, it has become one of the key elements of staying competitive. It can enhance operations, improving efficiency, agility and overall productivity. And it also has an important role in our quest to become more sustainable.

Available technologies are varied – in cost, availability and suitability to a warehouse's operations. It's important to not only look at the most obvious, popular choices, but take a broader look at different solutions, and how these can be implemented to serve different sustainability goals.

The obvious

Autonomous mobile robots

AMRs are a popular warehouse technology – and it's easy to see why. They can considerably lower travel time within any given facility, and increase workers' productivity.

They're also easy to scale up and down, with options such as robots-as-a-service, a leasing model that gives warehouses enormous flexibility. This makes a business more agile, ready to increase or decrease their facility's size as and when they need. Increased agility also means it's easier to find new ways to become more sustainable, and implement them quickly.

For example, robots can handle a bigger weight load, needing less time to carry stock and pallets from one spot to another. In turn, they're reducing the overall footprint, as well as the likelihood of workers getting injured or fatigued by taking over heavier jobs. This way, their health and safety is also improved.

Finally, AMRs also lower the need for paper, as paper pick lists are often the biggest source of supply chain waste. The robots can do the picking, knowing exactly what they need to pick and where, without manual intervention.

Voice

Voice technology makes it easier and quicker to onboard new employees, as well as train them. This results in reduced travel time within the facility, as supervisors can easily direct employees with more work and tasks directly from a headset.

Without having to pay attention to a separate device, checking numbers and labels, as commands and directions are received through voice, it's easier for workers to concentrate on their task at hand, improving efficiency.

In turn, this improves operations efficiency, and health and safety conditions. It also cuts the need for paper, for those businesses still using paper pick lists.

“The devices we’re getting nowadays actually have greater capability. They can take photos, look at or sign on pods, capture paperwork from drivers and use optical character recognition technology, removing the need for paper almost completely.”

Jamie Sterling
Director of International Sales and Operations
at Körber Supply Chain

RF scanners

All operations that usually involve the use of paper, can be instead fulfilled using a mobile device. RF scanners, for example, can be used to scan data, rather than this being entered manually or recorded on a piece of paper. Receiving, returns, picking and packing are all operations that can be carried out with RF scanners instead of paper.

They also make work on the warehouse floor much smoother, making operations more efficient and driving productivity.

Smart devices

Rugged smart devices for warehouses are different from the usual smart phones. Hardware vendors provide these devices specifically for warehouse supervisors and managers, to access data that is actionable, as well as their employee’s schedule. They help keep up with all important information efficiently – as all data is available from one device, rather than different pieces of paper that are easy to get lost or take too much space.

The less obvious

Integrate the full supply chain ecosystem

A full end to end integration can come with a cost, but it's a worthy investment. It removes the need for all paperwork, Excel spreadsheets, and manual data input, making information visible from upstream right through downstream.

The digitalization of proof of deliveries and carrier paperwork removes the need to keep receipts after receipts, taking up valuable space within the warehouse; and of course, lowers the amount of waste produced.

Reusable containers

Some businesses have started introducing reusable totes for shipping. If customers are on a subscription-based account, all their orders will be delivered using a tote with an identification number, which can be scanned with an RF machine. When the next delivery is due, customers can leave the tote outside their door for the courier to pick up and return to the warehouse.

A reusable delivery container is a very efficient way to reduce waste. It's not made of paper, or cardboard, but of durable, and therefore reusable, materials. It doesn't need to go into a recycling cycle, but can be sent to another consumer as soon as it comes back.

WMS sophistication

A new warehouse management system can help optimize operations for maximum efficiency, reaching higher sustainability goals. It can completely eliminate the need for paperwork, as well as optimize space to reduce unnecessary tasks and workflows – thereby reducing movement inside the warehouse.

RFID enabled operation

RF technology is nothing new, but its potential is often overlooked. RFID enabled operation allows for scanning within the facility and in end-to-end operations.

For example, it can be used to scan a container and see what's inside through the machine, without the need to manually check. It can also improve operations such as picking and putaway. Allocating selected IDs to stock can also increase visibility, as the same item can be recognized all through shipment, distribution and along the whole lifecycle. And as we saw, visibility is a great tool to make the necessary adjustments to becoming more sustainable.

There are many technologies that can help achieve a business' sustainability goals. Some of them definitely more obvious than others – like AMRs or voice technology, versus reusable containers or RFID scanners. But all of them have the potential to impact operations in a positive way.

Making a warehouse more sustainable

By gaining a more holistic perspective of what sustainability means, we understand that it goes beyond the warehouse's four walls. To become more sustainable, businesses must think about both their internal and external environment – and how the two influence each other. Whatever happens inside the warehouse will naturally yield positive results on the outside too.

Satisfied employees, for example, present businesses as an attractive place for potential partners to want to work for and with them. Similarly, taking consistent measures to ensure their health and safety creates a ripple effect outside of the workplace. The wider community will not only perceive the business as a good place to work, but happy employees will most likely maintain a happy lifestyle.

When thinking about new ways to set and reach their sustainability goals, businesses must think about the literal "ins" and "outs" of their operations, as the two work together and influence each other.

Inside the warehouse

Part of taking a holistic approach is considering the facility's internal structure in its entirety. An efficient layout, for example, includes finding ways to lower the travel time within the aisles. Consistently monitoring the machine's conditions, and lighting's energy consumption, are also ways to pay more attention to the inside of the warehouse.

However, there are also bigger projects that businesses can take on, depending on their operational level. Some of these are:

Paper-free operations

In a typical warehouse, many operations still involve the use of paper. From receiving and putaway, to order selection, picking, packing and shipping – these require regulatory and environmental record keeping. This data is often recorded on paper.

Lots of paper means lots of waste. While some continue to find paper an easier, faster method of record keeping, others are switching to technology. RFID scans, for example, can increase operational efficiency, and lower the scope for human error. And of course, it's a great step towards a more sustainable warehouse.

The sustainable warehouse

Building a complete sustainable warehouse can only involve automating the internal processes. A good warehouse management system, combined with a good energy management system, can give businesses:

- Smarter control of equipment (e.g. "deep sleep, "off peak" mode)
- Adjustments for speed and acceleration, according to demand
- Optimization of stock transfer strategy (e.g. night inventory relocation)
- Use of case adapted energy storage strategy (e.g. ad hoc, production supply, batch)
- Machine learning energy management (e.g. anticipate zone cooling, predict peak demand)

"Even if you build your sustainable warehouse up to 30–40 meters high, you can still reduce your footprint by 60%, by optimizing the stock movements and increasing efficiency. We saw you can save up to 29% of energy in a normal temperature warehouse, and up to 40% in a deep freeze warehouse with a frozen environment."

Mark Vogt
Head of International Sales & Automation at Körber Supply Chain

“Should the dark warehouse be your goal? The answer is: probably not. There is likely an optimized state that you can reach before going to the level of autonomy required to achieve a dark warehouse.”

John Santagate
Vice President of Robotics at Körber Supply Chain

Dark warehouse

This is when end-to-end operations become automated to the point that they could be carried out in the dark – but it doesn’t actually mean working in a dark space.

Ben Ames, from *DC Velocity* magazine defines a “dark warehouse” or “lights-out facility” as something that “promises swift or air-free fulfillment operations, enabled by key technologies such as automated material handling equipment, warehouse execution systems, and automatic identification.”

Of course, manual labor cannot happen without a source of light. However, if a warehouse is well equipped with enough robots and automation solutions to operate without human intervention, the facility would ideally be able to work in complete darkness – thereby saving energy.

Automation technology is designed to enhance operational efficiency and drive productivity. It is driven by the idea is that with top line efficiency, the cost of handling each item comes down. Plus, the more automation used, the more fixed the cost of operations. With fewer staff members, the cost of running a fully automated warehouse lowers considerably. There is no more need for overtime, or additional shifts – operations would instead be run on a multi-shifts basis, where the equipment itself will face maximum utility, with continued precision.

The possibility for mistakes is also reduced, as they usually occur due to human error. If a machine makes a mistake, it was either programmed by a human incorrectly or the equipment was applied incorrectly. Safety is also significantly improved, due to fewer people working in a dangerous environment.

However, dark warehouses are not everyone’s ideal solution. They are still a long way away for most companies, and focusing on reaching such automation goals is, right now, counterproductive. Instead, automation should be a slow progress, starting with small steps that fit around the warehouse’s specific needs.

Outside the warehouse

It's important to carefully plan a warehouse's location when the goal is about lowering CO_2 emissions and improving the transportation system. And although these are very good steps towards sustainability, there is more to the external environment than location.

Taking care of the "inside" of the warehouse will have positive repercussions on the business overall. As the wider community is considered part of the external environment, their health and safety are heavily influenced by internal operations. In the same way, paying attention to what happens "outside" influences the overall efficiency of internal operations.

Transportation, for example, is widely believed to play the biggest role in sustainability. This is where businesses can make a real impact to their energy consumption, and CO_2 emissions, as well as improving drivers' working hours and finding the most cost-effective way to transport goods. A BVL survey involving logistics workers found that 34% of participants believed the greatest potential for sustainability to be in transport.[12]

There are several different solutions designed to improve transportation systems and lower emissions. These include:

Transportation Management System (TMS)

A TMS plans and monitors truck routes daily to help minimize vehicle use and reduce wait times and time on the road. This cuts down resource use and cost, in addition to lowering carbon emissions.

Distributed Order Management (DOM)

A TMS works even more efficiently when used with DOM solutions. These calculate and adjust the quickest transportation routes across an organization's different locations.

Supply Chain Network Design

As suppliers and raw materials need to be reviewed against tight regulations, a carefully planned network design can help ensure compliance. It optimizes transportation routes and types by determining the best location for warehouses, and assessing business continuity and mitigation strategies, as part of supplier risk management.

Looking at both the inside and the outside of the warehouse means the focus shifts from one big goal, to finding smaller and more ways to become more sustainable. And technology is a big part of that. It can improve both internal and external operations, helping a business identify and reach their sustainability goals quicker and more efficiently.

Conclusion

The climate crisis is close to reaching a point of no return. In fact, the IPCC states that the "Global surface temperature will continue to increase until at least the mid-century under all emissions scenarios considered." The supply chain must do its best to lower its impact as much as possible.

Sustainability is clearly a broad topic, and tackling its challenges can seem overwhelming at first. But the truth is, there is no step too small. Looking at their operations closely will help businesses identify exactly where they can cut down on carbon emissions, lower energy use, and improve people's safety. And all of this will help them reach their sustainability goals.

This is not an easy task. Pressures are high from both consumers and global forces, with the climate crisis worsening year after year. However, there are many small steps businesses can take today – some of which involve introducing new technology – both within and outside of their facilities.

The most important thing is to look at sustainability more holistically. As the 2030 Agenda for Sustainable Development widely explores, now is the time to put efforts towards achieving a variety of goals, not simply those affecting the environmental impact.

Technology, when applied in incremental steps, can make a real impact on operations and the business' overall footprint. Again, having a holistic overview of the warehouse is key to truly understanding what solution fits a business best.

Visit our website to learn how Körber Supply Chain technology solutions help businesses achieve their sustainability goals.

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