

SUSTAINABILITY REPORT 2022



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WORD FROM THE CEO



Joakim Karlsson
CEO, Envac Group

What is sustainability to Envac?

We offer automated waste collection solutions worldwide that create value for customers and various broader sustainability benefits for society. Our system reduces carbon emissions, improves the quality of life for residents, increases recycling rates, and saves space used to create additional value in the community including hospitals. In healthcare, waste handling comes with high risks. Envac solutions can provide a safe, hygienic and innovative solution for waste, linen and infectious waste that contributes to the hospital's top priorities with increased patient safety, working environment and efficiency. With the growing urbanisation, we need to rethink about sustainable urban development and how we must ensure that our system reduces the burden of the climate crisis on our planet.

How does Envac emphasise this commitment?

Our solution involves innovating waste collection and continuously developing our offering through R&D and close customer collaboration including facilitating hospital logistics. Modernisation is a fundamental foundation for sustainability, where we can use machine learning and AI to optimise the best of our solution.

What are the major sustainable milestones for Envac in 2022?

In 2022, we implemented a global information system to collect all the essential sustainability data throughout our business. The data further contribute to analysing gaps and creating necessary action plans. Another step forward is our new business market in North America. Envac acquired Precision AirConvey (PAC) specialising in industrial waste removal solutions. Drawing on resources and professional experience from our global network, Envac North America aims to assist hospitals, residential communities, cities and others in realising their visions

“

A landmark year for Envac as we took steps in 2022 to manage global uncertainties and ensure our business can continue to deliver waste collection systems that improve the quality of life for people today and secure a greener planet for future generations. Our world is rapidly changing, and we must learn to live with the new normal.

of progress and transformation to further contribute towards improving waste and sustainability standards in North America. Looking at Envac's digital transformation, I am confident we will revolutionise the user journey with the Envac ReFlow app and our digital automation platform.

Do you see any challenges in the way?

We educate and drive interest among decision-makers to understand the benefits of sustainable urban development offered by automated waste collection. Smart cities are the future of modern living, and digital transformation is necessary. We have modernised from fax to mobile phones, carriages to cars, but why limit our efforts in the waste collection? As technology advances, many sectors have undergone significant digital transformations. We must ensure to keep pace with modernisation in the waste sector.

ENVAC GLOBAL - OUTLINE 2022

We've been preparing for our sustainability approach since 2020 and starting implementation in 2022. Our goal is to make impactful changes by 2024 and to achieve this, we'll update our stakeholder dialogue, gather historical data, and conduct a global Life Cycle Analysis to achieve carbon neutrality by 2030.



35
OFFICES
20
COUNTRIES

747
EMPLOYEES
115
FEMALES



<50 kwh/tonne
POSSIBILITY ON
ALL NEW SYSTEMS
GLOBALLY

50%
ENERGY
REDUCTION
WITH SMART
TECHNOLOGY

CARBON NEUTRAL
BY 2030



100,000
REFLOW USERS
BY 2027

100
SYSTEMS RUNNING
ON LATEST
VERSIONS OF
ENVAC AUTOMATED
PLATFORM (EAP)



50,000
ENVAC SYSTEM
DAILY USERS
ADDED IN 2022



MISSION


Combining innovation and experience, we create and implement clean, clever and resource-efficient waste handling technologies, providing our customers with game-changing solutions for sustainability and quality of life.

VISION

To create smarter cities, improve quality of life today and help secure a greener planet for future generations.



We enable **smart, sustainable communities** and drive the circular economy by redefining how society thinks of waste – today and for future generations.



Welcome to the Envac Sustainability Report 2022. For the first time in our history, we are proud to include data from all parts of our global sustainable business.

Our refined sustainability areas reflect the positive sustainability benefits of our products. We call these the four cornerstones. In addition, Envac's three business responsibility areas define our commitment as a business partner – to guide our behaviour and how we operate our business. Taking care of our employees, being honest and transparent towards our business partners, and treating everyone equally and with respect is vital to be considered a serious business partner.

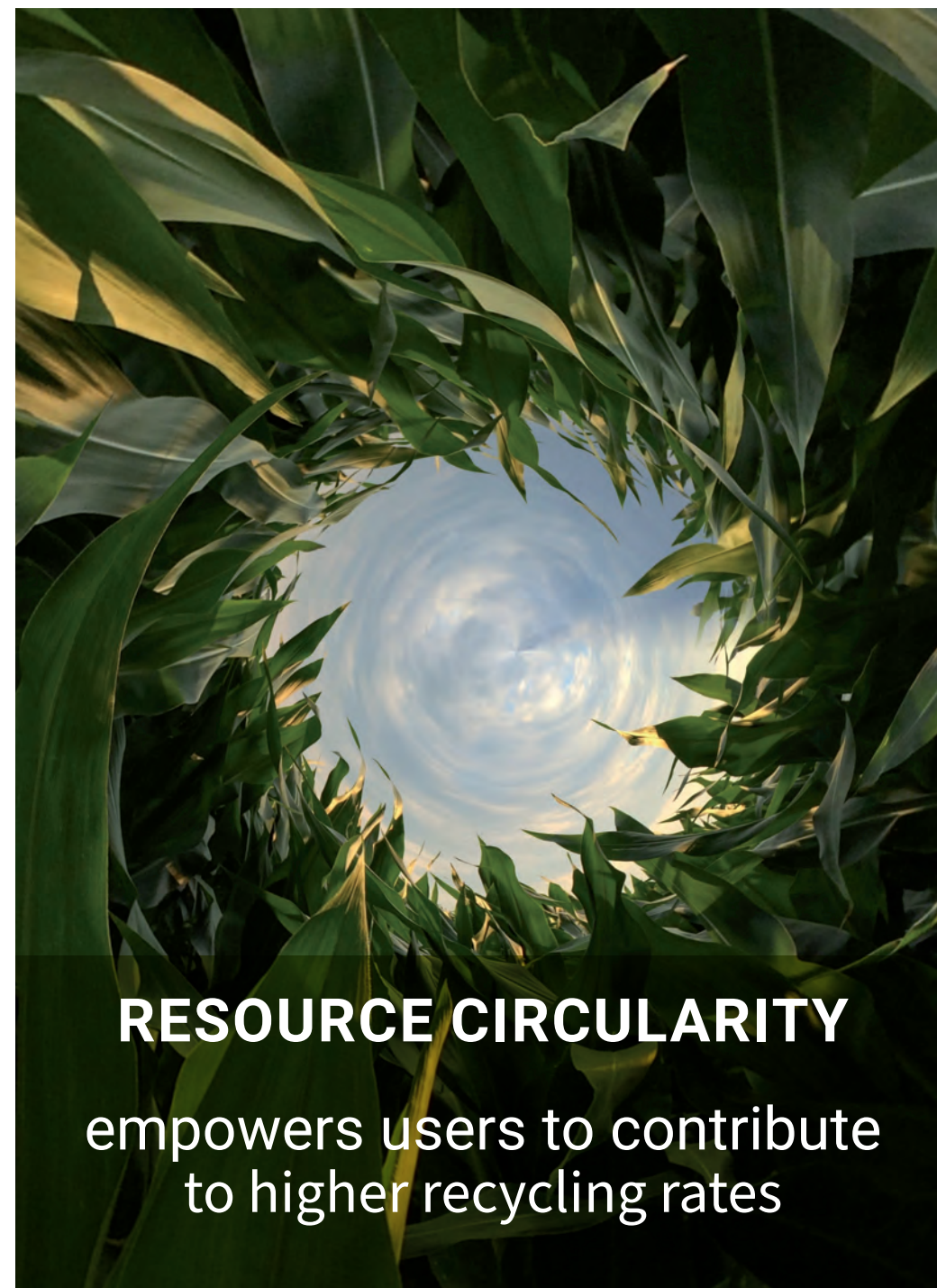


ABOUT THE REPORT

With innovation and ingenuity, we lead the design and implementation of next-generation recycling using resource-efficient waste handling.

FOUR CORNERSTONES

Envac is part of the broader solution by promoting circular resource use and carbon neutrality while improving quality of life and creating added value for property developers.





VALUE CHAIN STAKEHOLDERS AND MATERIALITY

- This report is based on our value chain, stakeholder interests, risks & opportunities, and prioritised topics from 2020.
- With valuable input from each region it is confirmed it is still valid for 2022.
- In 2023 we are planning to do a focused update of the stakeholder and materiality analysis to also prepare us for primarily upcoming EU regulations within sustainability reporting.

Our prioritised stakeholders

- Customers
- Cities/Communities
- Building owners
- City developers
- End users
- Employees
- Suppliers

MATERIALITY ASSESSMENT

Building on the evaluation of our value chain risks, we conducted a market investigation with external stakeholders on a global level in 2020. Sustainability was part of the investigation but not its sole focus.

In parallel, we held 15 workshops with 20 Envac employees that have regular contact with important external stakeholders. The employees were asked to rank 22 different materiality topics from the perspective of specific external stakeholders in order to gauge the sustainability perceptions and priorities of various external stakeholder groups.

The results of these materiality assessments were cross checked with the findings of our value chain risk evaluation to provide a list of prioritised reporting topics that is aligned with our Business Strategy Topics and Business Responsibility Topics. The prioritised list was approved by the Envac Board of Directors and Global Executive Board (GEB) in the beginning of February 2021.

RESEARCH & DEVELOPMENT

In our product development phase, we develop new products and improve existing products. The products need to be designed to have the end user in mind. On top of that we need to find the right quality of products to make sure they are resilient and have the lowest cost to make it cost effective for our customers.

At the same time we need to know that the materials in our products are safe to use for the environment and raw materials are collected in a fair and ethical way.

Identified risks

- Cost/quality balance
- Environmental design
- Design for user experience
- Material sourcing

Opportunities

- Resource Circularity / Carbon Neutrality
- Customer Added Value
- Quality of Life

Risk mitigation and opportunity enhancement policies and procedures

- Minimise environmental impact
- Cost efficiency
- Safe & user friendly systems



PROJECT INSTALLATION

Our customers have high demands in terms of environment, OHS and other social criteria. We have the processes to manage and meet these requirements when we deliver and install an Envac system. Cost efficiency in project delivery and making sure we deliver on time is crucial for the continued success of our business and customer satisfaction. An installation requires a lot of physical and manual work with associated OHS risks. We primarily use subcontractors but in some cases our own employees do the job. Either way, we ensure high standards of OHS.

Identified risks

- Cost-efficient projects
- On time project delivery
- Customer project environmental and social requirements
- OHS practices
- Partnership with subcontractors

Opportunities

- Customer added value
- Working conditions
- Resource Circularity / Carbon Neutrality

Risk mitigation and opportunity enhancement policies and procedures

- Global project procedure
- Regional/Local project processes
- Regional/Local OHS policies and procedures
- Subcontractor agreements

SUPPLY

In our supply chain we need to find the best suppliers that will help us to deliver high quality products to our customers. This also involves setting high standards for our company when it comes to social and environmental criteria. We need to make sure that our suppliers follow our expectations within environmental and social impact. It can also be important to know that the raw materials in our products are sourced in a fair and ethical way.

Identified risks

- Supplier partnership
- Transport efficiency
- Supplier environmental impact
- Supplier social impact
- Material sourcing

Opportunities

- Fair and ethical business
- Diversity and inclusion
- Resource Circularity / Carbon Neutrality

Risk mitigation and opportunity enhancement policies and procedures

- Supplier evaluation
- Global procurement policy



SALES & MARKETING

We ensure that our products have positive overall sustainability impacts. To succeed in selling the Envac concept, we need to have competent sales people that understand the sustainability benefits of our systems and how to present them correctly. A key to success is to influence municipal decision makers. While doing this, we need to make sure we communicate with them in an ethical way and all facts we communicate about our products must be verified. employees do the job. Either way, we ensure high standards of OHS.

Identified risks

- Sustainability product knowledge
- Fair and ethical sales process
- Fair and ethical marketing

Opportunities

- Customer added value
- Fair and ethical business

Risk mitigation and opportunity enhancement policies and procedures

- Global sales procedure
- Regional/Local sales processes





General Policies & Procedures

Code of Conduct

Global Quality Manual

Global Environmental Policy

Global OHS Policy

Global supplier Code of Conduct

Global Diversity & Inclusion
policy

Global whistleblowing policy &
process

OPERATION & MAINTENANCE

An Envac installation can be in operation for decades. Our first and oldest system was installed in 1961 and is still up and running. In order to ensure optimal operation, an Envac system needs to be maintained. Our team of service technicians provide such services on a daily basis. While ensuring a system operates optimally, they work with safety in mind and travel between sites in an energy efficient way. Safety is crucial when a system needs new parts or is decommissioned. For instance, we have very old installations where we need to consider the kinds of material the building contains before we start to remove an old system.

Identified risks

- OHS practices
- Operating efficiency
- Route planning
- Fuel usage
- End of life practice

Opportunities

- Quality of Life
- Working conditions
- Resource Circularity / Carbon Neutrality

Risk mitigation and opportunity enhancement policies and procedures

- Regional/Local O&M process
- Regional/Local OHS policies and procedures

BUSINESS RESPONSIBILITY

Our approach to responsible business is the foundation of our sustainability work, and we aim to be a sustainable business partner by conducting business responsibly and working with our three business responsibility areas.



“

Business responsibility isn't a particular programme, it's what we do every day, **maximising positive impact** and minimising negative impact.





- Christer Lundberg

Global Sustainability & Quality Lead

ROAD TO GLOBAL SUSTAINABILITY

Enabling the smart, sustainable city of the Future

As someone who closely monitors global urban development through various media channels, I have noticed a common trend among urban developers. They want to prioritise the needs of city dwellers over those of cars and trucks, which suggests that future cities will likely have less traffic and more space dedicated to recreation, socialising, and nature. Envac's innovative approach helps make this vision of a more sustainable city a reality. We don't just offer a waste collection solution; we are committed to being vital to the bigger picture.

Important Advancements in 2022

In 2022, we implemented a global information system to collect sustainability data. We aim to evaluate which data we need to collect historically on a global level in 2023, with the target to provide a complete baseline from 2018 in the 2023 report for next year.

We've made significant headway in modernising and digitising our operations in 2022. Our ReFlow solution is vital to achieving our sustainability goals, and we're excited to offer a

free version with all new Envac installations and upgrades in the future.

We conducted a pre-study for global Life Cycle Analysis in 2022 to help us set priorities and guidelines to achieve our sustainability target.

To promote responsibility, we updated our policies and guidelines, trained employees on our Code of Conduct, launched a supplier code, and updated our health and safety policies. We created a global policy for diversity and inclusion and will develop action plans. We also implemented a global independent third-party whistleblowing system open to all our internal and external stakeholders to report any suspected misconduct anonymously.

Ready, set, go

We've been preparing for our sustainability approach since 2020 and starting implementation in 2022. Our goal is to make impactful changes by 2024 and to achieve this, we'll update our stakeholder dialogue, gather historical data, and conduct a global Life Cycle Analysis to achieve carbon neutrality by 2030.

THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Our planet needs the positive reinforcement now more than ever before and the UN Sustainable Goals are the perfect way to make a positive impact. Envac is dedicated to making waste management more innovative and accessible to reduce the impact of current global challenges. With the technologies at our fingertips, it's clearer than ever that we can be the change and do our part for future generations.

<div><div>3GOOD HEALTH AND WELL-BEING</div><div></div><div>Envac system promotes user safety and health as it prevents unsanitary conditions. Our solutions for hospitals promote safer handling of contaminated waste, including the medical waste.</div></div>	<div><div>8DECENT WORK AND ECONOMIC GROWTH</div><div></div><div>From fair wages, safe working conditions to green initiatives, Envac is making steady progress toward economic growth that works for everyone.</div></div>	<div><div>9INDUSTRY, INNOVATION AND INFRASTRUCTURE</div><div></div><div>One of our installations in NYC has been in operation since 1975 and has withstood extreme weather conditions. It is possible to retrofit our system in existing delicate urban areas.</div></div>
<div><div>11SUSTAINABLE CITIES AND COMMUNITIES</div><div></div><div>Roads give way to walkways, bike lanes, and green areas. Combined with better air quality due to less waste collection traffic, we help cities achieve this goal and improve urban quality of life.</div></div>	<div><div>12RESPONSIBLE CONSUMPTION AND PRODUCTION</div><div></div><div>Our system reduces water usage, supports UN goals, and promotes responsible waste management. It handles multiple waste types, sorts for recycling, and produces bioenergy and biofertilizers from food waste.</div></div>	<div><div>13CLIMATE ACTION</div><div></div><div>Pneumatic waste collection reduces carbon emissions by up to 90% and improves recycling behaviour.</div></div>

Smart cities are investing in Envac’s automated waste collection as a sustainable, ingenious solution. From optimizing services to meet local needs and limiting truck traffic in cities, to reducing waste output, improving recycling behaviour, and creating jobs, Envac is providing a progressive, automated solution for many cities around the world. It’s obvious that when it comes to global sustainability we must act together and work in harmony to preserve our planet for the future.



RESOURCE CIRCULARITY

Our automated waste collection system sorts, collects, and gives the opportunity to reuse waste for purposes such as waste-to-energy and recycling, reducing pressure on landfills. We use advanced technology that has proven to be highly efficient and has the potential to significantly reduce our carbon footprint. This breakthrough could pave the way for a cleaner and more eco-friendly future in our cities. With automation in waste collection, resource circularity is a reality that we can experience in our daily lives.

1

SORTING – THE KEY TO SUCCESSFUL WASTE MANAGEMENT

By collecting multiple waste fractions, users can contribute to higher recycling rates and promote circular resource use in their municipality.

2

USER RECYCLING ENGAGEMENT AND AWARENESS

With the ReFlow app, users receive guidance on sorting recyclables, as well as feedback on their recycling performance and impact on the environment.

3

WASTE TO ENERGY, FUEL AND FERTILISER

By better sorting waste streams at source, Envac systems can help to generate cleaner energy from municipal waste.

4,2 MILLION USERS IN 2022



USERS OF ENVAC SYSTEM BY 2025

Baseline - 4 million daily users of
Envac system from 2020

3,000 ReFlow users by the end of 2023 & 100,000 users by 2027

Recent studies conducted by Envac's partner, LocalLife, among a niche focus group have demonstrated that ReFlow can lead to

- o **12%** reduction in waste generation
- o **15%** increase in plastic recycling

First commercial sale of ReFlow
made in 2022

ANECDOTES

- New Envac systems are being installed in Stockholm neighborhoods to meet customer feedback. The ReFlow system will initially serve up to **600** apartments and expand to **6,000** apartments within eight years in the neighborhood.
- More than **50,000** additional daily users of Envac system in 2022 compared to previous reporting year.
- ReFlow solution free version with all new Envac installations and upgrades will be offered in the future.

OPTICAL WASTE SORTING OPTIMISED IN BELGIUM

The region of Limburg, Belgium, now benefits from Envac's optical sorting system, which has been operational since 2022. This facility is responsible for accepting, storing, transporting, and sorting household waste bags with high efficiency and hygiene. The installation design prioritises maintainability, safety, standardisation, and availability. The use of state-of-the-art technology also ensures that the power consumption of the installation is minimised.

- With a sorting capacity of 150,000 tonnes annually, the installation sorts five household waste fractions in coloured waste bags: plastic bottles, metal packaging and drink cartons, textile, kitchen, garden, and residual waste.
- The facility's approach to waste management follows the principles of source separation and multi-stream collection using a single waste truck, which significantly reduces the number of kilometres driven by waste trucks and CO² emissions.
- Additionally, the sorting installation can sort two more fractions in the future.



ENVAC SCOOPS TOP KOREAN ENVIRONMENTAL AWARD

- In November 2022, Envac was awarded the sustainable waste treatment prize for a system that weighs deposited food waste so that users pay for the waste collection based on the principle of “pay as you throw”.
- The system is designed to raise resident awareness of how much food waste they produce and to encourage them to waste less.

33 ENVAC SYSTEMS IN SOUTH KOREA, HANDLING **54,750 TONNES** OF WASTE/YEAR FOR MORE THAN **500,000 APARTMENTS**



CARBON NEUTRALITY

We aim for carbon neutrality by improving energy efficiency and using renewable electricity. Our system has cut carbon footprint by 90% and boosted energy efficiency of customer facilities up to 50% in a decade.

1

ENERGY EFFICIENT WASTE MANAGEMENT SYSTEMS

Our Envac systems' energy usage per tonne has decreased by up to 50% through retrofitting. We have the possibility to reach 50 kWh/tonne on all our new systems globally through modernisation, thus reducing energy usage.

2

ENERGY EFFICIENT SOLUTIONS

Envac Automation Platform (EAP) uses machine learning that enables pneumatic waste collection systems to learn and optimise over time.

3

USER RECYCLING ENGAGEMENT AND AWARENESS

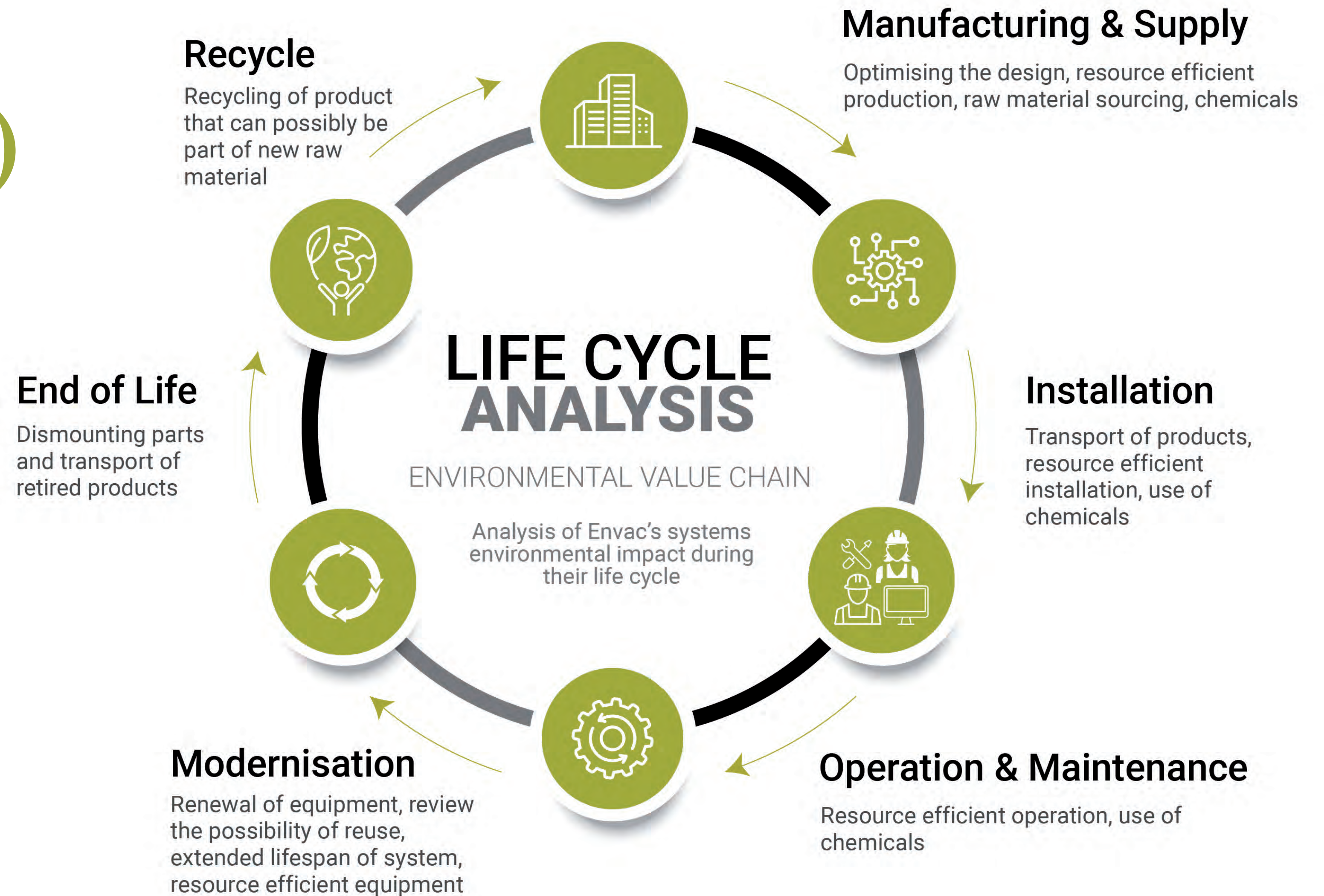
With the ReFlow app, users receive guidance on sorting recyclables, as well as feedback on their recycling performance and impact on the environment.

GLOBAL LIFECYCLE ANALYSIS (LCA)

By 2023, we will use key performance indicators to measure both qualitative and quantitative aspects of the environmental impact of Envac's system. Furthermore, the new global lifecycle analysis (LCA) will provide a deeper understanding of the critical areas for achieving carbon neutrality in the future.

<50 kWh/tonne
possibility with modernisation
globally (system operational
energy)

Note: Breakthrough improvment in last two decades, from 270 kWh/tonne

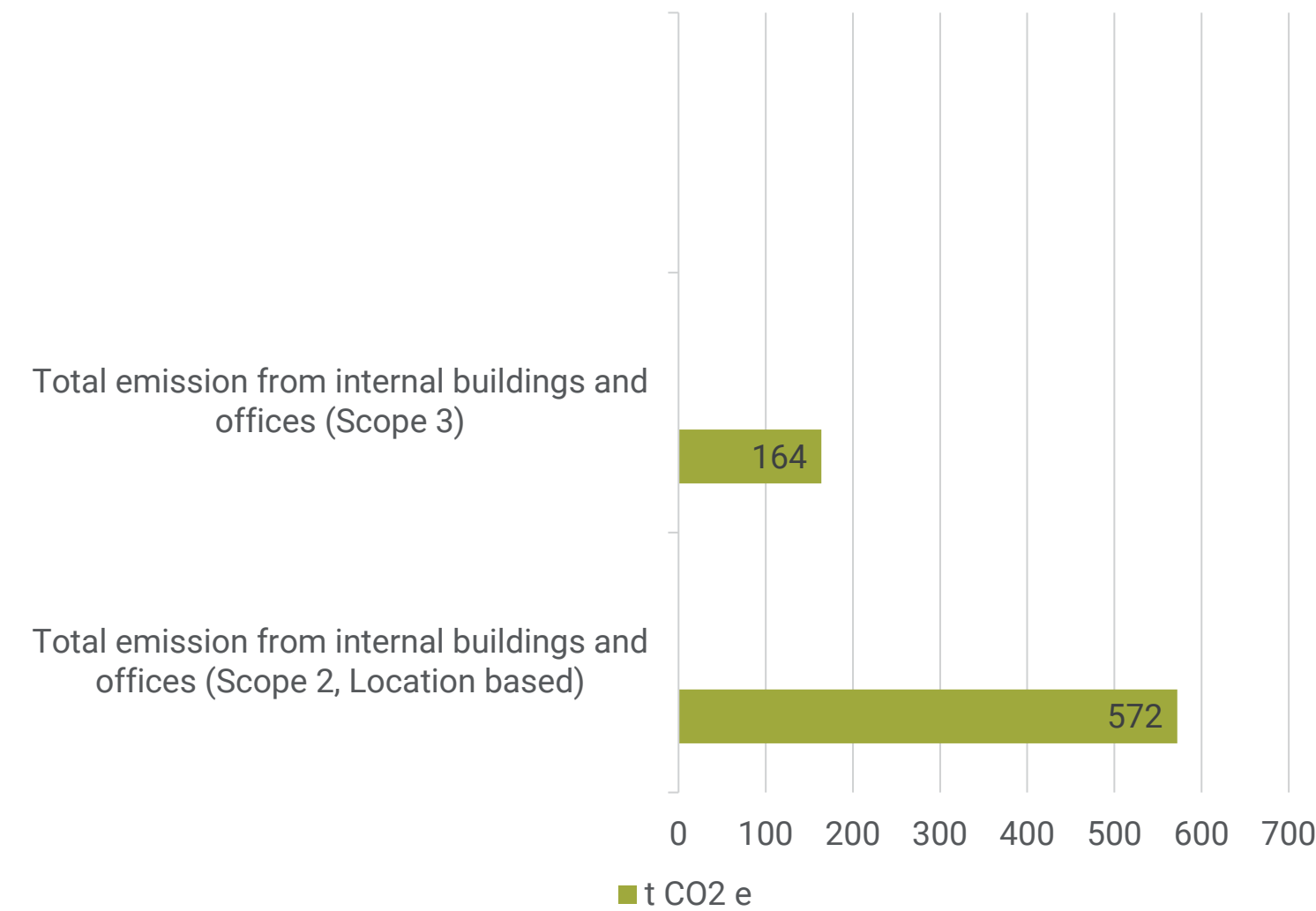




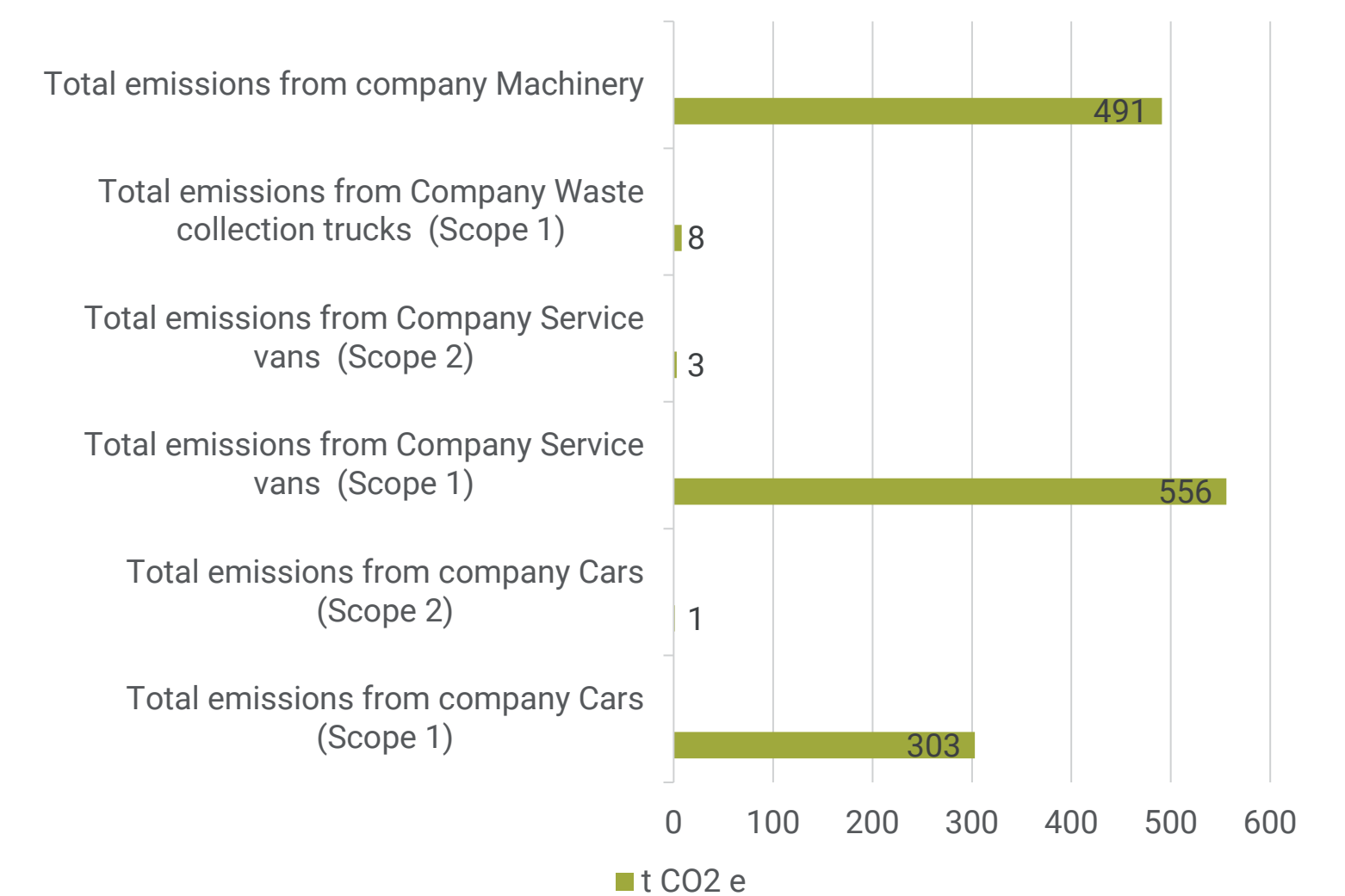
EMISSION IMPACT

Here is the emission impact data of our operations, and we will use LCA going forward to reduce our footprint with a more efficient approach. This data also defines the baseline for our continuous work towards a sustainable action plan. The new global information system will help us qualitatively collect relevant data and improve the guidelines.

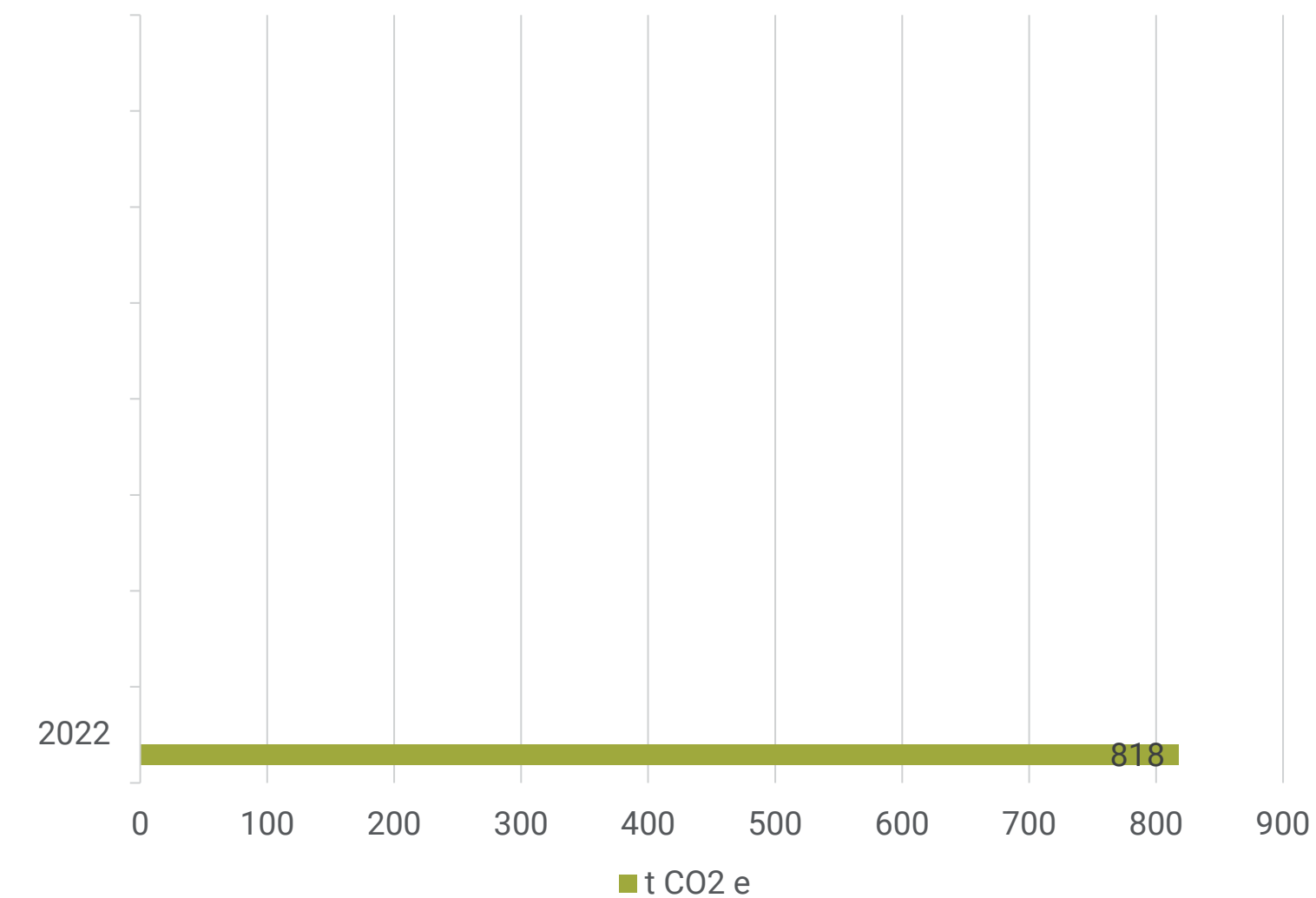
EFFICIENT & ROBUST
TECHNOLOGY ALLOWS US TO
REDUCE ENERGY USE YEARLY.



Resource Efficient Operations (offices)



Resource Efficient Operations (vehicles)



Emissions from transport (products to customer-site)
- scope 3, North Europe

Stella Futura batteries together with our automation platform has optimised the effect of batteries to reduce power consumption during peak hours by up to 70%

The project started in 2022 and has five more battery installations in the plan for the Stockholm area. The current system is levelling out peaks in electricity use, called peak shavings that reduce power costs and energy load. Currently, in many countries, electricity prices are higher than normal and peak loads are a challenge to manage. Envac's automated system along with Stella Futura's battery is designed to accommodate these peak loads.

During the project, Envac implemented the latest generation control system supporting peak load management. The new control systems tuned operation has reduced energy consumption by up to 30%. Overall Envac's automated system maximizes the effect of batteries leading to up to 70% reduced power consumption during peak hours.

“

Collaborating with urban innovators at Envac is inspiring. We're working towards sustainable cities and making waste management affordable. This partnership offers new opportunities for progressive administrations. - Ulrika Tornerefelt, CEO, Stella Futura

ACCELERATING THE GREEN TRANSITION

- A new 'Pioneer the Possible: Accelerating the Green Transition' exhibition in Washington D.C. highlights various proven green solutions from Sweden that can help US cities to achieve their sustainability objectives.
- Envac's waste collection solutions are a key part of the exhibition as they can help cities to reduce emissions and promote sustainability.



CARBON NEUTRALITY TARGETS



ZERO

**CARBON NEUTRAL
OPERATIONS BY 2030**

Reduce all carbon emissions from our operations and external customer site operations (O&M by Envac, scope 1 & 2)



**<50
kwh/tonne**

**POSSIBILITY ON ALL
SYSTEMS GLOBALLY**

Deliver energy efficient solutions to our customers and modernise the existing systems



3,000

**REFLOW USERS BY
2023**

Digital transformation through Envac ReFlow app and automation platform



100,000

**REFLOW USERS BY
2027**

Digital transformation through Envac ReFlow app and automation platform



QUALITY OF LIFE

1

SAFER STREETS AND MORE LIVEABLE NEIGHBOURHOODS

Our system reduces traffic and make streets safer for pedestrians and cyclists. It also eliminate odours, and vermin and reduce noise and emissions from traffic.

2

USER FRIENDLINESS AND AVAILABILITY

Systems are designed to ensure that inlets are conveniently located close to where people live, and that residents can deposit their waste 24 hours a day, every day of the week.

3

HOSPITAL LOGISTICS AND SAFETY

The system prioritise the safety of hospital staff, patients, and visitors while also cutting costs. The solution for collecting infectious waste from hospitals works well alongside our existing waste and linen collection systems.

The solution creates space for more green areas that can be used for creating parks, walkways, bicycle tracks, and much more. The system also decreases the need for heavy waste collection trucks and reduced carbon emissions by up to 90 %, as the system automatically transports waste outside the living area in a sealed environment.



**OUR FOCUS IS TO
INCREASE SAFETY
IN HANDLING
HAZARDOUS
WASTE AND LINEN
IN HOSPITAL
ENVIRONMENTS**

**5 MILLION
USERS**

OF ENVAC SYSTEM
BY 2025

3 reported incidents
for third party user

**4,2 MILLION DAILY
USERS GLOBALLY**

**100,000
users of
ReFlow App
by 2027**

Recent studies conducted by Envac's partner, LocalLife, among a niche focus group have demonstrated that ReFlow can lead to

- More satisfied users
- Improved sense of doing good
- Makes it easy for users to sort and recycle correctly
- More liveable neighbourhoods

First commercial sale of ReFlow
made in 2022

SMART MOBILITY TO INCREASE **QUALITY OF LIFE** IN HIGHLY SATURATED CITIES

The Sweden+Korea Green Transition Alliance and its member companies invited a delegation of South Korean journalists to Sweden to learn more about Swedish sustainability solutions



Envac was represented at the event by Christer Lundberg, Global Sustainability & Quality Lead, who led the talks about smart mobility in a new carbon-neutral society.

With so many people living in densely populated areas, keeping the streets and sidewalks free of litter and debris can be challenging. However, significant improvement in automated waste collection has made the waste collection more efficient, cost-effective, and environmentally friendly. Instead of relying on traditional methods of garbage collection, which involve manual labour and large trucks, automated systems use underground pipes to transport waste directly to a central location. This eliminates the need for street garbage trucks, reducing traffic congestion and air pollution. One of the most significant benefits of automated waste collection is that it is much more

hygienic than traditional methods. Garbage trucks can be a breeding ground for bacteria and other harmful pathogens, but with automated systems, the waste is transported underground, away from people and animals. This makes the streets much cleaner and safer for everyone. Another advantage of automated waste collection is that it is more sustainable than traditional methods. By reducing the number of garbage trucks on the road, the city can save on fuel costs and reduce its carbon footprint. Additionally, because the waste is sent directly to a central location, it can be sorted and recycled more efficiently, reducing waste in landfills.



76% of users from customer survey in North Europe prefers automated waste collection system over the traditional waste handling



CUSTOMER ADDED VALUE

1

OPERATIONAL COST SAVINGS

The systems offer long-term cost savings and favourable payback periods due to more efficient waste collection and the reduced use of electricity and vehicle fuel costs.

2

RESILIENT SYSTEM & ENHANCING THE PROPERTY VALUE

Our waste collection system has been reliable for over 50 years, even in harsh weather conditions. It takes up less space than traditional methods, freeing up land for development to increase property value.

3

POTENTIAL FOR MORE GREEN SPACE

The saved outdoor space can be used to create more green areas that can improve the quality of life for residents.

The space that is saved from the reduced need for waste collection rooms can instead be used to create added value and increase revenue for the real estate owner by using the saved space for business offices, stores, or similar.

PROMOTING CUSTOMER ADDED VALUE



Increased liveability value



Empowering the circular economy



Increasing property value

LOWER ENERGY
CONSUMPTION

INCREASED VALUE
OF THE REAL
ESTATE

IMPROVED
SORTING QUALITY

LESS DOWNTIME/
SERVICE

OPPORTUNITY
TO REDUCE
INSURANCE COSTS

LOWER COST OF
SORTING

Envac Automated Platform (EAP) is the foundation of our digital transformation that enables machine learning and AI

- smart technology that supports efficient operation & maintenance
- increase system availability
- improves energy efficiency

“

I always breathe a sigh of relief whenever we leave or come back to our home, knowing that I won't have to deal with any unpleasant waste odours. Yantai Hammarby Eco City is the ideal solution for us to reside in a more eco-conscious community that contributes to improving China's ecological problems. - Lisa, resident of Yantai Hammarby Eco City, China

DIGITAL TRANSFORMATION

Our journey towards digital transformation has achieved significant milestones. We have improved the data collection of our automated systems and prepared the technology that completes future data collection needs. We have completed a pilot project that focused on optimising energy usage by implementing solar panels and batteries. The green energy complements Envac's Automation Platform (EAP) and optimises the power utilisation of system operation during peak hours.

I am pleased to reveal that we have made remarkable progress in reducing energy consumption, positively impacting the environment, and improving the quality of life. Our

projects showcase the immense potential of the synergy between our teams, client and the technology we are implementing. We are launching ReFlow app that will be a game-changer for our customers, end-users and the environment. I commend everyone for their hard work, dedication, and collaboration in achieving these milestones.

70%

REDUCED POWER CONSUMPTION
DURING PEAK HOURS POSSIBLE
BY EAP IN COMBINATION WITH
BATTERY SUPPORT



- Kent Norlenius,

**Chief Technology
Officer**



CASE STUDIES

...one city, one world, one planet at a time

Envac confidently utilises case studies to highlight our successful collaborations with customers. These studies provide a clear and compelling blueprint for achieving our goals of promoting cleanliness and sustainability and implementing cutting-edge digital solutions to ensure safe automated waste collection. We place great importance on customer feedback, enabling us to identify areas where we can continue to improve and excel.

KING ABDULLAH FINANCIAL DISTRICT, SAUDI ARABIA

The King Abdullah Financial District (KAFD) is a 1.6 million square meter mixed-use neighbourhood with a strong sustainability profile that is being developed in Riyadh, Saudi Arabia.

- > Four separate Envac systems with a total of 160 waste inlets, 16 public litter bins and 21 km of piping will collect an estimated 140 tonnes of waste in two fractions – general and recyclable.
- > The system will be equipped with Envac's Automation Platform (EAP), which is proven to reduce energy consumption by up to 50%.
- > The project is aiming to become the largest Leadership in Energy and Environmental Design (LEED) Platinum certified neighbourhood in the world.

“

'Part of our commitment to urban living in KAFD is climate action, and this means that we seek partnerships that foster and improve environmental solutions for the city and its residents and tenants. Our partnership with Envac helps to ensure that waste at KAFD is properly managed, allowing us to contribute to a clean environment and reduced GHG emissions.' - Gautam Sashittal, CEO, King Abdullah Financial District



CARBON
NEUTRALITY



QUALITY OF
LIFE



CUSTOMER
ADDED VALUE



“

'When building the Hammarby Eco City in Yantai, we strive to make Swedish innovation, lifestyle, and sustainability advocacy flourish in China. We are delighted to work with Envac and bring its leading vacuum waste collection system to Yantai, as part of our integrated solutions to reduce environmental impact and create a pleasant living experience for the residents.' - Jesper Jos Olsson
Group CEO and Founding Partner, White Peak

QUALITY OF
LIFE

CUSTOMER
ADDED VALUE

YANTAI HAMMARBY ECO CITY, YANTAI CHINA

An ecological smart city built on an area of 880,000 square meters based on the global eco-city model of the Hammarby lake city project in Stockholm.

- > The Envac system has 64 inlets and 2.5 km of piping that collects waste from over 5,000 apartments.
- > It is estimated to reduce waste collection traffic and the related emissions by 90% and has contributed towards the sustainability aspirations of the residential neighbourhood to promote healthy and green lifestyles.
- > With 46% of green space in the residential area, there are watersaving devices such as humidity and raindrop sensors in use for landscaping.



MAROOCHYDORE, SUNSHINE COAST, AUSTRALIA

The Envac system in Maroochydore, the Sunshine Coast, 100 km north of Brisbane, is the first automated waste collection system in the country.

- > Downtown Maroochydore has been redeveloped and designed for pedestrians, cyclists and public transport, which means that a conventional waste collection system with trucks were not a viable solution.
- > The Envac system avoids the need for heavy trucks in the city centre to promote road safety, and reduce traffic emissions and noise.
- > Public litter bins, for general waste and recyclables, are cleared every day without rubbish trucks. The system is hermetically closed, which eliminates odour and vermin.

“

'I'm very proud the Sunshine Coast is leading the change in Australia with this innovative waste collection solution and I'm sure other cities and major urban projects will soon be following in our footsteps. As well as making our city heart more attractive, this technology has a track record of increasing recycling rates, so our natural environment will benefit too.' - Mark Jamieson
Sunshine Coast Mayor



CHILDREN'S HEALTHCARE OF ATLANTA, USA

Consistently ranked among the top children's hospitals by U.S. News & World Report, the hospital provides access to 2,000 pediatric physicians and allied health practitioners across more than 60 pediatric programs.

- > **Containment and quick removal of waste improve the hospital's aesthetic providing a comfortable and clean healthcare environment.**
- > **Waste in an enclosed system vs. hallways and elevators significantly reduces the risk of hospital-acquired infection.**
- > **Reduced staff movement in busy hallways and elevators.**
- > **Readily available load stations will significantly increase the recyclables capture rate.**

“

Children's Healthcare of Atlanta understands that automating hospital support services, such as waste removal, can lead to increased efficiency, reduced operational costs, and helps to provide a comfortable and clean healthcare environment. Improved cleanliness promotes infection control measures, creating a safer environment for young and vulnerable patients.”

- John Coates, COO, Envac North America



BUSINESS RESPONSIBILITY

Our approach to responsible business is the foundation of our sustainability work, and we aim to be a sustainable business partner by conducting business responsibly and working with our three business responsibility areas.



**SAFE
WORKING
CONDITIONS
IS OUR TOP
PRIORITY**



WORKING CONDITIONS

We promote good working conditions for everyone impacted by our solution and operations.



FAIR & ETHICAL BUSINESS

Business partners, including suppliers and customers, are crucial to our ability to run a fair and ethical business.



DIVERSITY & INCLUSION

A more diverse and inclusive organisation drives innovation and makes us better adapted for long-term success.

OCCUPATIONAL HEALTH & SAFETY

Manual handling is one of the most common root causes of injuries in the waste collection industry. According to the yearly report from UK Riddor, between the years 2017/18 and 2021/22, 39% of non-fatal injuries leading to more than seven days of absence were due to handling, lifting or carrying waste; for the private sector, it was 27%.

ENVACS AUTOMATED
WASTE COLLECTION
MINIMISES AND OFTEN
ELIMINATES THE NEED
FOR MANUAL HANDLING

Envac system for hospitals creates a more sanitary environment while reducing operational costs

Our solutions in hospitals collect waste and linen to be handled efficiently in a closed system. Therefore, the risk of spreading diseases is reduced and improves the safety of patients and hospital staff.

With the infectious waste solution, the waste is handled in a sealed environment and is neutralised in the facility using safe methods. After the treatment, the waste can be handled as normal waste.

87% **EMPLOYEE FEEL
SAFE AT WORK**
(+2% improvement
from 2021)

HOW WE DO IT

We have safety for our workers at the top of our agenda. Our management team worldwide starts every meeting with OHS and looks at relevant KPIs to take necessary decisions and action.

In 2022 we did major updates to our Global Occupational Health & Safety policy and clarified our expectations for the different regions to fulfil.

–8 **EMPLOYEE NET PROMOTER
SCORE (ENPS)**
MEASURES THE EMPLOYEE
EXPERIENCE AND PREDICTS
GROWTH UP (3 points better than
2021)

Note: To read more about Net Promoter Score [click here](#)

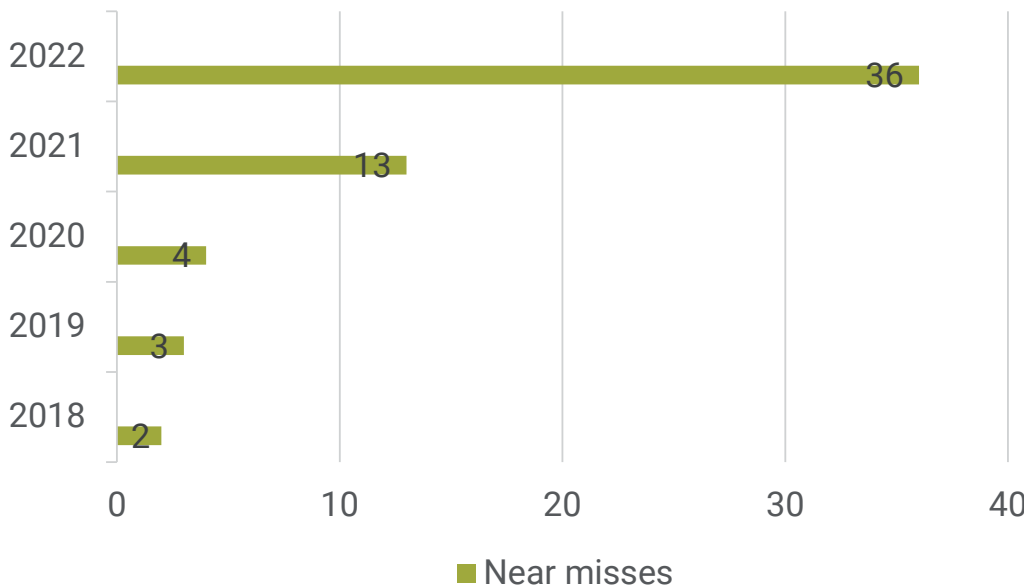
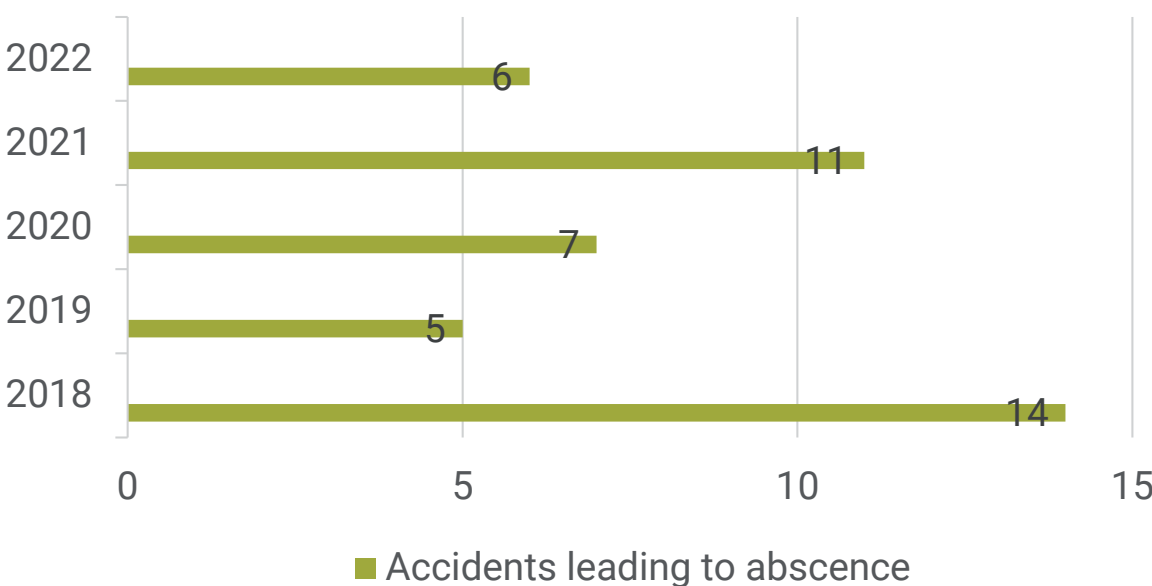
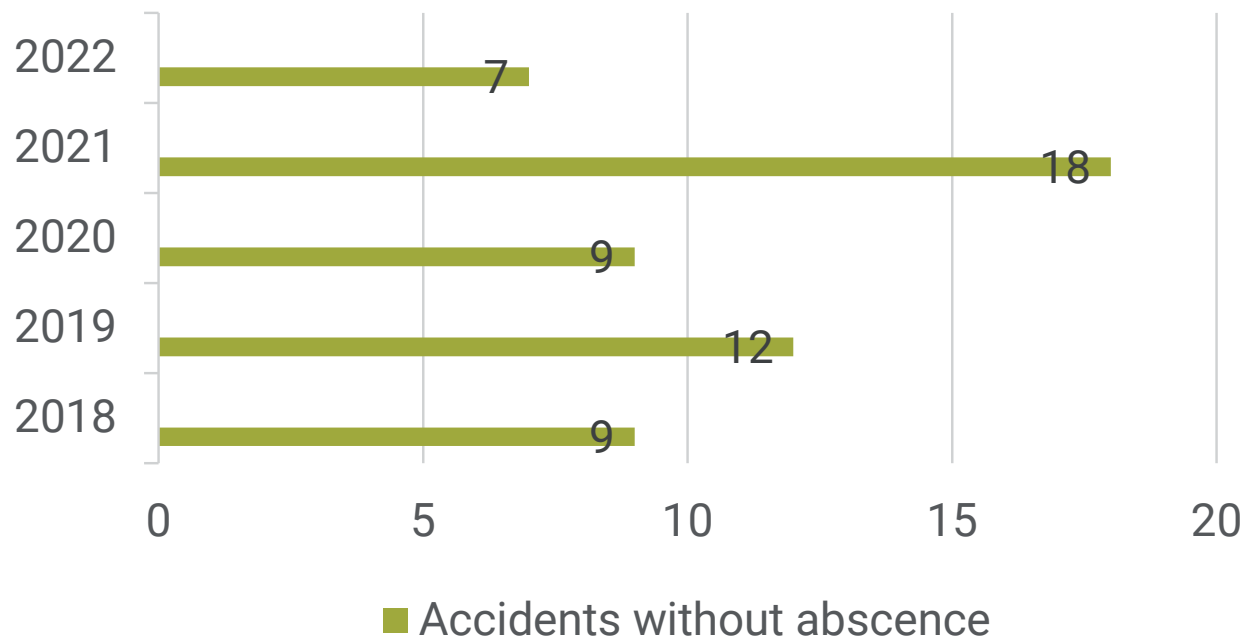
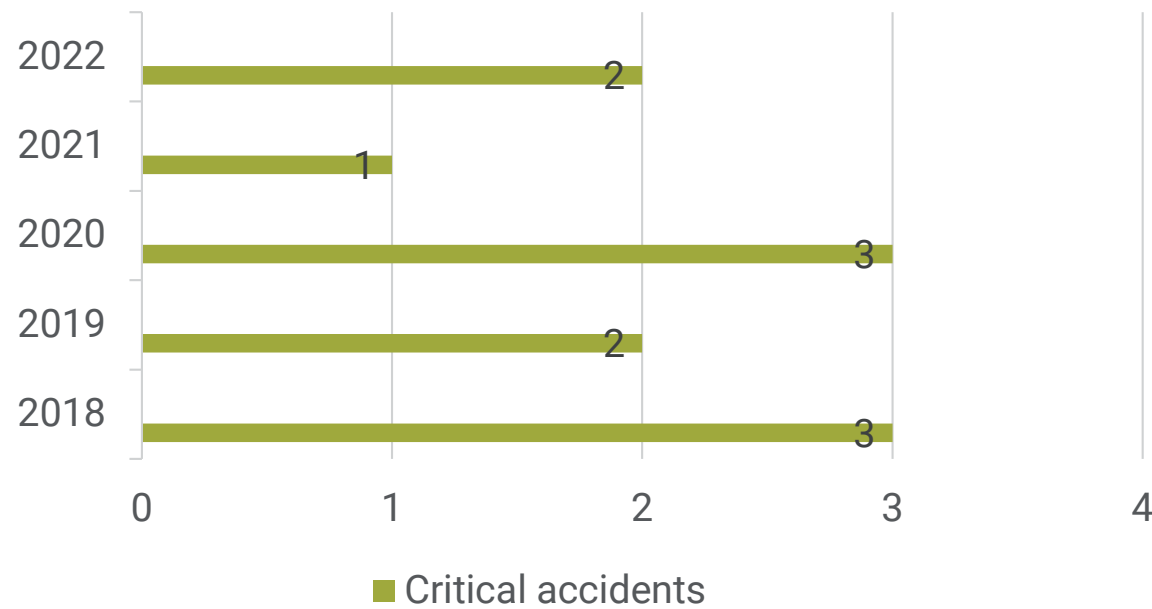
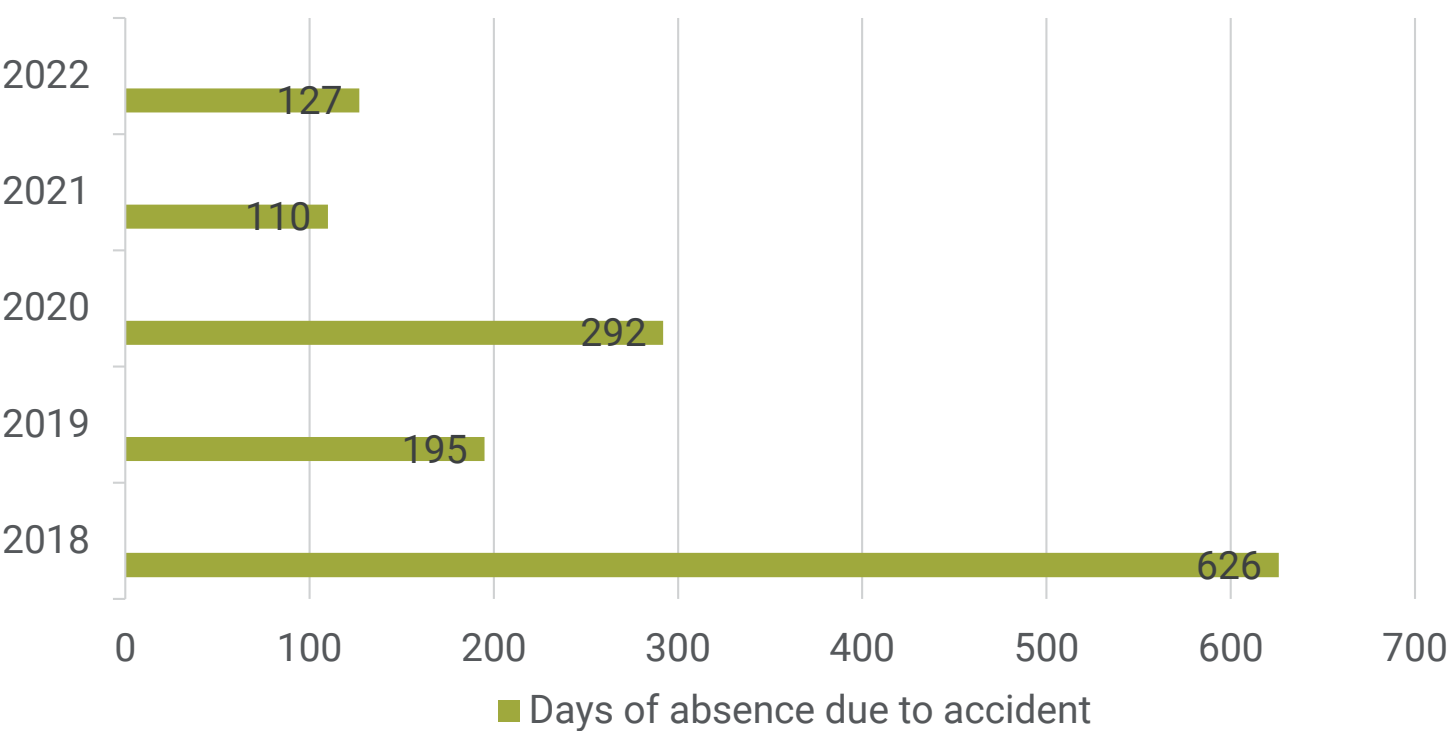
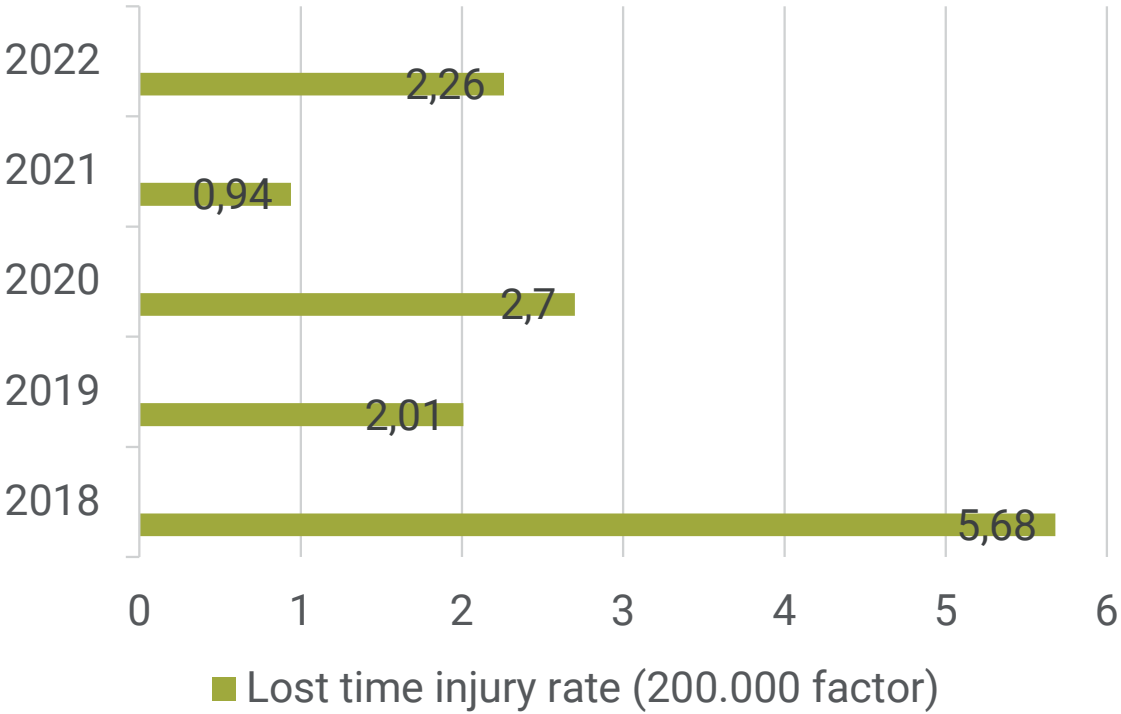
OCCUPATIONAL HEALTH & SAFETY

ZERO
ACCIDENTS

Long Term Target

ZERO LOST
TIME INJURY
RATE

Short Term Target



Note 1: For the year 2018 to 2021, the data is collected from North Europe & Spain
Note 2: Critical accident refers to more than 30 days leave of absence from work or serious medical/physical ailment



ENVAC KOREA IS RECOGNISED AS A FAMILY-FRIENDLY BUSINESS

In 2022 The Korea Institute for Healthy Family certified Envac Korea as a company creating a family-friendly organisation. The certification recognises that Envac provides the following:

- Flexible working hours
- Promote a good work-life balance
- Have initiatives leading to opportunities to shorten working hours for employees

US SAFETY COMMITTEE PROMOTES GOOD SAFETY PERFORMANCE

- The Envac Safety Committee in the US meets monthly to discuss 'near misses' and identifies, investigates and pursues improvement opportunities.
- The committee also reports at company-wide meetings and shares safety experience with the entire workforce, and organises interactive sessions with external safety experts.

PROMOTING SAFETY IN KOREA

- In 2022, Envac Korea created an Occupational Health & Safety management team to provide new pre-emptive safety measures for protecting its workers.
- The team has regular project site safety visits and meetings and provides safety training.

Operating a fair and ethical business is crucial to Envac's reputation and success. Business partners, including suppliers and customers, are essential to our ability to run a fair and ethical business.



TARGET 2023

100% employees trained in code of conduct



PROGRESS 2022

50% employees trained in code of conduct



TARGET 2023

100% key suppliers signed our code of conduct



PROGRESS 2022

50% key suppliers signed our code of conduct

FAIR & ETHICAL BUSINESS

INDEPENDENT THIRD-PARTY WHISTLEBLOWING SYSTEM FOR INTERNAL AND EXTERNAL STAKEHOLDERS IMPLEMENTED IN 2022

The system is in line with EU regulations and guarantees anonymity for the reporter. Any external stakeholder can reach the system through our website.



DIVERSITY & INCLUSION

We are working to promote equality and inclusion among all our employees worldwide.

747
EMPLOYEES
GLOBALLY

15%
WOMEN
WORKFORCE

18%
WOMEN
MANAGERS

7 MEN
2 FEMALE
IN GLOBAL
EXECUTIVE BOARD


In 2022 we developed a new Global Diversity & Inclusion Policy. In 2023 we have identified two focused actions within Diversity & Inclusion

1. Perform global gap analysis with an action plan according to policy
2. Develop a global manager training in diversity & inclusion

ANECDOTES

- In 2022, we hired two people with special needs as part of inclusivity initiative with the Korea Employment Agency.
- Hiring people with special needs is in line with our Diversity & Inclusion Policy and not discriminating against certain groups of people.
- To promote diversity and inclusion, Envac North America proactively engages with vendors that women, veterans and minorities own.
- In a recent project, we allocated 16% of partner dollars towards such businesses.
- We also prioritise inclusion in our hiring practices.

THE EVOLUTION OF MARKETING COMMUNICATION



As businesses become more aware of their impact on the environment, Envac is taking steps to incorporate sustainability into our marketing communication strategy. By adopting sustainable practices, Envac can reduce its carbon footprint and influence customers who are increasingly concerned about the environment. We work with sustainability at every step in our communication. We do not promote printing our communication material. Instead, all media and content are shared digitally. Another way we are incorporating sustainability into marketing communication is by highlighting our system's environmental benefits, such as energy efficiency, reduced traffic and CO2 emissions. We invest in **Life Cycle Analysis (LCA)** assessments and do research and white papers to show proven results with our solutions. By sharing customer success stories and offering educational visits, we influence and educate potential decision-makers in choosing a long-lasting, sustainable option. Through partnerships with organisations such as

Viable Cities and Greenovation Stockholm, we promote sustainability and safe waste management to a broader audience and encourage others to adopt sustainable practices. We believe in educating and inspiring people to change for the better and use our external channels by proactively sharing updates on sustainable practices such as waste sorting and recycling. We ensure the sustainability of our system through research, data, and over six decades of experience, which prove the positive impact of our system. With modernisation, we have new opportunities to improve life for everyone. As a result, we have a significant responsibility to conduct ourselves responsibly and take pride in our solutions. Additionally, we prioritise transparent communication with our clients and end-users.

- Sara Arrhenius, Chief Marketing Officer, is at the forefront of the digital customer journey



SMART SYSTEM

Making cities smarter and more sustainable through innovation

This report is approved by Board of Envac AB on 08.06.2023

Anders Wassberg,
Chairman of the Board

Henrik Hallin,
Member of the Board

Christer Öjdemark,
Member of the Board

Maud Olofsson,
Member of the Board

Tore Hallersbo,
Member of the Board

Lena Wäppling,
Member of the Board

Michael Gidlund,
Member of the Board

Joakim Karlsson,
CEO Envac AB