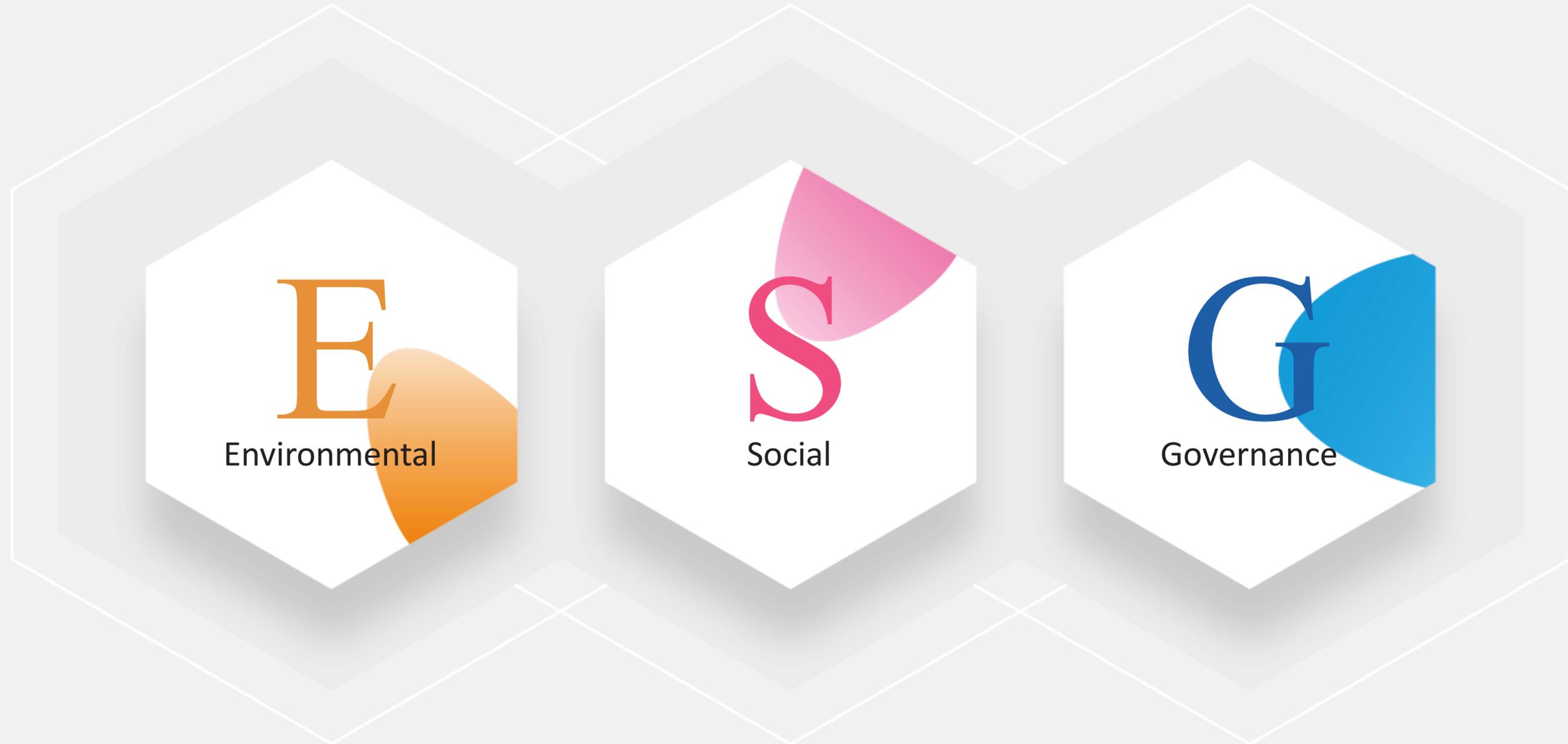


# 2<sup>nd</sup> v ESG REPORT

CF PHARMA and PATRIAPHARMA

2024





# Content

## Introduction

- ESG Commitment
- Message from the CEOs
- Message from the Lead expert of ESG
- ESG approach at an SMS company
- VSME standard – Basic and Comprehensive Module

## General Information - B1, B2, C1, C2

### Environmental Performance

- B3 – Energy, GHG emissions
- B4 – Pollution of air, water and soil
- B5 - Biodiversity
- B6 – Water
- B7 – Resource use, circular economy and waste management

## Contributions to Society

- B8 – Workforce Characteristics
- B9 – Workforce - Health and safety
- B10 – Workforce – Remuneration, collective bargaining, training
- Internal support
- Support of the society

## Governance

- B11 – Convictions and fines for corruptions and bribery
- In line with the international trends
- Unique results at CF Pharma

## Assurance

## Expert Opinion

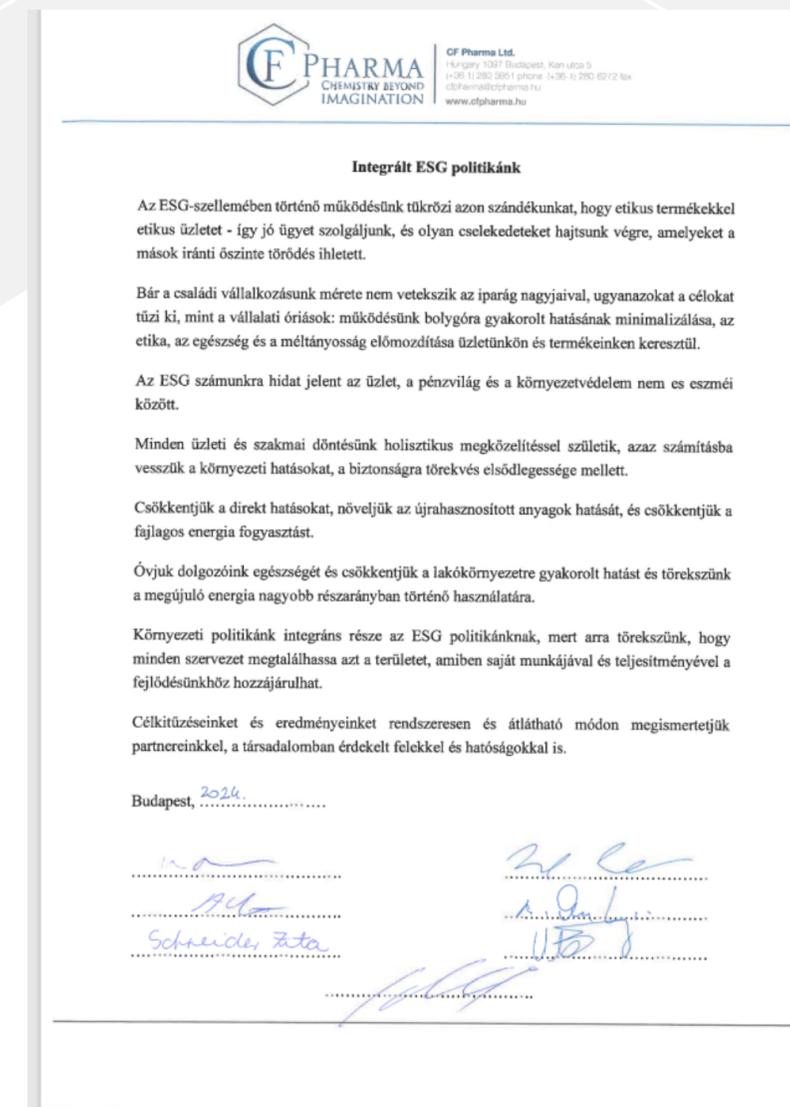
## Introduction

## ESG Commitment

**This report reflects the strong commitment of our company, including the employees, the employers and the owners of CF Pharma and Pátriapharma to integrate the ESG approach into our daily operations and reduce our carbon footprint. Our commitment to ESG is articulated in the ESG policy.**

The report follows the VSME Standard published by EFRAG in 2025. VSME is a simplified, voluntary reporting tool designed to support small and medium-sized enterprises (SMEs) in disclosing sustainability data and information consistently and transparently.

The report provides information of our ESG progress in the time frame of the 2nd voluntary ESG report - 2022-2024. This report builds on our 1st ESG report, published in October 2023.



## Introduction

### Message from our CEOs

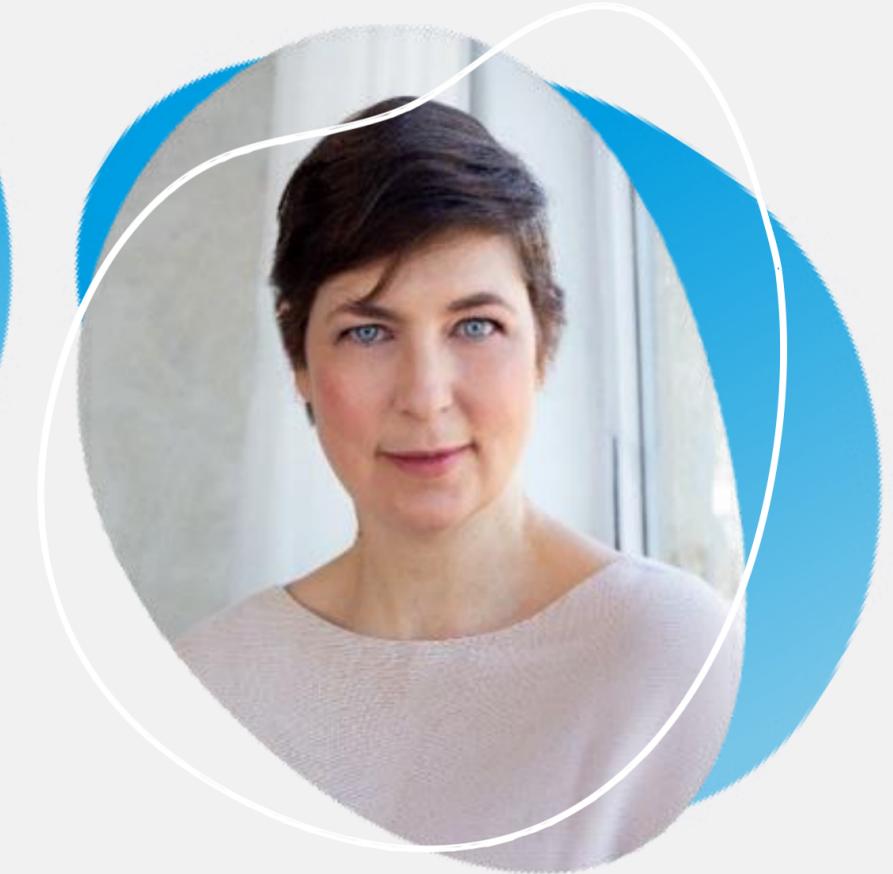
“Our attitude to ESG reflects our intention to serve a good cause, to carry out actions inspired by the genuine concern for others. Although our family business is not the largest, it sets the same targets as corporate giants: minimising the impact of our operations on the planet, advance ethics, health and equity through our business and products.”



**Géza Schneider**  
CEO



**Zita Schneider**  
CEO



## Introduction

### ESG Approach at a SMS company

Our company is experiencing a very exciting time, as there are changes in the generation of senior management, the operation of the management and our work culture. As our aim is to become a leading company, we switched our focus to the holistic approach both in business and EHS.

ESG seems to be a complex and a relatively new navigation tool of this holistic approach, serving as a bridge connecting finance, business and EHS.

We understand that every decision we make has direct or indirect impact on the society and the environment. Therefore, we produce ethical pharmaceutical products for our customers and patients, while taking responsibility for the health of our employees and the protection of our environment.

In order to accomplish our goal, and communicate the results and performance for the partners, the management decided to publish a voluntary ESG report ( vESG report ) in line with the prepared roadmap. It has been identified our main ESG targets and KPIs.

**The first detailed report** — has been published in **Oct.2023.**— includes the issues and topics that we faced to achieve the goals set out in our own roadmap. This is the second report, focusing on data and information regarding our sustainability performance since 2023.



## Introduction

### VSME Standard

As our company, due to its size does not fall under the validity of the ESG law, instead of the CSRD standard, the report follows the VSME Standard (Voluntary Sustainability Report Standard for non-listed SMEs) published by EFRAG in 2025.

VSME is a tailor made for SMEs; simplified, voluntary reporting tool designed to support small and medium-sized enterprises (SMEs) in disclosing sustainability data and information consistently and transparently.

Our motivations to report the sustainable performance of the company are the followings:

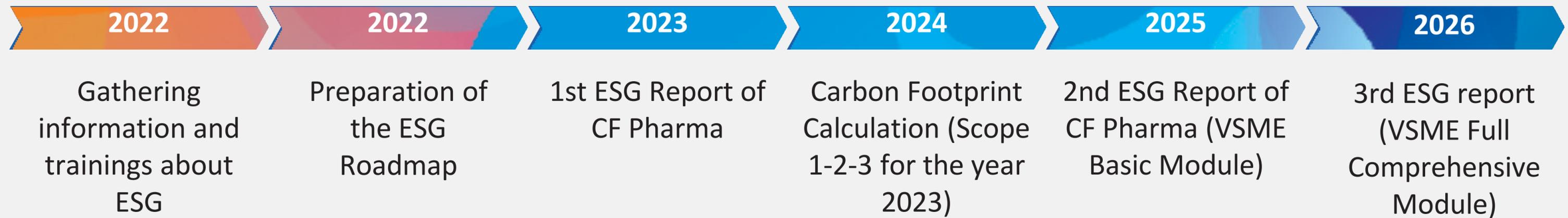
- to provide relevant sustainability data to our customers,
- to improve our sustainability management,
- to gain access to financing and
- to improve transparency among our internal and external stakeholders.

In order to achieve these objectives, this report is based on the Basic (B) and partly the Comprehensive (C) Modules of VSME Standard. Our aim is to fulfil all the requirements of the Comprehensive Module within 2026.



# Introduction

## Timeline



## Environmental Performance

As a pharmaceutical company, the awareness of all the environmental load connected to our processes and products is essential and on the focus of our operation. As the reduction of these environmental impacts.

We identified all types of waste which can be reused off-site instead of incineration.

Thanks to this effort, hundreds of tons of water methanol have become raw material for biogas production or reused by another company for indirect cooling system, in line with the spirit of circular economy.

Hundreds of tons of pretreated solvent (commercial quality) have become useful auxiliary compounds for other customers, instead of incineration and emission of GHG's.

In the last 3 years no limit exceeding happened neither by the wastewater nor by the VOC emission channels, though dramatically decreased the discharged pollution.

The heaviest contributor to the carbon footprint is the purchased and transported raw materials and used energy.

The same result was provided by EcoVadis: we should improve the procurement process, policy and system towards the sustainability.



## Reduction of energy consumption – B3 (Energy and GHG emission)

### Due to:

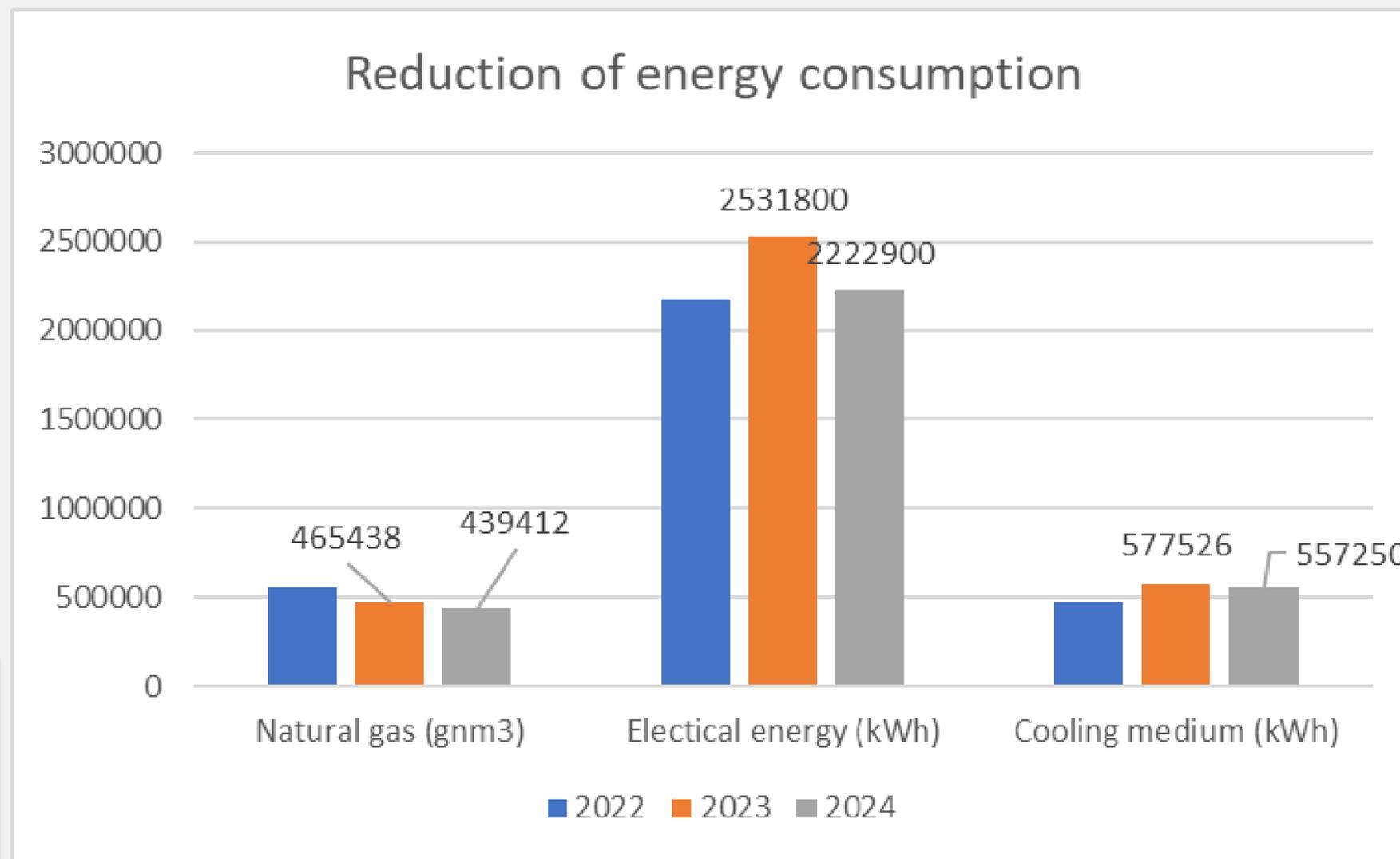
- reducing heat loss of steam pipes by partly renewed and partly implemented pipe isolation,
- Optimization of heating
- disconnection of long steam pipes if not used,
- The efficiency the above measures, is certified by competent body.

- **the energy consumption has been reduced by**

*Gas 5,59%;*

*Electricity 12,2%*

*Cooling medium 3,51%.*

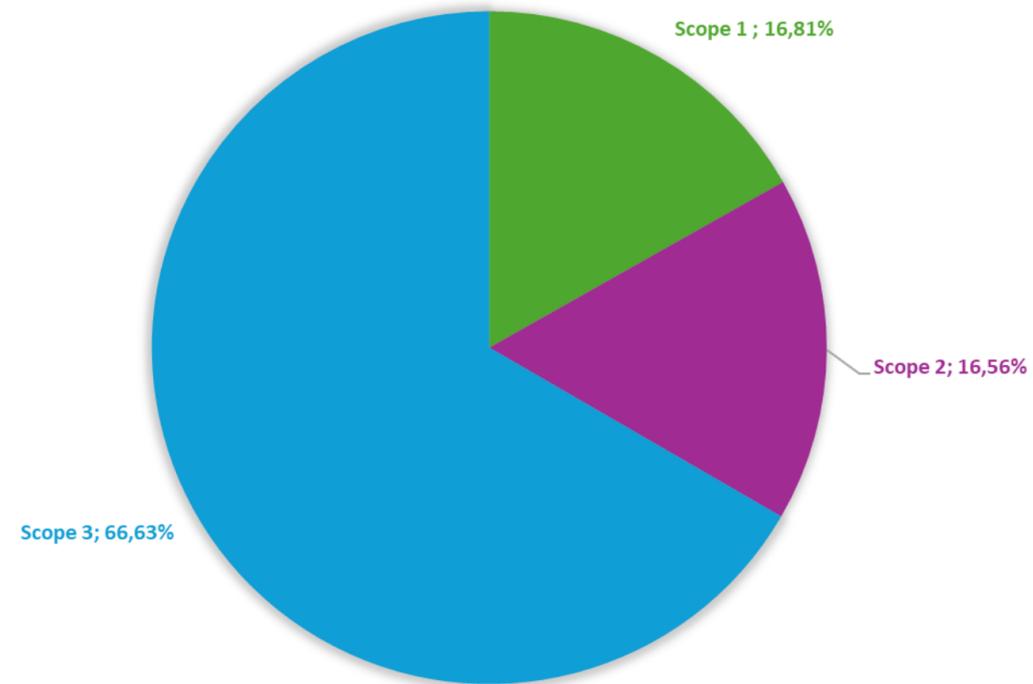


## Greenhouse Gas emission – B3

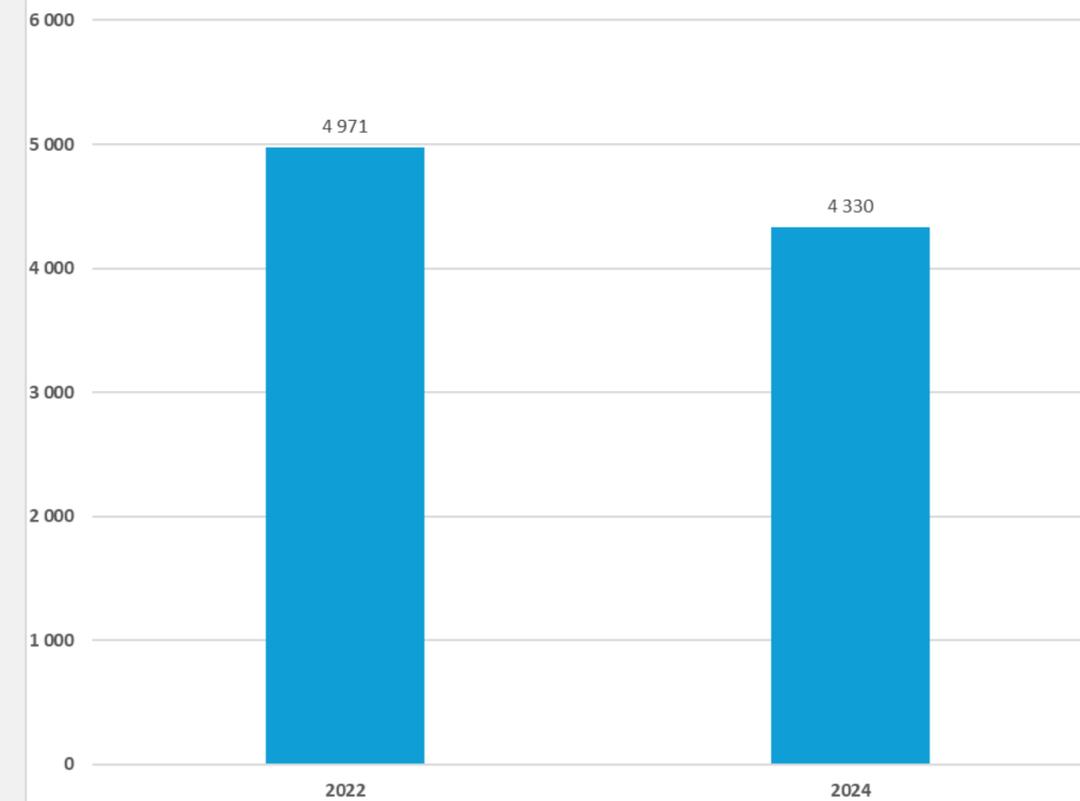
Carbon Footprint Scope 1-2-3 has been calculated according to GHG Protocol and ISO Standards for the years 2022 and 2024.

★ Thanks to reduced energy consumption, our carbon footprint has decreased by 15%.

Carbon Footprint by Scopes at Pátriapharma Ltd. in 2024



Carbon Footprint in 2022-2024 (tonne CO2eq)



## Environmental Performance – Emissions – B4

### Emissions & monitoring

Parameters	2022 Kg/year	2023 Kg/year	2024 Kg/year
COD	7085	255	621
BOD5	3341	109	248
total Nitrogen	241	216	40,5
total Phosphorus	322	78,9	18,3
inorg. Salt	74751	25817	25623
solvent	0	0,13	0,08
Fat&tar	140	0	0
AOX	0	0	0
Discharged waste water	40259 m <sup>3</sup> /year	42886 m <sup>3</sup> /year	36181 m <sup>3</sup> /year

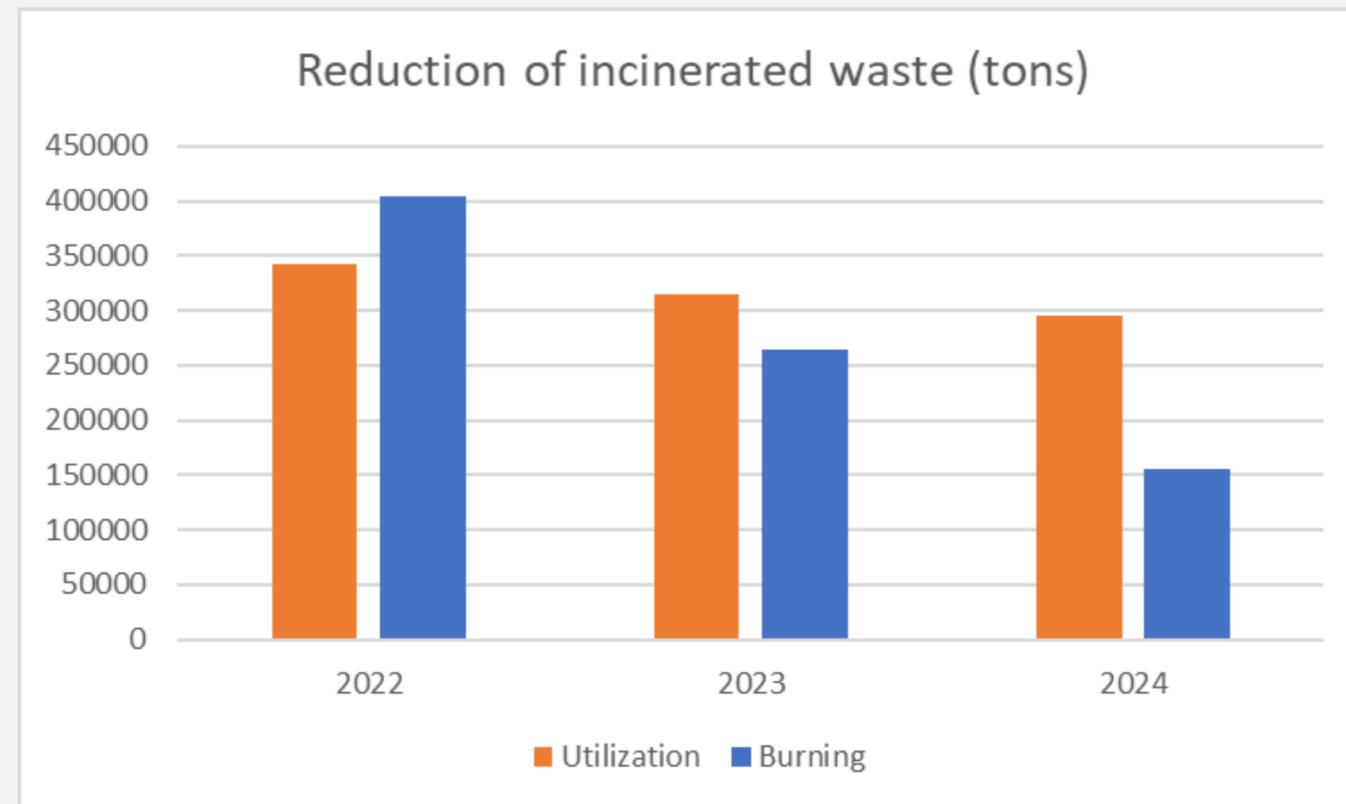
	2022 T/year	2023 T/year	2024 T/year
SUM:	748	268150	182633
Direct waste from production	469	264509	146690
Indirect waste	279	3641	35943

Due to the systematic investigation and conscious navigation of several „non-product“ streams, both the COD and BOD radically decreased in the discharged wastewater.

It was set out in the „Pollution reduction action plan“ approved by the local environmental authority, and validated by the supplier, who operates the relevant sewage and WWTS.

COD = chemical oxygen demand  
 BOD = biological oxygen demand  
 WWTS = wastewater treatment station  
 AOX = absorbable organic halogen

## Reduction of incinerated waste - B7 (Waste management and circular economy)



The ratio of reused and burnt solvent has been developed from 16% up to 47%.  
 The „utilization” means the inside and outside reuse solvent volume.



## ENVIRONMENTAL PROTECTION

1. Full implementation of BAT
2. Zero tolerance of new contaminants
3. Decrease the carbon footprint of our activity
4. Rational and more efficient energy management
5. Sustainable purchasing policy



● Targets

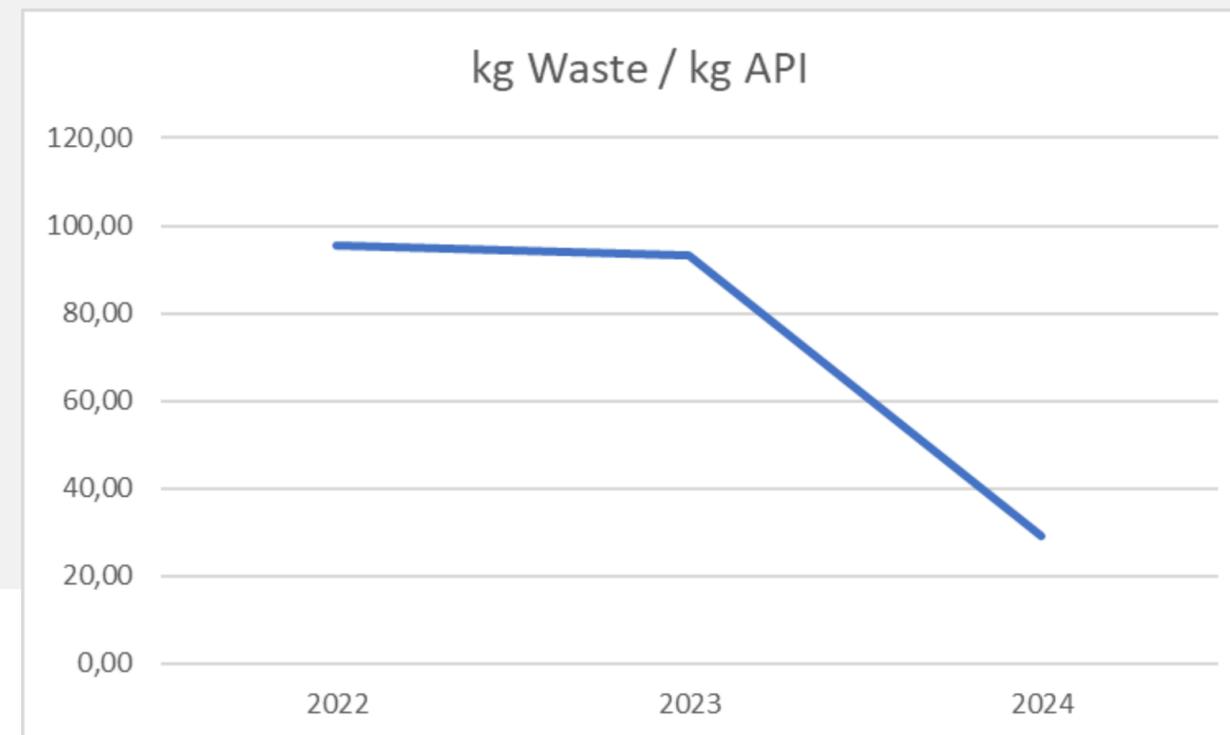
☆ KPIs

## 1. Full implementation of BAT - B4, B7,

- Targeting the use of less harmful reagents, preventing the production of large quantities of hazardous waste and the pollution of surface water with active ingredients, continuous research and development of new technologies both for manufacturing active substances and BAT treatment processes.

☆ **KPI: Reduction of specific indicator of produced waste/kg produced API by 10%.**

☆ **This KPI has been radically enhanced, as the 95kgwaste/1kg API has been decreased to 30kg waste/ 1 kg API.**



 Targets  KPIs

## 2. Zero tolerance for new contaminants

- Treating groundwater that has already been contaminated in the past, in order to reach the „safe” D values
- Zero tolerance for new environmental contaminations
- Efficient use of resources (energy, water and waste)
- Promotion of the biodiversity programme of our manufacturing site in Budapest

We work tirelessly under the strict control of local Environmental Agency to achieve our goals. Most of the pollutants have disappeared already, and the rest is close to their target „D” values. Out of the **12** monitoring wells, **8** no longer have any pollutants exceeding the target D values. Due to the consouis spillage management, no any new contaminants appeared in the monitored ground water.

☆ The common approach and the cooperation have been started with our R&D organisation. They identify the waste quality in early R&D phase and the most efficient treatment before the industrialisation of the new process. „Green” principles have already been introduced at R&D level .

## Biodiversity – B5



### Promotion of the biodiversity programme at our manufacturing site in Budapest

Although our site is located in an urban area, the fauna of its surroundings is very diverse.

The area is the habitat of 12 bird species, snails, bats, hedgehogs, foxes and several reptiles, such as lizards and frogs. Our target is to protect their habitat and feed them during the winter.

On the other hand, we strictly keep them away from the production area, according to the requirements of GMP.

We plan to cooperate with the NGO ( KÖVET) expert to step forward to support the living condition of the identified species.



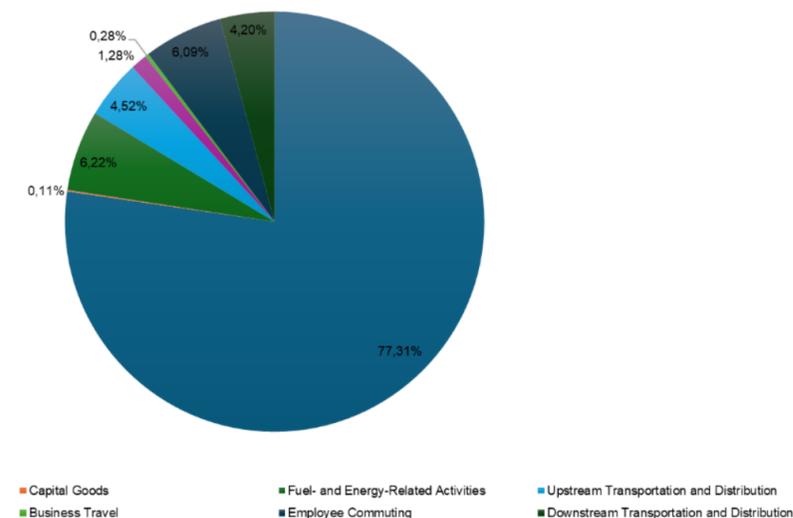
### 3. Reduction of our carbon footprint B3, C3, B7

- Identified the carbon footprint of our activity with the Bilan Carbon method, is in line with the ISO 14064 and ISO14069 standards and GHG Protocol
- Identified the Scope 1, 2, 3 contributors

As the most significant factor is Scope3, was necessary to investigate the contributor causes:

- 1.) *Purchased Goods and Services : 51,5 %*
- 2.) *Capital Goods,*
- 3.) *Fuel- and Energy-Related Activities,*
- 4.) *Upstream Transportation and Distribution*
- 5.) *Waste Generated in Operations,*
- 6.) *Business Travel,*
- 7.) *Commuting of employees*
- 9.) *Downstream Transportation and Distribution).*

Patriapharma Kft. 2024 évi karbonlábnyomának Scope 3 megoszlása

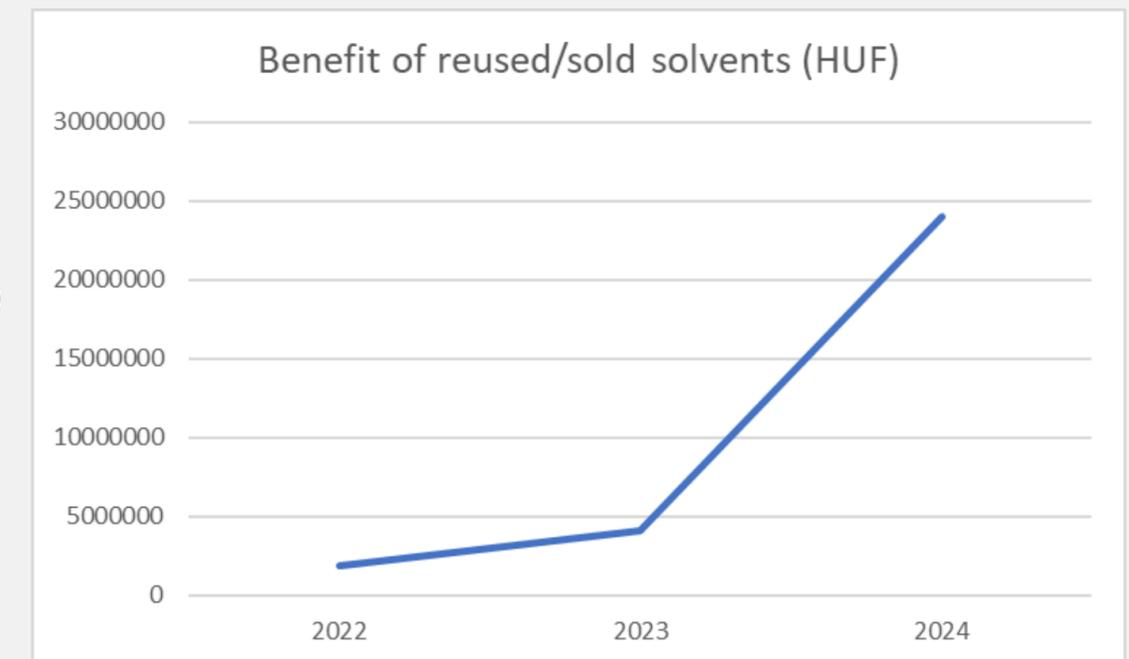


*It was important step to identify the biggest contributor: the purchased material. Although the manufacturing of the API by organic synthetic processes usually is a material demanding technology, still there is a room for decreasing the material usage and improving the carbon efficiency.*

*The other factor is, that due to the relatively low volume of transported products ( from 100g to 100kg/case) the preferred transportation is by airplane, which emitted the most CO2 in the transport sector.*

## Environmental benefits thanks to the solvent recirculation – B7

- Due to the very strict GMP regulations, any kind of solvent recovery with in the technology at first must be approved by the competent authority. Case by case we have to fulfil this long process of administration.
- The favourable environmental effects are as follows:
  - No need to purchase of fresh solvent
  - Suppliers use less energy, less water, emits less pollution on their site,
  - Suppliers use less raw material (e.g. crude oil, which is a non-renewable source)
  - We need less transport from the supplier, thus reducing CO<sub>2</sub> emission
  - Less waste, thus reducing CO<sub>2</sub> caused by waste transportation
  - Less CO<sub>2</sub> emission caused by waste incineration



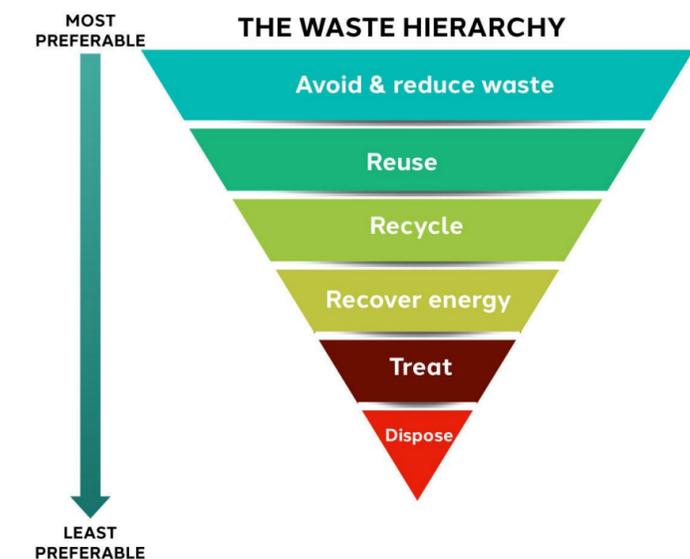
## Reduction of waste production

### Necessary measures and administration:

- In early phase, R&D needs to identify the composition of produced waste in order to define the most effective reuse method or treatment.
- If we set the possibility of recirculation in the regulatory dossier, it provides us more flexibility.

### We consider the waste hierarchy:

- avoiding the production of waste,
- advance recirculation,
- reuse materials by recycling
- incineration combined with energy generation – recovery energy



### 3. Reduction of our carbon footprint

#### Integrating green principles into R&D activities

All industries must act to reduce their environmental footprint and improve sustainability.

Industry-specific factors

- Bulk chemical industry: generates a very large amount of products with a relatively small amount of waste produced per kilogram.
- Pharmaceutical industry: generates relatively small amount of products with large amount of chemical waste per kilogram.

Green chemistry is introduced through our pipeline.

The framework is based on 12 principals (developed by Anastas and Warner in 1998) which inspire our scientists to find creative and innovative ways to reduce waste, conserve energy and eliminate the use of environmentally hazardous substances.

*ESG considerations in pharmaceutical industry can stimulate green innovation performance in R&D to create more sustainable and carbon-neutral manufacturing processes, services and products that save and prolong lives.*

*Imre Kovács, R&D Director*

## Implemented and planned solvent recoveries, reuses and regenerations for commercial production of API-s and LGB 1/2

### Atracurium Besylate

In step Atra55-4, the distilled DKM from the esterification reaction is recycled to produce the anhydrous DKM used in the reaction.

In step Atra55-5, the distilled DKM from the solution of base releasing transformation, can be reused to prepare the ethyl acetate / DKM mixture used to wash the aqueous phase of Atra55-5.

### Biperidene53 Technology

During the production of the intermediate BIPE53-2, the toluene used is regenerated at **70%**.

In the introductory step of BIPE53-3, the toluene used during the liberation of the BIPE53-2 base can also be recycled with an efficiency of **70%**.

The reuse of THF used in the Grignard reaction is not possible due to its high benzene content.

The possibility of regenerating other solvents used in the production process, such as DKM, IPA and MeOH, is being studied.

In addition to the fresh solvent requirement and the harmful emissions associated with waste treatment and disposal, the raw material costs have also been significantly reduced (**EUR 50 / KG API**). There is about the same amount of reserve in planned recoveries and reuses.

## Implemented and planned solvent recoveries, reuses and regenerations for commercial production of API-s and LGB 2/2

### LGB

Cyclohexane with a maximum 1.0 % benzyl alcohol content distilled during LGB production **can be reused** in the esterification step.

THF from the reslurrying can be used in the hydrolysis step of the next batch without risk.

### Cabergoline

Regeneration of the solvents used for the reactions is not economical.

The Isocabergoline and Cabergoline mixture from the mother liquors remaining after crystallization and recrystallization can be converted back into the Caber-4 intermediate. This chemical transformation reduces the raw material requirement of a campaign by **10%**.

## CDMO business: efficient, environmentally friendly, economical process development solutions

### Fmoc-amino acids

Development of a unified, general, extremely simple production method for the Fmoc derivatives of four amino acids. Isolation and crystallization of the target compounds in a single operation, instead of complex, multi-operational, multi-extraction processes. Solvents: water and acetone.

### Fmoc-Lys-OH HCl

Preparation of the target compound in a **“one pot” reaction**, without isolation and purification of intermediates. Environmentally friendly and economical process with solvent recycling.

### levo-MA

Development of a process to produce levo-MA that is **3-4 times more efficient** than methods known from the literature. It is scalable, environmentally friendly, using water and methanol as solvents. The key transformation of the process is a dynamic kinetic resolution reaction.

## How QAQC can contribute to the EHS/ESG performance of the site?

CF Pharma's top priority is to deliver safe and efficient generic APIs of consistently good quality.

### What are the specific subjects of QAQC?

- Ensure strong quality assurance, regulatory affairs and data integrity
- Promote quality mindset: reactive, preventive, proactive
- Harmonise the EHS and quality targets

We are proud of our colleagues at QAQC, who support the ESG performance. It is not the amount of saved energy or the weight of saved waste, but the attitude that matters: their commitment to achieve our goal and the fact that all the decisions are consensual.

### For example:

- All treatment process has been validated, so there is no more excess use of solvent, but quantified volume is used
- No more interim sampling to check the progress the treatment, but validated process.
- All in all less chemicals, and energy is used both for treatment and the follow up of its efficiency.



# CONTRIBUTIONS TO SOCIETY

## Our contributions to local community

1. Fight against Social Chemophobia (support and advocacy)
2. Workforce – our employees – **B8**
3. Ensuring the health, safety and well-being of our employees – **B9**
4. Diversity & social inclusion – **B10**
5. Human rights – **C6, C7**
6. Internal Carbon footprint decreasing competition



## 1. Fight against Social Chemophobia (support and advocacy)

- We joined in 2024 to the Association of Hungarian Chemist, supporting their program to improve the chemical knowledge of the society: **THE MAGICAL WORLD OF CHEMISTRY**
- Our work was published in the periodical of the Hungarian Chemical Society.



- Continuous research and development of new technologies for manufacturing generic Active Substances, to make available for all nations the effective and affordable medicines.
- We joined to the national program of „ Modern factory’s night”. Many visitors we received, escorted the groups of visitors to the laboratories of R&D and QC. Several young people were so impressing that decided to join the pharmaceutical industry after finishing their education.



## 2. Supporting the development of science and initiatives to improve access to medicines



- Exhibitions/conferences where we presented our scientific results Arab Health (Dubai), CPhI Japan, Chemoutsourcing (USA), CPhI WW (Barcelona)

### Conferences:



- Process safety day for representatives of the Hungarian Pharmaceutical Producers
- Green financing round table discussion on Hungexpo
- „Fit for REACH” program, round table and information sharing
- A podcast about the efforts and results in the pharmaceutical sector.



## 4. Ensuring the health, safety and well-being of our employees – B9

*In 2025, our company participated in the Modern Factory Night event, where we presented our activities to visitors through an exciting program. After a warm welcome and a brief introduction, guests were invited to tour our laboratories, where research and development as well as analytical testing take place. They had the opportunity to learn about organic chemical reactions and physical separation processes such as distillation, filtration, and drying, and gained insight into the steps involved in the production of intermediates and active pharmaceutical ingredients.*

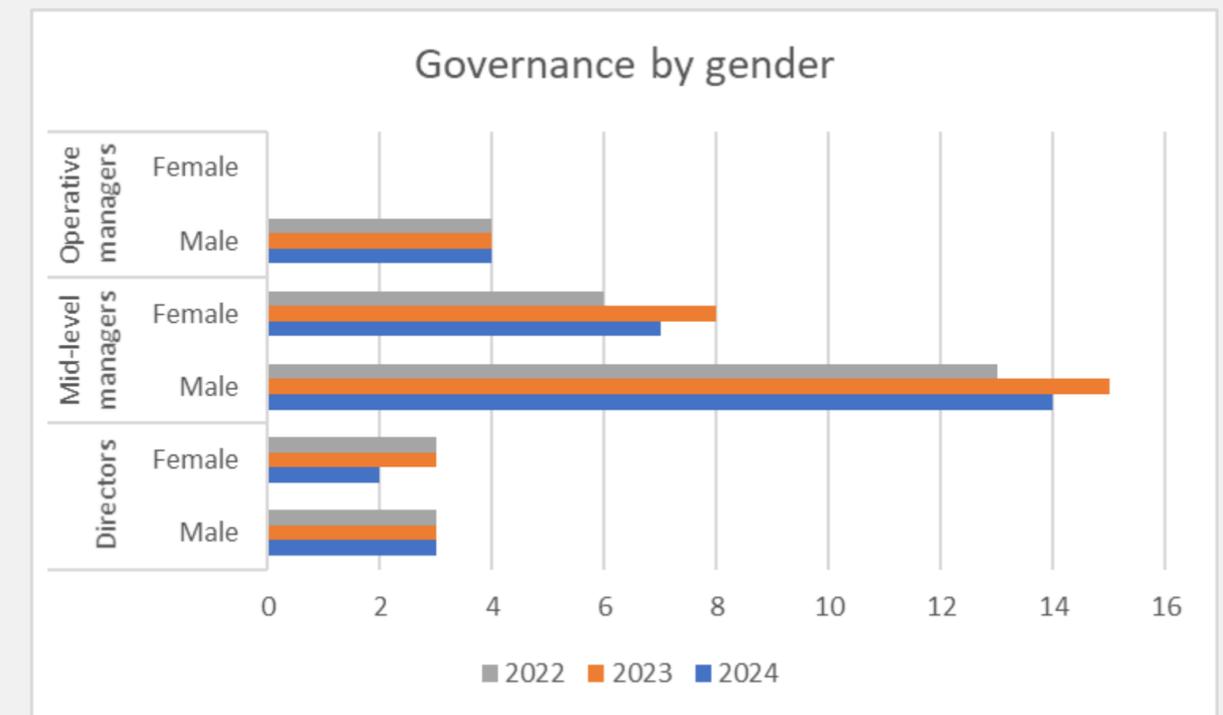
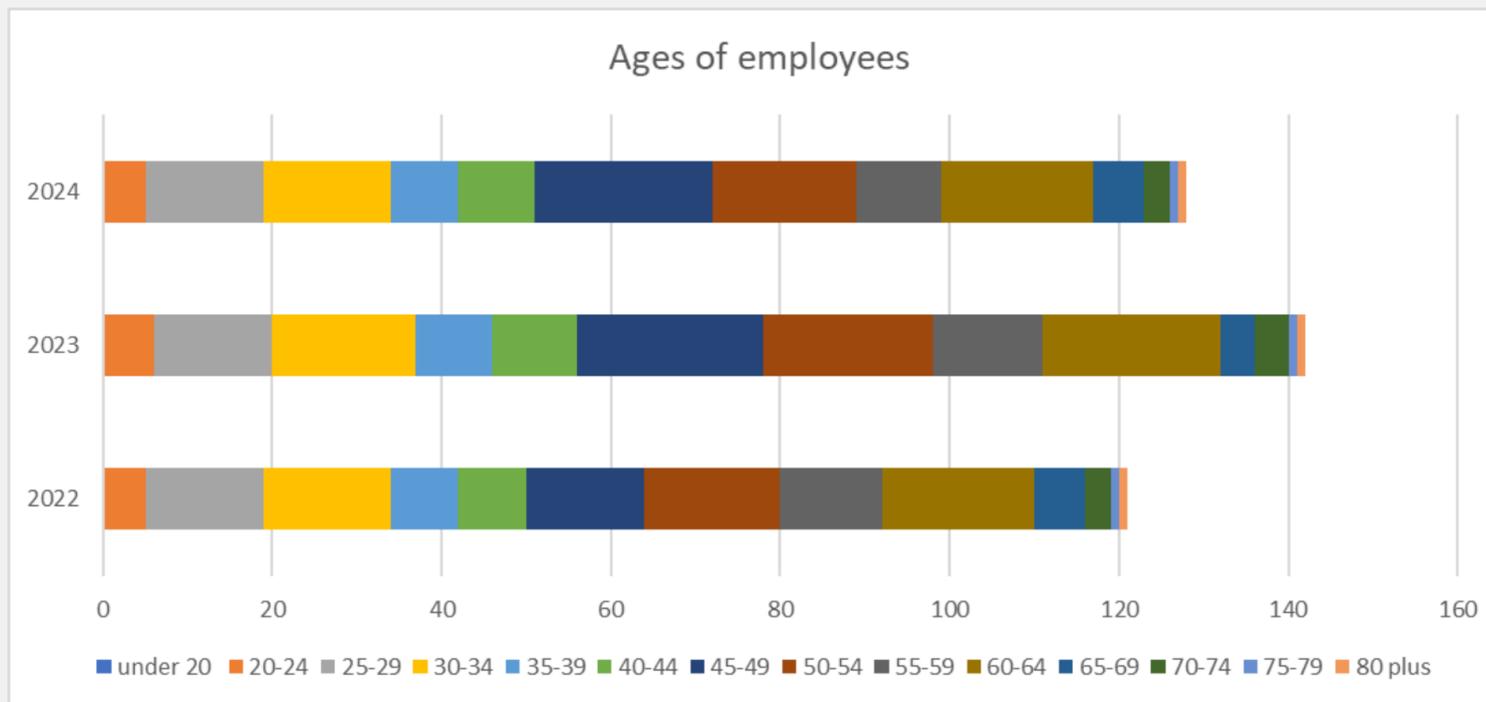
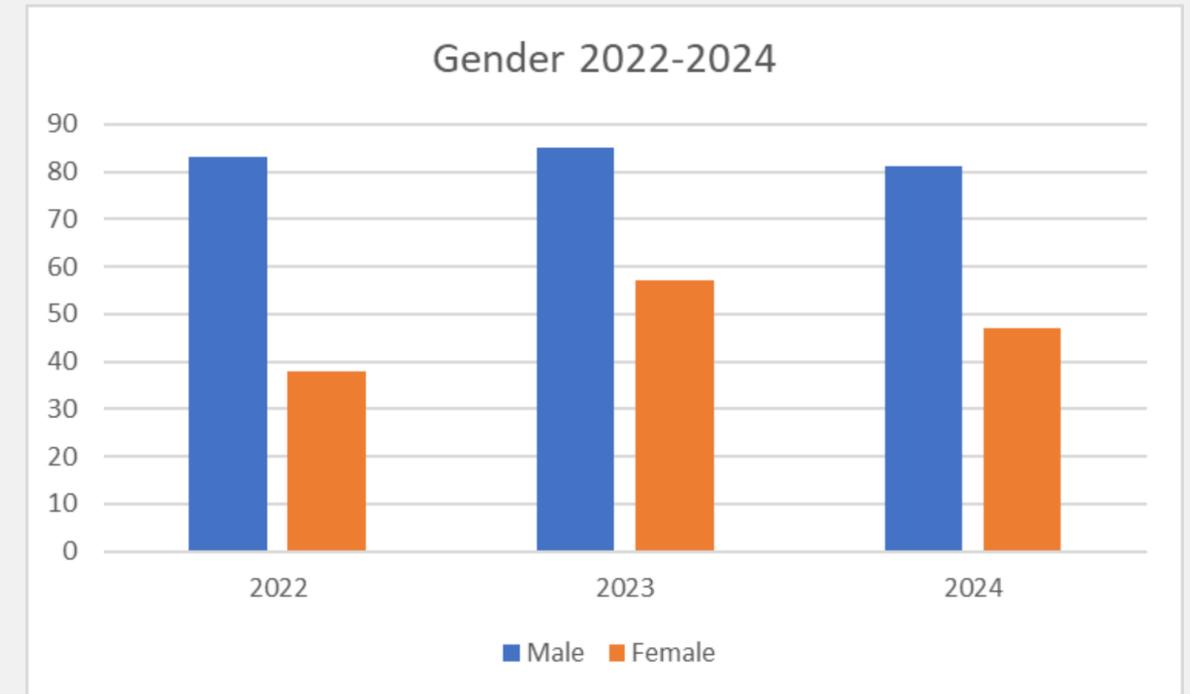
*In addition to traditional analytical methods – such as titration, pH measurement, and water content determination using the Karl Fischer method – we also showcased modern instrumental techniques, including gas and liquid chromatography. These techniques utilize the unique adsorption properties of substances to provide accurate data on composition and purity.*

*The special atmosphere of the event was further enhanced by the fact that it was combined with our company's Family Day – during which we also prepared and served pancakes for our guests. With this gesture, we not only welcomed the families of our colleagues but also created a more friendly and approachable environment for all visitors, bringing them closer to the world of our factory."*



### 3. Workforce - our employees – B8, C9

The ratio of ages did not change significantly, but the staff number more optimal  
 In comperation the previous report the ratio of female/male increased 46% up to 58 % in general.



## 3. Ensuring the health, safety and well-being of our employees – B9

### Health care programme

In order to support the health-conscious behaviour among our employees

- A regular health check, inc. X-ray screening
- Consultation possibility about personal health or mental health issues at the occupational doctor or at a coach.

### Weel being and mental health :

- Weekly on-site „office” massage for the locomotor disorders
- An internal, voluntary mentoring program is in force
- **Accident/ incident**
- In 2024 we have 2 first aid case accidents; No lost time accident and not happened industrial accident .

### We provide our employees with:

- Courses for managers about the soft skills ( assertive communication, resilience, empowering, delegation, etc.) with in ternal and external presenters
- and trainings to support continuous development of hard skills ( languages, intelligent usage of xl, etc.)
- Cheerful community events ( birthday of the company, X-mass party, tree planting in case of retirement, etc.)
- Regular team buildings, and sports events,
- summer camps for the children of the employees
- Extra holidays for birthdays and weddings,
- Accommodation in worker’s hostel
- Support for travel expenses

## 6. Human rights – C6, C7

### Code of conduct:

- Content: Oversight responsibilities;
- Legal matters;
- Confidential information;
- Ethical matters;
- Business relations;
- Fair dealing and antitrust laws;
- Giving gifts or other benefits – anticorruption's measures ;
- Financial records;
- Internal controls;
- Accuracy and integrity of Business records

**Complaint-handling mechanism:** Whistleblowing channel, operated by an independent lawyer, and inside complaint-handling channel.

### Severe negative human rights incidents:

We are not aware any of the following human rights incidents involving our own workforce : child labour, forced labour, discrimination, human trafficking or other negative human rights incidents.

## 6. Employee rights & Development –B10

Type of training	Trained hours in 2024	No of attendies
Internal trainings (GMP, EHS; technical etc.)	420	All employees
Language course (GINOP)	40	6
Excel training	32	23



## GOVERNANCE

1. Family-like work environment
2. Innovation of work style
3. Training and development of employees & suppliers – B10,
4. Operational risk management
5. Fair and transparent corporate activities and Convictions and fines for corruption and bribery – B11



## 1. Family-like work environment

An NGO ( Center of Family Friendly) is dedicated to audit and based on the audit result to provide the certification of „Family Friendly Workplace” branding.



Their summary was:

*„ The efforts of enterprise are equally available for all employees. There are several measures to ensure the work-life balance, ensuring flexible working time in special cases. The employer regularly investigate the opinion of the idea of their employees, provides extra free time in case of birth also for the fathers. „*



### 3. Training and development of employees & suppliers – B10

Our Internal Management Academy had its second college year in **2024**. The aim of the programme is to improve the management skills of our mid-level managers including:

- Thought leadership
- Result orientation
- People management
- Personal management

The 8-session courses gave managers the chance to build a loyal team and acquire a common understanding of the targets, strengths and weaknesses of the company.

By completing the practice-oriented courses, managers will be able to lead their subordinates in a more effective way, by involving them and using assertive communication.

The employees got 420 hours internal training (new commers, EHS; Sevezo; GMP etc.)



## 5. Fair and transparent corporate activities

### Convictions and fines for corruption and bribery - B11

- Proper operation of compliance promotion system and establishment of rules
- Ensure exclusion of anti-social forces and prevention of corruption
- Developing a Fair process mindset within the Supervisory Committee pharmaceutical executives with international experience
- Ensuring transparent and proper information exchange
- We have not gotten any convictions or fines for the violation of anti-corruption and antibribery laws during the year 2024 or any year before it.
- Whistleblowing system is operating
- ☆ Code of Conduct drafted: completed, it is available at: ...
- ☆ Number of serious breaches of compliance: **0** Implementing compliance education and training: **opening training completed by the CEO during the year**  
**Implementation of compliance awareness surveys**
- ☆ Members of the Supervisory Committee: 7
- ☆ Promotion of proper vision and long-term strategy: **quarterly town hall meetings held by the CEO**
- ☆ **A mentoring programme** was launched on a voluntary basis, on project culture, time management, networking and conflict management. The CEO and 3 directors are nominated as mentors.

## Assurance – third party verification

The KÖVET Association for Sustainable Economy has certified the CF Pharma and Pátriapharma Ltd. ESG Report 2024. The Association has undertaken to certify the report as an expert, independent third party.

The report was evaluated based on:

- Comparison of the content of the report with the principles of the VSME Standard published by EFRAG in February 2025 and the sustainability indicators recommended by VSME.
- Recognition of the company's sustainability performance and verification of the credibility, reliability and completeness of the information provided in the report;
- Reliability, credibility and consistency of data and information.

### Result of the verification

- The 2024 ESG Report of CF Pharma and Pátriapharma Ltd. fully covers the indicators of the VSME Standard Basic Module and also includes several indicators from the Comprehensive Module.
- The report is clear, comprehensive and presents the company's sustainability objectives and results.
- Data and information provided in the report are: relevant, faithful, comparable, understandable and verifiable.

**Katalin HERNER**

**Executive Director, KÖVET Association**

**for Sustainable Economy,**

**Accredited ESG consultant**