Annual

Impact Report 2023

Regnan Global Equity Impact Solutions

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Regnan

Regnan Global Equity Impact Solutions Fund

The Regnan Global Equity Impact Solutions Fund invests in mission-driven businesses that provide solutions to the environmental and social challenges of our time. We aim to deliver market-beating, long-term returns, by identifying 'system changers' that innovate, disrupt and ultimately produce positive environmental, social and financial outcomes.

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Fund overview

- The fund aims to generate long-term outperformance by investing in the listed shares of solution-providing companies for the growing unmet sustainability needs of society and the environment, using the United Nations Sustainable Development Goals (SDGs) as an investment lens.
- The team has built a comprehensive proprietary framework that aims to identify these solution-providers: companies that provide solutions to the environmental and societal challenges facing the world.
- The portfolio is actively managed, high conviction, diversified, global multi-cap with very low portfolio turnover and an emphasis on engagement.
- Reference Index: MSCI ACWI Investable Market Index.
- The use of the Index does not limit the investment decisions of the fund manager, therefore the composition of the portfolio may differ significantly from those of the Index.
- Please click here* for further details on this fund's sustainable objective[1]

[1]Please refer to the Prospectus and KID/KIID of funds before making any investment decisions. *Not applicable to US investors.

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Letter to investors

This year was about two letters: “AI”.

2023 will perhaps be remembered as the year that generative AI burst onto the stage. Following a multiyear, multi-billion-dollar investment by Microsoft in ChatGPT owner OpenAI, announced in January 2023, the remainder of the year saw data centre infrastructure owners race to invest and upgrade cloud computational capability, to handle its huge processing requirements.

Generative AI is something we find incredibly exciting, both in terms of the opportunities it presents for investment, as well as in terms of how it has changed the way we work. We are already using it to become more efficient, and over the course of 2023, it has been encouraging to see how quick some of the portfolio companies have been to integrate this powerful tool. The following are just a few examples of innovations that have already been rolled-out by impact solution providers in the portfolio:

- Qiagen, one of the leading molecular diagnostics innovators, is using gen AI in its bioinformatics platform to help accelerate drug discovery, by identifying molecular targets
- Sartorius, a global leader in bioprocess solutions, is partnering with NVIDIA, to create organoids – 3D structures, created from stem cells – that could replace traditional animal models in drug discovery
- Agilent, the life science tools maker helping customers increase the efficiency of their research labs, has used generative AI to improve quality control and reduce production defects by 49%
- Ansys, one of the world’s leading software simulation innovator, has released SimAI, which can boost the efficiency of generative AI models by 10 to 100 times during the design phase
- PTC, the product design and life cycle management software company, has integrated generative AI into its Creo software, allowing users to specify performance and suggest alternative materials that improve efficiency
- Ecolab, a leader in hygiene and infection prevention solutions, has established an AI acceleration lab to provide faster and more effective recommendations to their clients to reduce energy and water consumption
- Xylem, the water treatment and technology innovator, has partnered with software company Esri, to build a model that predicts pipe leakage, which has reduced pipe failures four-fold.

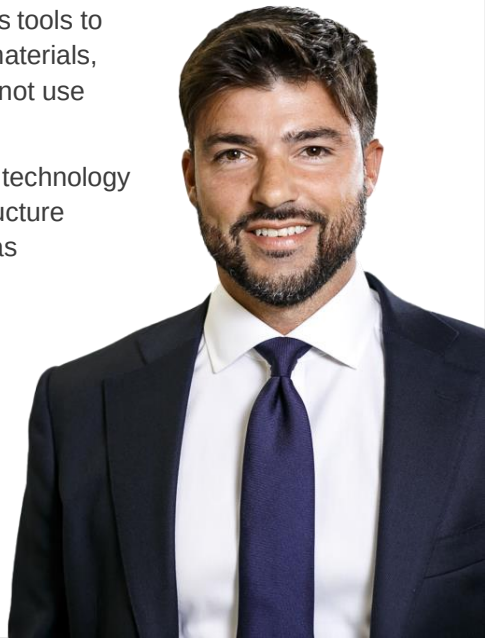
It is fair to say that generative AI will be a critical enabler and accelerator for some of the system change that the transition to a more sustainable world has already embarked on. And as with any new enabling technology, new challenges will also need to be addressed, as generative AI infrastructure is rolled out across the globe.

Perhaps the most obvious challenge at this stage is the increased energy and water demands that come with more powerful data centres that host generative AI Large Language Models. We spent the first half of 2023 trying to understand these challenges, and what solutions exist to try and mitigate them, as more extreme compute power is rapidly installed.

This pointed us towards two enabling solutions: gallium nitride-based power transformers in data centres, that could significantly reduce their energy consumption by reducing power loss by up to 80%[1] compared to silicon-based technology, and liquid-based data centre cooling technology, which can provide energy savings of up to 90%[2] compared to conventional air-cooling technologies.

The result of this work was a new investment in Germany-based Aixtron, which makes tools to manufacture power semiconductors using gallium nitride, amongst other compound materials, and Sweden-based Munters, which makes data centre liquid cooling systems that do not use water and offer class-leading efficiency.

We are undoubtedly still in the early stages of understanding what this transformative technology can help deliver in areas such as drug discovery, efficient product design and infrastructure resilience. We will continue to search for new investments that use innovations such as generative AI to drive solutions to environmental and social challenges, delivering *impact through innovation*.



Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.

[1]Texas Instruments - https://www.ti.com/technologies/gallium-nitride.html
[2]Sunbid - https://www.sunbirddcim.com/blog/data-center-liquid-cooling-101

Tim Crockford
Senior Fund Manager, Head of Equity Impact Solutions

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Portfolio Summary 2023*

The team added a handful of exciting companies to the portfolio in 2023, with Aixtron and Munters entering as holdings within the Energy Transition theme, specifically focused on mitigating the energy impact from generative AI, and Kardex added in Circular Economy, as a business enabling more efficient manufacturing with its innovative process automation tools.

2023 also saw the portfolio reinvest in Hannon Armstrong Sustainable Infrastructure (HASI), as concerns about the company's ability to scale were dispelled. Conversely, the two portfolio exits – Abcam and Evoqua – were the result of acquisitions; Abcam by Danaher and Evoqua by Xylem, which is also held in the portfolio.

The team anticipates five-to-ten-year investment horizons, and the volatility of markets often provides opportunities to enter new ideas at more attractive entry points than had been assumed during the due diligence process and similarly, should the value gap close for a particular holding, the team will divest regardless of how many years have lapsed since the original initiation.

*Period: January – December 2023

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Companies added to the portfolio

Buys

AIXTRON

HASI

kardex

Munters

Energy Transition | Energy Transition | Circular Economy | Energy Transition

Theory of change

Aixtron's deposition equipment is enabling the move towards next generation compound semiconductors including Gallium Nitride (GaN) and Silicon Carbide (SiC). Both materials allow for a significant reduction in conduction and switching losses, which in turn translates to more power-efficient transistors which deliver superior performance in terms of energy saving, less heat, lighter weight and lower system cost. For example, Navitas, a leading provider of GaN on silicon power semiconductors, estimates that every GaN-on-Si power chip saves 4kg of CO_2 emissions, and lowers lifetime CO_2 footprint of charging devices by 28%.

Hannon Armstrong Sustainable Infrastructure (HASI) is the first US-listed company whose business model is solely dedicated to financing climate solutions, ranging from behind-the-meter assets, such as energy efficiency improvements of buildings, to renewable energy, such as solar land, utility scale renewable projects, renewable natural gas and other emerging climate solutions technologies, playing a critical role in the increasing adoption of these technologies.

Kardex is a global leader in intralogistics solutions for automated storage, retrieval and material handling systems. Kardex intralogistic solutions improve the efficiency of logistics processes within manufacturing or distribution centres through automation and can drive an 80-85% reduction in space requirements which significantly improves the carbon footprint of operations.

Munters is the pioneer and market leader in desiccant dehumidification (c.50% market share), a key technology required for lithium-ion battery plants. Manufacturing of lithium-ion batteries is a highly sensitive process requiring strict temperature and dryness parameters (<1% relative humidity) to ensure safety, quality and production yield. Munters have also developed a patented technology for data centre cooling (SyCool) providing significant energy and water savings which is driving strong order intake and market share gains.

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.

Source: www.aixtron.com; www.hasi.com; www.kardex.com; www.munters.com

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Companies exited from the portfolio

Sells/Acquired

abcam

Health & Wellbeing

EVOQUA WATER TECHNOLOGIES

Water

Divestment Rationale

Abcam was acquired by Danaher in December 2023. The portfolio does not invest in Danaher, so the proceeds from the sale were reinvested across the existing holdings in the portfolio. Abcam had been held since the original inception of the fund in 2017, and the team are hopeful that under Danaher's ownership, the management can continue to drive innovation and enable the wave of new biotechnology drug discovery that is expected to unfold over the next decade.

Evoqua was acquired by Xylem in May 2023. We continue to hold Xylem, the combined company becomes the world's largest pure-play water technology company with an unmatched portfolio of innovative solutions and with significant potential for revenue synergies, given Evoqua's US service network and Xylem's international presence.

Source: www.homereit.com; www.siemensgamesa.com; www.procredit.com; www.hannonarmstrong.com

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Thematic recap – 2023 vs. 2022

The team's proprietary SDG Taxonomy has driven the creation of impact solution groups or themes which are collections of the investible solutions identified by the SDG Taxonomy. These are built from the bottom-up.

We do not explicitly target thematic exposures when constructing the portfolio.

At year-end the collective thematic exposure across the 8 themes was 80.2%. The number varies according to the individual portfolio holding weights. We calculate it by apportioning revenue and end-market exposure across the 8 themes and multiply by the security weight. We also apportion neutral and negative revenues where appropriate but recognise that the relationship between impact and corporate revenues can be ambiguous.

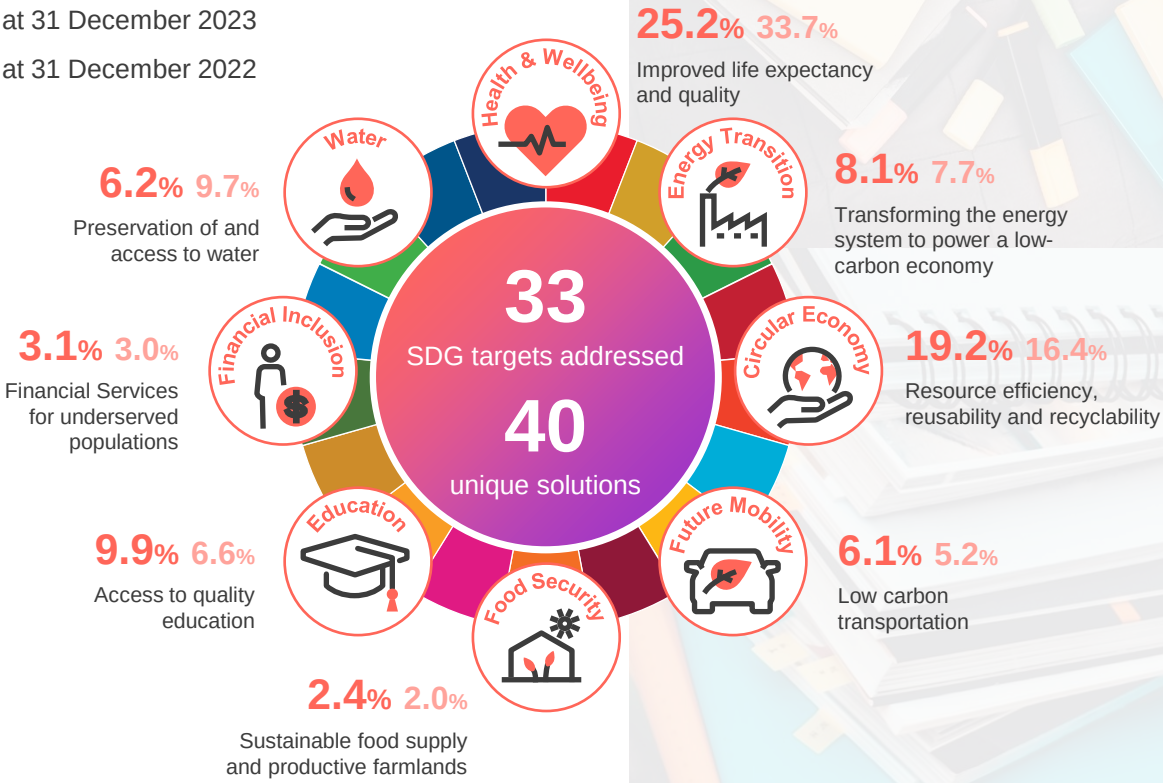
Over the year we increased exposure to names within Circular Economy and Education, while net exposure to Health & Wellbeing names were reduced.

Portfolio exposure by impact theme

31 December 2023 vs. 31 December 2022

As at 31 December 2023

As at 31 December 2022



25.2% 33.7%
Improved life expectancy and quality

8.1% 7.7%
Transforming the energy system to power a low-carbon economy

19.2% 16.4%
Resource efficiency, reusability and recyclability

6.1% 5.2%
Low carbon transportation

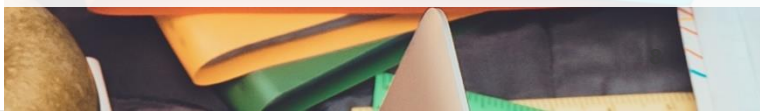
2.4% 2.0%
Sustainable food supply and productive farmlands

9.9% 6.6%
Access to quality education

3.1% 3.0%
Financial Services for underserved populations

6.2% 9.7%
Preservation of and access to water

Source: Regnan/JOHCM as at 31 December 2023. Note: Thematic exposure attribution to eight impact themes based on estimates of company revenues or other relevant metrics. Chart does not include the cash position, neutral impact (estimated where revenues not directly tied to any theme) and negative impact (estimated where revenues may be detrimental to UN Sustainable Development Goals (SDG).

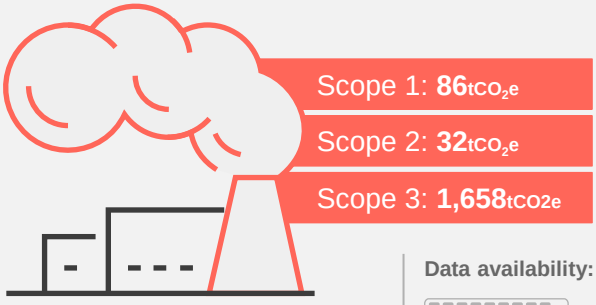


Regnan

Portfolio level metrics – Operational Impact Indicators

Any business has both positive and negative impacts. We have used the Operational Impact Indicators as a measure of the operational sustainability of the portfolio relating to environmental, social and governance matters. This is not an exhaustive list of indicators but provides a snapshot of the portfolio as at year end. As we engage with our portfolio companies for improved disclosure, we expect to see greater data availability.

GHG Emissions



Total emissions:
1,776 tCO_2e

Benchmark: 3,808tCO_2e

Data availability:
90.3%

Carbon Footprint

Total:
258
tCO_2e/m EUR (EV)

Benchmark: 552tCO2e

Data availability:
90.3%

Exposure to companies active in the fossil fuel sector

Total:
2.5%

Benchmark: 10.8%

Data availability:
98.8%

GHG emission intensity of investee companies

Total:
647
tCO_2e/m EUR (EV)

Benchmark: 1,357tCO_2e

Data availability:
90.2%

Non-renewable energy consumption

Total:
0.7%

Benchmark: 1.1%

Data availability:
43.2%

Non-renewable energy production

Total:
0.0%

Benchmark: 0.0%

Data availability:
54.7%

Energy use from coal, oil, nuclear, or unclear sources

Total:
55.8%

Benchmark: 55.7%

Data availability:
55.5%

Activities negatively affecting biodiversity sensitive areas

Total:
0.0%

Benchmark: 0.1%

Data availability:
98.8%

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: ISS. Data as at 31 December 2023.

Regnan

Portfolio level metrics – Operational Impact Indicators

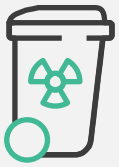
Emissions to Water

Total:
6.6
tonnes/mEUR

Benchmark:
30.82tonnes/mEUR

Data availability:
0.8%

Hazardous Waste Ratio



Total:
483
tonnes/mEUR

Benchmark:
85,560tonnes/mEUR

Data availability:
18.4%

Violations of UN Global Compact (UNGC) principles & Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises

Total:
0.0%

Benchmark: 1.8%

Data availability:
90.5%

Lack of processes and compliance with UN Global Compact principles and OECD Guidelines for Multinational Enterprises

Total:
19.1%

Benchmark: 34.9%

Data availability:
86.5%

Exposure to controversial weapons
(anti-personnel mines, cluster munitions, chemical weapons and biological weapons)

Total:
0.0%

Benchmark: 0.1%

Data availability:
98.8%

Board gender diversity (Ratio)

Total:
0.51

Benchmark: 0.52

Data availability:
98.8%

Companies without workplace accident prevention policies

Total:
8.0%

Benchmark: 9.8%

Data availability:
86.5%

Companies without water management policies

Total:
27.4%

Benchmark: 17.6%

Data availability:
57.5%

Companies without carbon emission reduction initiatives

Total:
45.1%

Benchmark: 49.5%

Data availability:
90.3%

Lack of a supplier code of conduct

Total:
19.7%

Benchmark: 15.8%

Data availability:
86.5%

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: ISS. Data as at 31 December 2023.

Engagement

Regnan was established to investigate and address environmental, social and corporate governance (ESG) related sources of risk and value for long-term shareholders.

The Regnan Insight and Advisory Centre engage and advocate with listed companies on a range of issues, most typically categorised as environmental, social and governance or ESG.

Joining Regnan allows the investment team to draw on two decades of experience…

Our overarching aim when engaging with portfolio companies is to improve their net impact. Engagement activities thus aim to both reduce negative impacts, as well as amplifying positive impacts of portfolio companies. As such, the investment team's engagement programme is an integral part of the investment process and directly linked to the output generated by other stages of the process.

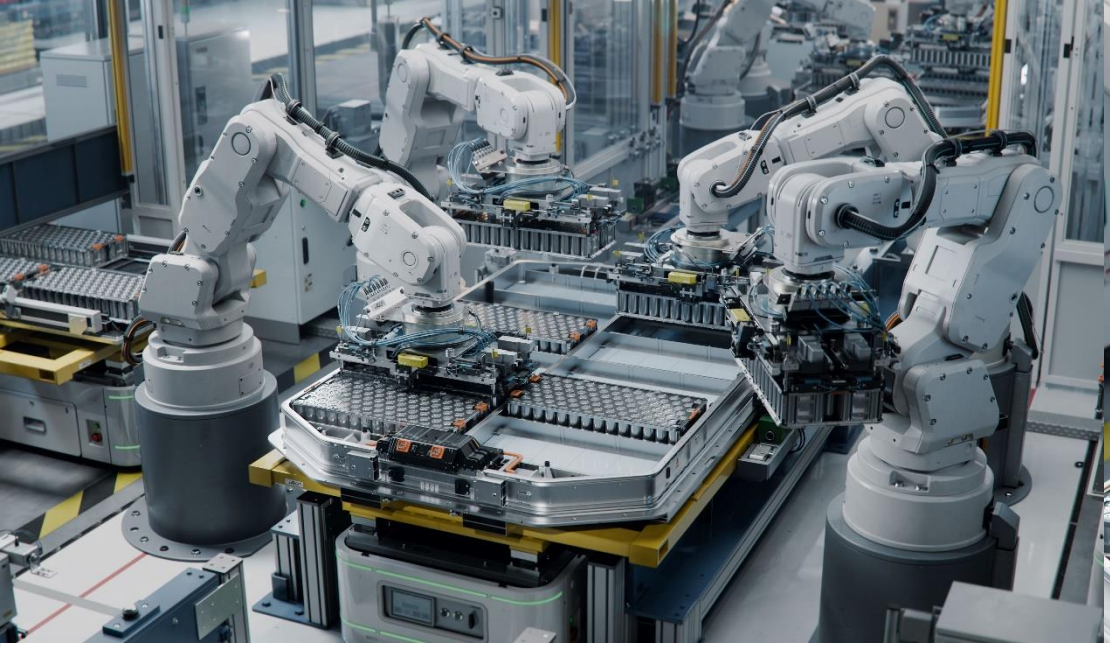
The team will seek to determine willingness to engage prior to investment and divest if a company is no longer willing to engage.

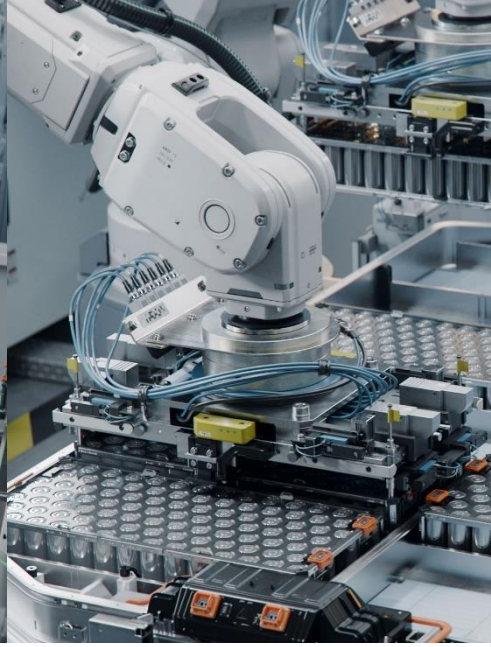
Engagement is long-term and outcomes-focused, and thus guided by engagement objectives, which are formulated on a company-by-company basis. A company's materially negative impacts, as identified in previous stages, are assessed via team's 'engage-ability' assessment. This assessment recognises that not all negative impacts are not necessarily engageable, and that engagement on some objectives is likely to generate more positive impact than engaging on others.

After an engagement objective has been set, progress towards this engagement objective is then tracked via three 'checkpoints', and where possible, quantitative metrics. However, engagement intensity will differ between portfolio companies, to reflect differing materiality. Furthermore, the completion of engagement objectives is expected to take multiple years as it takes time to create change.

Any engagement work is led by the investment team but also supported and enhanced by the research capabilities of the Regnan Insight and Advisory Centre, which provides long-standing and in-depth experience in analysing sustainability factors. In particular, the Regnan Insight and Advisory Centre team focuses on driving positive change throughout the solution value chain.

The team's long-term, constructive approach to engagement is welcomed by most portfolio companies. In other words, engagement often acts as a positive feedback loop between the investment team and portfolio companies. Companies who provide positive impact solutions are generally interested in improving the net impact their business has on stakeholders.





How we engage

We engage for protection and enhancement of portfolio and stakeholder value using the following engagement process:

Identification and materiality assessment of negative impacts

Identification and in-depth analysis of negative impacts of each stock, prior to investment

Engageability assessment

Material negative impacts are assessed for engagement potential

Four stages: Opportunity cost, Know-how, Feasibility and Additionality

SMART engagement objectives

Objectives set at the stock level

Objectives are SMART (specific, measurable, attainable, realistic and, time-bound)

Constructive engagement

Targeted, outcomes-focused and recognition of unique value drivers for that business supports constructive engagement

Progress tracking

Progress is always tracked through via engagement 'checkpoints'

Wherever possible, progress is also assessed via quantifiable, periodically-reported negative impact metrics

2023 Portfolio engagements by numbers

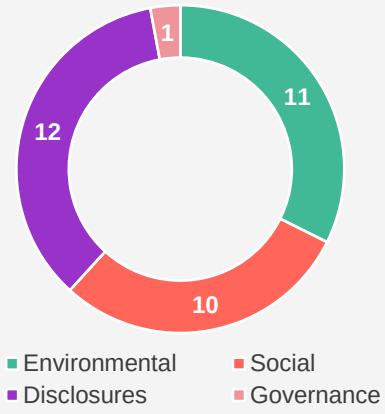
38

Interactions
with Companies on Engagement Objectives

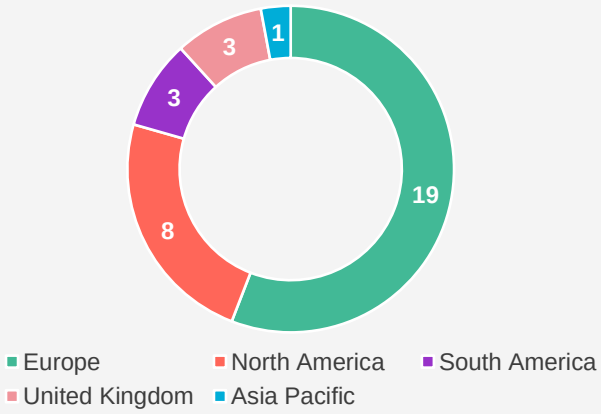
34

Engagement
Objectives Progressed

Engagement Objectives Progressed (E,S,D,G)



Engagement Objectives Progressed by Geography



Portfolio Engagements

Better disclosure of impact metrics remained a key focus of our engagements. This can be challenging, as it requires good data collection by companies, and the use of sound estimation models when using metrics such as avoided GHG emissions that requires the selection of an adequate baseline and other assumptions.

Within environmental engagements, we continued our work diving into companies' decarbonisation strategies, notably pushing for more detailed articulation of how companies are planning to reach their targets in the mid and long term, and better disclosure of scope 3 emissions and how to reduce them. We also engaged on the integration of sustainability factors into R&D processes, for instance through the adoption of sustainability checklists or product life cycle analyses within R&D departments, which we will continue to focus on as a key way companies can influence the future trajectory of their product impacts. We also conducted engagements on biodiversity, an issue most companies are in the early stages of developing coherent strategies and reporting, and built on The Regnan Insight and Advisory Centre's thematic research report "Beyond Biodiversity" to push this issue higher up on the agenda.

Within social engagements, we continued to focus on diversity, equity and inclusion, for instance through our engagement with Afya, a Brazilian education company, on how its medical courses can benefit students from disadvantaged backgrounds. We also continued our engagements on health and safety, encouraging the adoption of clear targets for reductions in accident rates.

Source: Regnan as at 31 December 2023.

CASE STUDY

Novo Nordisk is a global leader in providing treatment for diabetes, obesity and rare diseases. The company has pioneered the development of GLP-1 therapies for the treatment and prevention of diabetes, obesity, and potential new indications such as cardiovascular disease.

Issue

Obesity Care is a relatively new market, which opens up reputational and operational risks in executing Novo Nordisk's growth strategy. Off-label prescriptions by doctors of diabetes drug Ozempic in place of Wegovy to people living with obesity has already been an issue, creating the potential to limit diabetes patients access to this critical medication. Promoting the health benefits of obesity drugs through sponsored research and training could increase the risk of undue influence on medical practices. Novo Nordisk needs to ensure it builds its obesity business with the highest ethical standards in its interactions with stakeholders, notably to reduce the risk of off-label administration..

Objective of Engagement

The engagement objective focused on oversight of marketing activities, as the company accelerates the growth of its Obesity Care segment and actively participates in building the market by expanding access to therapies.

Outcome

The company has been open and transparent in discussing this issue with us and announced an enhanced ethics and compliance approach.

- The company provided detailed explanations as to how they are approaching marketing, which showed a commitment to high ethical standards, notably the strict separation of the sales force diabetes and obesity care.
- At its March 2024 Capital Markets Day, Novo Nordisk's CEO publicly committed to an enhanced ethics and compliance approach, including reinforcing communications around product labels with healthcare professionals, enhancing training around engagements with stakeholders such as healthcare professionals, and dedicated resources for obesity ethics, level and compliance. The company explicitly mentioned shareholder engagement as a driving factor leading to those changes.

Action

We held several virtual meetings with company representatives and sent a letter to the CEO as part of a collaborative engagement effort.

- We raised our concerns in meetings with the company's representatives - VP Sustainability & Public Affairs in March 2023 and June 2023.
- We sent a letter to the CEO with other investors to lay out our concerns and request a formal follow up meeting in July 2023.
- We held a collaborative engagement meeting with the company in November 2023.
- We reiterated our points in the company's stakeholder perception study in December 2023.

Source: www.novonordisk.com

CASE STUDY

Lenzing
Innovative by nature

Lenzing produces wood-based viscose fibres, modal fibres, lyocell fibres and filament yarn, which are used in the textile industry for clothing, home textiles, and technical textiles, as well as in the nonwovens industry.

Issue

Lenzing produces wood-based fibres that offer better environmental performance compared to alternatives. However, its operations are energy and carbon intensive, making it a significant greenhouse gas emitter within the portfolio in 2023. Additionally, the processing of wood products into fibres exposes Lenzing to biodiversity risks.

Objective of Engagement

The engagement focused on accelerating the decarbonisation plan, enhancing disclosure by providing company-wide impact metrics, and the establishment of a clear biodiversity strategy.

Outcome

Lenzing has ramped up its decarbonisation targets.

- Lenzing has adopted a more ambitious decarbonisation target, aiming for 1,100,000 tons of CO_2 emissions to be reduced by 2030 (instead of the previously targeted 700,000 tons).
- The company is reluctant to publish product impact data due to methodological uncertainties and competitive risks.
- The company is continuing to work on biodiversity frameworks and quantitative measures but has not yet formally adopted a framework.

Action

We held several virtual meetings with company representatives, including the head of sustainability, to ensure their decarbonisation plan is robust.

- We continued to ask for more disclosure on plans to reduce their dependence on fossil fuels in their operations, as well as improve energy efficiency, notably in industrial heat.
- We asked for better disclosure of product impacts in terms of avoided emissions and avoided water use, how Lenzing can best comply with regulation on green claims, and how they can accelerate the growth of Refibra, a fibre with high recycled content.
- We explored how Lenzing could step up its approach to managing biodiversity risks by adopting a standard such as the Taskforce for Nature-related Financial Disclosures (TNFD) or Science-Based Targets for Nature (SBTN), as well as report quantitative data.

Source: www.lenzing.com

Voting activity

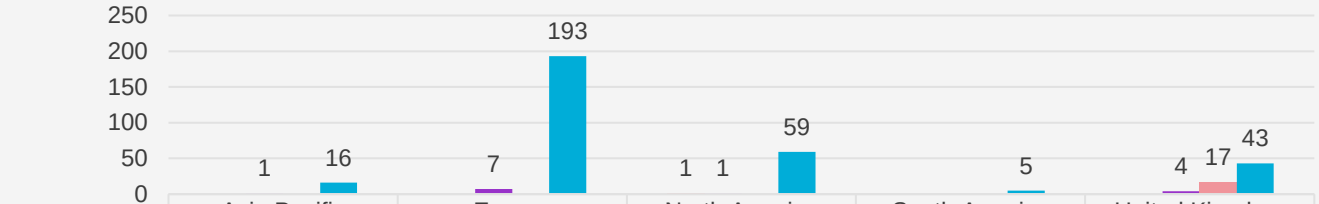
29
Total number of **Meetings**

368
Total number of **Proposals**

32
Total number of **Significant Votes**

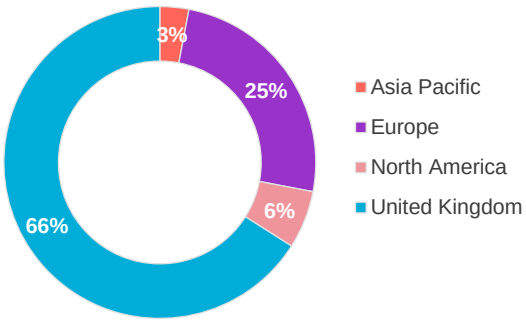
8.7%
Percentage of **Significant Votes**

Total number of votes that were For, Against, Withheld or Abstained



	Asia Pacific	Europe	North America	South America	United Kingdom
Abstain			1		
Against	1	7	1		4
Do Not Vote					17
For	16	193	59	5	43

Significant votes by region

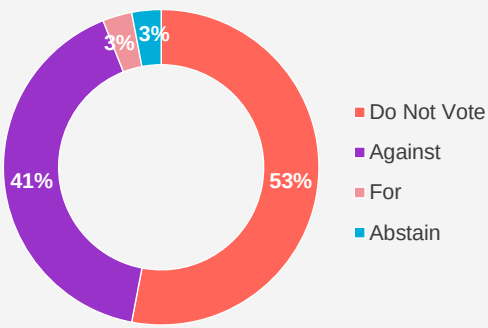


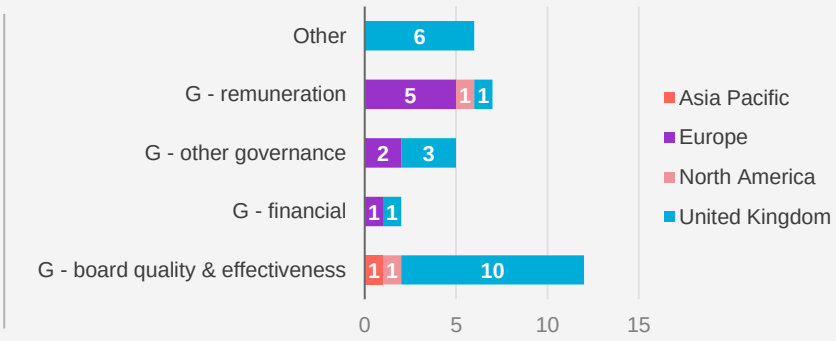
In reporting our voting activity to our clients, we believe the focus should be on "significant votes" as required by the Shareholders Rights Directive under UK law. While the directive does not define "significant" we define this as votes where:

1. ISS has recommended voting AGAINST management, OR
2. The investment team has voted AGAINST management, AND
3. ALL shareholder resolutions, AND
4. ALL withheld votes AND
5. ALL Abstained votes.

Investment teams may also add any votes they deem significant.

Significant votes that were for, against, withheld or abstained





Source: Regnan. Note: 'G' abbreviated for 'governance'. J O Hambro Capital Management Stewardship Policy: https://www.johcm.com/uk/about-us/557/stewardship-policy

Regnan

Company specific impact metrics

Regnan

Company specific impact metrics

Below is a table of each portfolio company's positive (green) and negative (red) impact metrics tracked over time. Where negative metrics have been identified, these represent a specific engagement target, while those in green relate to positive solution impacts. The team's aim is to both reduce negative impacts, as well as amplify positive impacts of portfolio companies; this is an important part of our investor impact.

Summary of Value		Year-ended						
Company	**Name**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Afya[2]	Free consultations offered by Afya students (#)	-	-	270,000	427,184	341,286	471,107	586,611
	Aggregated number of physicians graduated (#)	-	-	8,306	12,691	17,000	18,104	20,960
	Student enrollment: Total medical student base (#)	-	4,724	6,597	11,030	16,017	17,968	21,446
	Total approved medical seats (#)	-	9,17	1,572	2,143	2,731	3,163	3,203
	Greenhouse gas emissions (mt tonnes)	-	-	-	1,664	4,048	5,459	10,583
Agilent	R&D expenditure ($m)	341	387	404	495	441	467	481
Aixtron	R&D expenditure ($m)	65.6	47.5	55.0	58.4	56.8	57.7	87.7
Alfen	CO_2e emissions avoided (m tonnes)	-	-	-	1.4	2.2	3.8	6.0
	Annual charge points produced (#)	-	12,200	25,800	55,000	114,800	265,600	150,800
	Annual substations produced (#)	-	1,800	2,930	3,320	3,240	3,065	3,143
	Potential households supplied with renewable energy (#)	-	-	-	142,000	206,000	283,000	374,000
	Lost Time Injury Frequency Rate/LTIFR (#)	-	4.5	5.5	2.7	2.5	0.8	2.4
Ansys	R&D expenditure ($m)	202.7	233.8	298.2	355.0	405.0	434.0	495.0
	Student free version downloads (#)	260,000	260,000	290,000	500,000	550,000	520,000	551,000
	GHG emissions scope 1 and 2 (mt tonnes)	-	-	16,531	16,634	16,287	13,359	12,759
ATS	Life science backlog (CA$m)	-	-	-	770	805	1,113	871
	Transportation backlog (CA$m)	-	-	-	385	272	293	425
Autolus	R&D expenditure ($m)	16.0	48.3	105.4	134.9	134.8	117.4*	130.5
Bank Rakyat	BRILink agents (#)	279,750	401,550	422,160	504,233	503,031	627,012	740,818
	Micro Loans Outstanding (IDRt)	239.5	274.3	307.7	351.3	397.0	503.0	504
	Small and Medium Loans Outstanding (IDRt)	173.8	201.3	220.2	217.2	224.9	237.8	260
	Coal Fired Powerplant Loans outstanding (% loan book)	-	3.8	3.9	2.9	2.5	2.1	2.3
	Palm Oil Loans outstanding (% loan book)	-	6.7	6.3	6.1	5.8	6.3	7.2
Befesa	Recovered materials: waelz oxide and aluminium (mt tonnes)	-	600,000	1,175,000	1,278,000	1,442,000	1,649,000	1,741,000
	Recycled residues (mt tonnes)	1,170,900	1,234,700	1,493,000	1,477,000	1,643,000	1,845,000	1,894,000
	GHG emissions (mt tonnes)	609,000	664,000	655,000	650,000	797,000	1,037,000	1,129,000
	Lost Time Injury Rate/LTIR (#)	3.0	3.2	2.0	1.3	0.8	0.6	0.45
Carl Zeiss Meditec	R&D expenditure (€m)	145.8	159.6	173.3	218.8	232.1	291.4	349.0
	Carbon dioxide emissions (mt tonnes)	206,466	213,308	208,302	124,783	37,863	62,255	57,997
	Carbon intensity (mt tonnes/€m)	73	71	47	35	9	13	10
Duerr	EV order intake (€m)	-	278	400	650	776.4	1,100	1,100
	R&D expenditure (€m)	-	121	111	108	124	137	151
	Work related accidents per 1 million hours worked (#)	7.0	7.2	7.0	4.7	5.3	8.2	6
	Total scope 1 and 2 emissions (mt tonnes)	62,590	61,224	56,683	49,359	48,372	34,929*	25,269

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
*Metric restated. Afya methodology changed.

Regnan

Company specific impact metrics

Summary of Value		Year-ended						
Company	**Name**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Ecolab	GHG emissions avoided (mt tonnes)	-	1,088,435	1,500,000	3,500,000	3,600,000	3,600,000	3,800,000
	Water withdrawals avoided (billion gallons)	-	855*	867*	787*	814*	829*	855
	GHG emissions scope 1 and 2 (mt tonnes)	-	460,055	469,175	335,126	330,999	386,076	382,211
	Total hazardous waste (mt tonnes)	-	-	25.204	22.861	28.028	43,881	71,949
	Total water used (m^3)	-	-	2,182	1,902	1,847	1,857	2,446
Evoqua[1]	Outsourced water backlog ($m)	-	607.4	179.3	165.6	275.6	377.1	-
	R&D expenditure ($m)	-	15.9	15.3	13.2	13.4	15.4	-
Hannon Armstrong	Carbon reduction (million mt tonnes)	-	496,000	384,000	2,000,000	800,000	600,000	760,000
	CarbonCount (mt tonnes of CO_2 offset/$1,000 invested)	0.6	0.4	0.3	1.0	0.5	0.4	0.3
	Water savings (billion gallons)	0.6	0.3	0.4	0.6	0.2	2.0	0.7
	WaterCount (mt gallons of water saved/$1,000 invested)	-	-	293	303	140	1,180	300
	Carbon reduction (million mt tonnes)	0.5	0.5	0.4	2.0	1.0	0.6	0.8
	Gender board diversity (%)	-	29	29	33	33	33	36
	Racial/ethnic minority board diversity (%)	-	-	-	11	11	22	18
Hoffmann Green Cement	Avoided GHG emissions (mt tonnes)	-	-	-	711	4,620	1,789	8,486
	Avoided limestone extraction (mt tonnes)	-	-	-	1,435	8,187	9,816	17,289
Horiba	R&D expenditure (JPYm)	13,911	15,183	16,254	15,594	16,710	18,585	20,436
Ilika	R&D expenditure (£m)	2.1	2.0	2.1	2.3	2.3	4.8	4.1
Kardex	R&D expenditure (CHFm)	10.3	11.4	11.3	11.0	12.0	12.7	18
Lenzing	R&D expenditure (€m)	-	27.7	24.6	16.2	24.0	29.2	69.1
	GHG emissions scope 1 and 2 (mt tonnes)	-	1,750,000	1,640,000	1,380,000	1,610,000	1,270,000	1,340,000
Lonza	Commercial molecules (#)	-	290	310	245	245	190	195
	Pre-clinical and clinical molecules (#)	-	575	730	820	780	825	880
	Non-recycled or treated waste intensity (mt tonnes/CHFm)	-	24.0	26.4	27.9	10.0	9.9	10
	Water intensity (million m^3/CHF)	1,720	1,422	1,326	1,111	6,831	500	458
Munters	R&D expenditure (SEKm)	167	217	197	186	162	236	360
	Total case incident rate	-	-	-	-	1.7	1.8	1.2
Novo Nordisk	Patients reached (#m)	-	29.2	30.0	32.8	34.6	36.3	40.5
	Patients reached with access programmes (#m)	-	0.3	2.9	3.2	1.7	1.8	2.4
	Product recalls (#)	-	3.0	4.0	0.0	1.0	3.0	2.0
Orsted	Avoided carbon emissions (mt tonnes)	6,700,000	8,100,000	11,300,000	13,100,000	15,100,000	18,200,000	10,218,000[2]
	Installed renewable generation (MW)	16,700	17,200	20,118	25,424	29,050	35,641.0	35,641
	GHG emissions scope 1 and 2 (mt tonnes)	4,000,000	3,528,000	1,850,000	1,853,000	2,142,000	2,511,000	1,586,000
PTC	R&D expenditure ($m)	236.0	250.0	246.9	256.6	299.9	338.8	394.4
Qiagen	R&D expenditure (€m)	166.9*	190.9*	176.3*	170.0	224.5	181.0	192.2
Sartorius	Patents and trademarks (#)	197.0	154.0	222.0	339.0	234.0	353.0	435.0
Stevanato	R&D expenditure (€m)	-	-	-	17.4	29.6	34.4	35.7

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
*Metric restated. [1]Acquired and no longer reported. [2]Methodology changed.

Regnan

Company specific impact metrics

Summary of Value		Year-ended						
Company	**Name**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Syncona	Cumulative capital invested in life science portfolio companies (£m)	116	235	383	590	780	1,000	1,200
	Portfolio companies (#)	7	8	10	9	11	13	13
Tomra	RVMs installed (#)	82,000	83,100	77,500	78,000	81,000	82,000	85,000
	Sorting machines installed (#)	13,470	16,323	17,578	19,468	21,430	22,800	22,800
	Carbon dioxide avoidance through products sold (mt tonnes)	27,520,000	27,800,000	17,010,000	18,040,000	19,440,000	21,140,000	2,285,400
	Reportable injuries (#)	102	113	142	71	92	147	105
Umicore	R&D expenditure (€m)	175	196	211	223	245	315	281
	Capital expenditure (€m)	365	478	553	403	389	470	857
	Scope 1 CO_2e emissions (mt tonnes)	364,139	417,140	389,101	330,619	372,699	346,439	317,849
	Scope 2 CO_2e emissions – Market based (mt tonnes)	269,565	350,562	402,795	401,926	473,738	338,554	314,093
Valeo	Share of innovative products in order intake (%)	50	53	47	56	45	62	73
	Share of products contributing to the reduction of CO_2 (%)	50	50	57	60	60	60	57
	GHG emissions scope 1 and 2 (mt tonnes)	-	1,045,000	1,162,000	631,000	775,000	708,000	708,600
	Scope 3 downstream emissions product use (mt tonnes)	108,000,000	99,574,000	39,000,000	30,800,000	36,845,00	35,814,000	36,200,000
Xylem	Avoided emissions from product use (mt tonnes)	-	-	300,000	700,000	730,000	2,800,000*	3,950,000
	Non-revenue water reduced (m^3)	-	0.1*	0.1	0.5	0.4	0.5	0.8
	Water treated for reuse (m^3)	-	0.4*	0.4	4.3	1.1	3.1	3
	GHG emissions scope 1 and 2 (mt tonnes)	97,733	102,227	92,598	88,990	92,276	85,090	128,930
YDUQS	Distance learning centres (#)	394	607	933	1,510	2,030	2,506	2,507
	Total student base (#)	515,400	517,768	569,747	762,645	1,243,861	1,194,900	1,308,000
	Medical student base (#)	3,300	3,570	4,028	5,378	6,463	7,500	8,700

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
*Metric restated.

Theory of change

Afya[2] is the leading Brazilian medical education player in the provision of undergraduate medical courses (c10% market share). Brazil has amongst the lowest level of medical density at (2.1 physicians per 1000 inhabitants, which reduces to 1.3 when urbanised, wealthier cities are excluded, versus an OECD average of 3.4). While the population of Brazil is rapidly ageing (60+ population is expected to be 18% of the population vs 13% in 2018) the pressure on medical services will only increase. Afya is helping to address this unmet need through its plans to grow in this space with the addition of new medical seats, supported by the governments Mais Medicos program. Applicants per seat are at 5x and occupancy rates in medical schools are therefore at or close to 100%.

Pathway of change

INPUT

- Total approved medical seats (#)
- Investment into new medical seats ($)
- Teachers employed (#)
- High quality curriculum developed

OUTPUT

- Student enrolment: Total medical student base (#)
- Student enrolment: Total non-medical student base (#)

OUTCOME

- Number of physicians graduated in Afya's campuses (#)
- Number of free consultations offered by Afya students (#)

IMPACT

- Improved access to healthcare services and physicians
- Development of Brazil's human capital and social mobility

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Free consultations offered by Afya students (#)	-	-	270,000	427,184	341,286	471,107	586,611
Aggregated number of physicians graduated (#)	-	-	8,306	12,691	17,000	18,104	20,960
Student enrollment: Total medical student base (#)	-	4,724	6,597	11,030	16,017	17,968	21,446
Total approved medical seats (#)	-	9,17	1,572	2,143	2,731	3,163	3,203
Greenhouse gas emissions (mt tonnes)	-	-	-	1,664	4,048	5,459	10,583

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.afya.com.br. [2]Methodology changed.

Agilent Technologies

Theory of change

Agilent transitioned from simply selling instruments and consumables, to becoming a provider of integrated, interconnected solutions which it provides via Agilent Cross Labs (ACG). ACG enables laboratories to focus on what they do best: delivering value-additive outcomes, while ACG provides an optimal laboratory set up. ACG serves laboratories in various different industry verticals, from pathology, to food testing, to operate at peak efficiency and thus maximise clinical value per dollar spent.

Pathway of change

INPUT

- R&D expenditure ($)
- Employees (#)
- Capital expenditure ($)

OUTPUT

- Connect rate of Agilent's installed base (%)
- Oligonucleotide APIs
- Live cell analysis product portfolio

OUTCOME

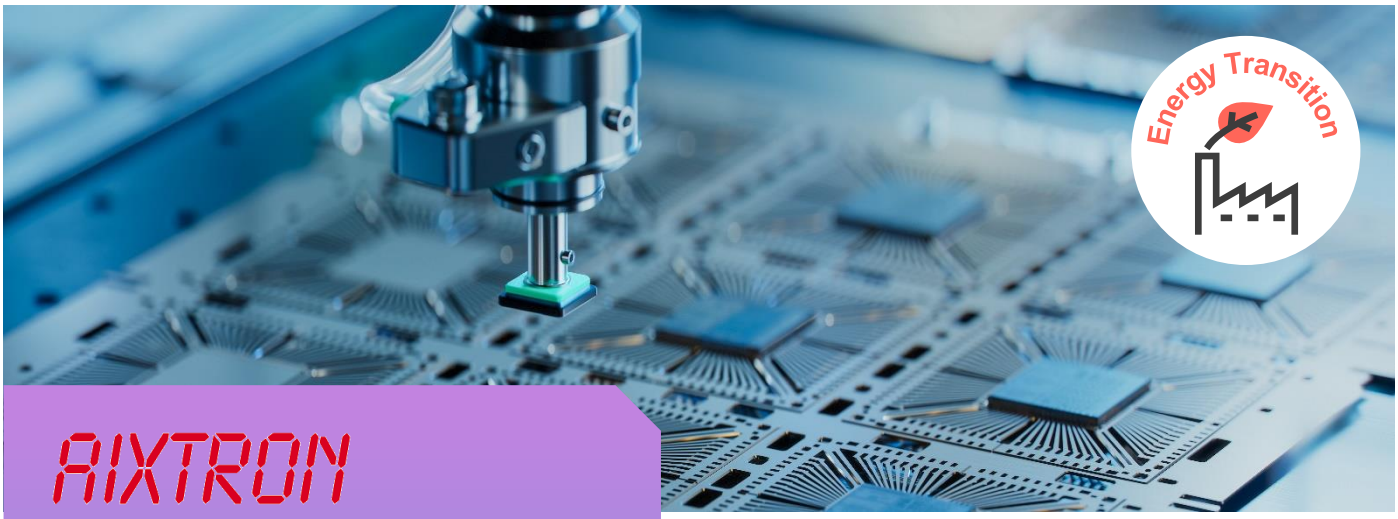
- Improved productivity of laboratories, allowing for the maximisation of clinical outcomes per dollar spent (#/$)
- Live cell analysis workflows facilitate the commercialisation of cell and gene therapies
- Oligonucleotides act as key enablers in molecular biology and synthetic biology

IMPACT

- Maximisation of dollar per clinical outcome enables a more efficient use of funds and time, thereby improving healthcare outcomes
- Live cell analysis and oilgonucleotide synthesis allow for the treatment of previously untreatable diseases, used in a broad range of treatment areas, from oncology to infectious diseases

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure ($m)	341	387	404	495	441	467	481

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.agilent.com.



AIXTRON

Theory of change

Aixtron's deposition equipment is enabling the move towards next generation compound semiconductors including Gallium Nitride (GaN) and Silicon Carbide (SiC). Both materials allow for a significant reduction in conduction and switching losses, which in turn translates to more power-efficient transistors which deliver superior performance in terms of energy saving, less heat, lighter weight and lower system cost. For example, Navitas, a leading provider of GaN on silicon power semiconductors, estimates that every GaN-on-Si power chip saves 4kg of CO2 emissions, and lowers lifetime CO2 footprint of charging devices by 28%.

Pathway of change

INPUT

- R&D expenditure (EUR)
- Employees (#)

OUTPUT

- MOCVD equipment (#)

OUTCOME

- Efficient production of Silicon Carbide and Gallium Nitride semiconductor chips.
- CO2 emissions avoided (t)

IMPACT

- Improved energy efficiency of high power electrical devices
- Lower data centre cooling costs
- Extended range of electric vehicles

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure ($m)	65.6	47.5	55.0	58.4	56.8	57.7	87.7

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.aixtron.com.

ALFEN
POWER TO ADAPT

Theory of change

Alfen supports energy transition through supplying secondary substations to grid operators to upgrade the existing grid infrastructure, moving towards development of smart grids, which are critical given the rise of decentralised renewable energy. Alfen is also building out EV charging infrastructure, directly through AC charging point solutions and indirectly by providing DC fast charging stations their substation and energy storage solutions. Through the provision of energy storage solutions, Alfen also helps address the significant issue of intermittency that comes with renewable energy sources.

Pathway of change

INPUT

- R&D expenditure (EUR)
- Capex (EUR)

OUTPUT

- EV charge points delivered (#)
- Secondary substations delivered (#)
- Energy storage solutions delivered (MW)

OUTCOME

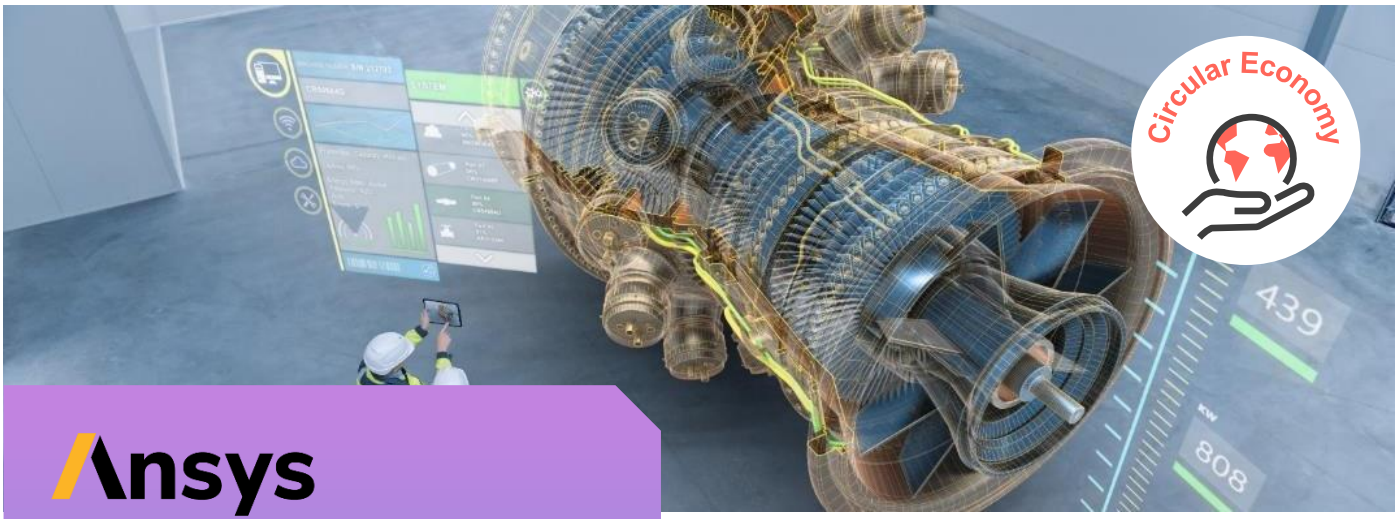
- CO_2e emissions avoided (mt) by Alfen charge points that have been powering electric vehicles and avoiding harmful emissions
- Potential households supplied with renewable energy from solar PV parks that were grid connected through Alfen's smart grid solutions (#)

IMPACT

- Alfen solutions support the energy transition through upgrading existing grid infrastructure, providing EV charging points and energy storage solutions.

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
CO_2e emissions avoided (m tonnes)	-	-	-	1.4	2.2	3.8	6.0
Annual charge points produced (#)	-	12,200	25,800	55,000	114,800	265,600	150,800
Annual substations produced (#)	-	1,800	2,930	3,320	3,240	3,065	3,143
Potential households supplied with renewable energy (#)	-	-	-	142,000	206,000	283,000	374,000
Lost Time Injury Frequency Rate/LTIFR (#)	-	4.5	5.5	2.7	2.5	0.8	2.4

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.alfen.com.



Ansys

Theory of change

Making economic activities more sustainable requires pervasive change throughout all manufacturing processes, starting with the design and testing of products. As a global leader in simulation solutions, ANSYS enables faster R&D, makes manufacturing more efficient and less wasteful, thereby reducing costs, as well as permitting environmentally-friendly specifications to be embedded at the design phase of product. Its simulation software is notably used in developing impact solutions such as EVs and AVs, renewable energy, and introducing environmental data into the choice of materials.

Pathway of change

INPUT

- R&D expenditure ($)
- Employees (#)
- Acquisitions in key growth areas ($)

OUTPUT

- Simulation solutions across physics (#)
- Real-time modelling simulations (#)
- Free student Ansys version downloaded (#)

OUTCOME

- Reduced development time for new products
- Lower use of resources for prototypes
- Cost savings due to lower R&D costs

IMPACT

- Increased innovation through faster and better R&D
- Faster development of EVs and AVs
- Lower environmental footprint of manufacturing

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure ($m)	202.7	233.8	298.2	355.0	405.0	434.0	495.0
Student free version downloads (#)	260,000	260,000	290,000	500,000	550,000	520,000	551,000
GHG emissions scope 1 and 2 (mt tonnes)	-	-	16,531	16,634	16,287	13,359	12,759

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.ansys.com.

ATS™

Theory of change

ATS Automation (ATS) provides factory automation solutions that contribute to higher resource efficiency across manufacturing processes, reducing the energy and material intensity of goods. In life sciences and food, those systems increase the quality and safety of medical devices, drugs and food produce, with a focus on aseptic solutions and reducing the risk of product safety issues. In transportation, ATS's focus on battery manufacturing contributes to the faster ramp-up of electric vehicles (EVs), which have at least 20% lower emissions than ICEs. Their process reduces costs, making EVs more affordable, which ultimately drives higher adoption.

Pathway of change

INPUT

- R&D spend
- Acquisition of innovative businesses
- Launch of new automation solutions

OUTPUT

- Sales of automation products
- Increased adoption rate of automation in manufacturing across industries
- Patents

OUTCOME

- Higher productivity
- Lower GHG emissions per production output
- Lower energy use per production output
- Lower rate of product defects and recalls

IMPACT

- Lower GHG emissions footprint of manufacturing activities
- Lower energy footprint of manufacturing activities

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Life science backlog (CA$m)	-	-	-	770	805	1,113	871
Transportation backlog (CA$m)	-	-	-	385	272	293	425

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.atsautomation.com.

Autolus

Theory of change

Autolus CAR T-cell therapies have been shown to be effective in some hematological cancers and may have wide application as a cancer treatment with the potential to provide a cure in some patients. Despite impressive remission rates, CAR T-cell therapies have safety, durability, and affordability issues that Autolus seek to address. In particular, Autolus modular approach to programming should allow them to bring down the cost of CAR T-cell therapies, if successfully commercialised, which are currently prohibitively expensive. We believe that the commercilisation of Autolus CAR T-cell therapies will broaden access and thereby reduce deaths caused by cancer.

Pathway of change

INPUT

- R&D expenditure ($)

OUTPUT

- Broad technology platform of next generation technologies which enable modular, scalable programming and manufacturing of CAR-T's

OUTCOME

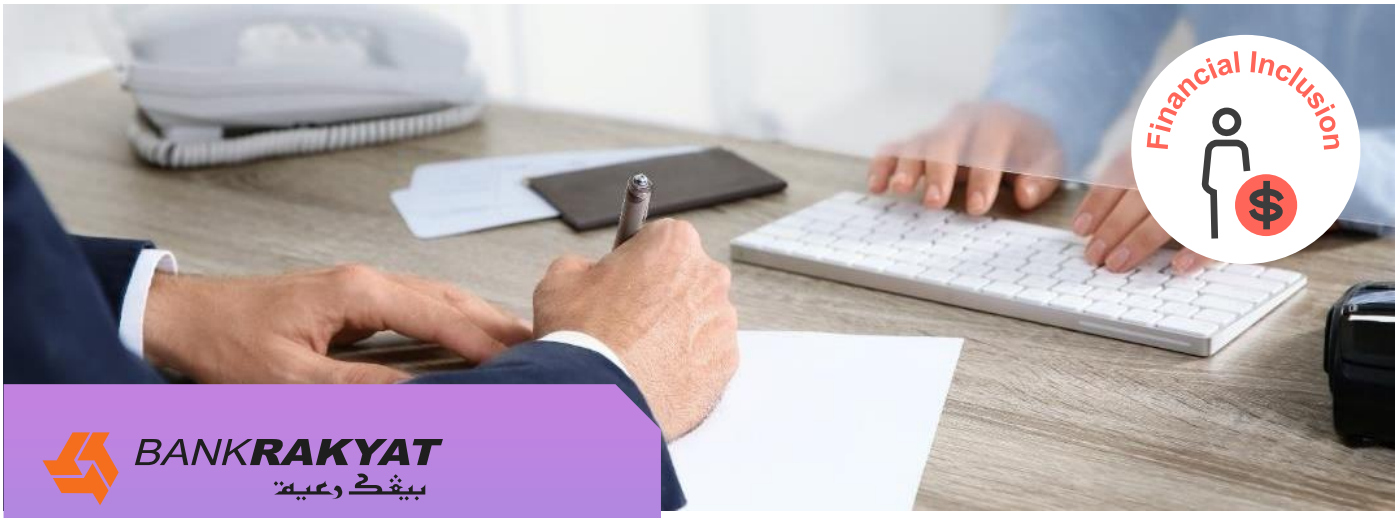
- Commercially available CAR-T therapies with an enhanced safety profile and durability
- Competitive pricing driven by semi-automated manufacturing process

IMPACT

- Extended life and potential cure for cancer patients
- Greater affordability of CAR-T therapies decreases burden on healthcare systems

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure ($m)	16.0	48.3	105.4	134.9	134.8	117.4*	130.5

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.autolus.com. *Metric restated.



BANKRAKYAT
بيڠكو رعية

Theory of change

Over 200 million Indonesians live on less than $4.50 per day and there are 96 million Indonesians on less than $1.90 a day. Without salaries or collateral, these individuals are considered too risky for loans or live in locations too remote for the reach of traditional financial services providers. Despite this, over 56 million Micro Small Medium Enterprises (MSME) contributed greater than 50% GDP. In Indonesia in particular, only about 25% of SME's have access to lending. Access to financial services enables firms to smooth cash flows, accumulate assets, make productive investments, and promote better use of resources. Yet many small enterprises around the world, formal and informal, lack the financing they need. Bank Rakyat is helping fill this gap in the Indonesian market.

Pathway of change

INPUT

- Number of BRILink agents (#)

OUTPUT

- Micro Loans Outstanding (IDR)
- Small and Medium Loans Outstanding (IDR)

OUTCOME

- SME's invest in new employees, new equipment or working capital to enable them to generate higher revenues and improve profitability.

IMPACT

- Microloans help alleviate poverty
- Dynamic SME's boost economic growth and employment

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
BRILink agents (#)	279,750	401,550	422,160	504,233	503,031	627,012	740,818
Micro Loans Outstanding (IDRt)	239.5	274.3	307.7	351.3	397.0	503.0	504
Small and Medium Loans Outstanding (IDRt)	173.8	201.3	220.2	217.2	224.9	237.8	260
Coal Fired Powerplant Loans outstanding (% loan book)	-	3.8	3.9	2.9	2.5	2.1	2.3
Palm Oil Loans outstanding (% loan book)	-	6.7	6.3	6.1	5.8	6.3	7.2

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.bankrakyat.com.my.

BEFESA

Theory of change

Secondary steel and aluminium production have a significantly lower CO2 footprint than primary production and use fewer natural resources. However, both secondary steel and aluminium production produce hazardous wastes, which are often landfilled, risking groundwater and sewage system contamination. Befesa's best-in-class recycling technology offers an alternative to landfills and its technology is able to extract and re-use the valuable metals contained within these hazardous wastes.

Pathway of change

INPUT

- Steel dust and salt slag recycling plants (#)
- Employees (#)
- Best Available Technology (BAT) for recycling steel dust

OUTPUT

- Recycled residues: steel dust and aluminium salt slags (# tonnes)
- Recovered materials: WOX, metal alloys, iron oxide, aluminium concentrate, aluminium melting salt, secondary aluminium alloys, aluminium oxides and others (# tonnes)

OUTCOME

- More circular steel and aluminium production
- Reduced landfilling of hazardous waste, thereby reducing risk for groundwater, air and soil contamination
- Reduced need for mining precious materials and metals such as waelz oxide and aluminium oxide

IMPACT

- Significantly reduced emissions-intensity of both steel and aluminium production, due to greater use of secondary production processes, mitigates climate change
- Reduced mining of valuable minerals, such as zinc, reduces the negative environmental and human impacts of extractive industries

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Recovered materials: waelz oxide and aluminium (mt tonnes)	-	600,000	1,175,000	1,278,000	1,442,000	1,649,000	1,741,000
Recycled residues (mt tonnes)	1,170,900	1,234,700	1,493,000	1,477,000	1,643,000	1,845,000	1,894,000
GHG emissions (mt tonnes)	609,000	664,000	655,000	650,000	797,000	1,037,000	1,129,000
Lost Time Injury Rate/LTIR (#)	3.0	3.2	2.0	1.3	0.8	0.6	0.45

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.befesa.com.

ZEISS

Theory of change

Vision impairment or blindness is estimated to affect at least 2.2 billion people worldwide, 1 billion of which could have been prevented or has yet to be addressed. Carl Zeiss Meditec provides the industry's most innovative end-to-end product suite for the surgical treatment of cataracts, from diagnostics to treatment, as well having pioneered the most innovative, minimally-invasive refractive laser technology.

Pathway of change

INPUT

- R&D expenditure ($)
- Employees (#)

OUTPUT

- Patients treated (for cataracts, diabetic retinopathy, glaucoma and refractive errors) (#)
- Patients treated (for cataracts, diabetic retinopathy, glaucoma and refractive errors) (#)
- Minimally-invasive surgeries conducted (neuro, ear nose and throat, and spinal) (#)

OUTCOME

- Improved treatment of eye diseases (cataracts, diabetic retinopathy, glaucoma and refractive errors)
- Improved diagnosis of eye diseases (cataracts, diabetic retinopathy, glaucoma and refractive errors)
- Improved patient outcomes undergoing minimally-invasive surgery (neuro, ear nose and throat, and spinal)

IMPACT

- Prevention of avoidable blindness through early diagnosis of ophthalmic conditions
- The closing of the coverage gap of refractive errors and cataracts, estimated to be $14.3bn by the WHO

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (€m)	145.8	159.6	173.3	218.8	232.1	291.4	349.0
Carbon dioxide emissions (mt tonnes)	206,466	213,308	208,302	124,783	37,863	62,255	57,997
Carbon intensity (mt tonnes/€m)	73	71	47	35	9	13	10

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.zeiss.co.uk.

Theory of change

Duerr solutions contribute towards a circular system. Paint application is very energy intensive, Duerr has innovated to significantly reduce the environmental impact of paint shops over the past decade with a 67% reduction in energy, 71% reduction in water, 73% reduction in volatile organic compound and 36% reduction in paint. Through a collaboration with PPG, Duerr has more recently developed a new paint process that can reduce energy consumption by up to 39% (vs 2018 levels) by significantly lower curing temperatures, faster flash and dehydration times. Additionally, Duerr's robotic assembly lines improve the ramp-up of EV production through helping OEM's, including new entrants, to rapidly scale EV production and to provide high-voltage end of line testing.

Pathway of change

INPUT

- R&D expenditure ($)

OUTPUT

- EV order intake ($) supporting end to end final assembly solutions for auto OEM's
- Digital Durr solutions improve efficiency of a broad range of industrial production processes

OUTCOME

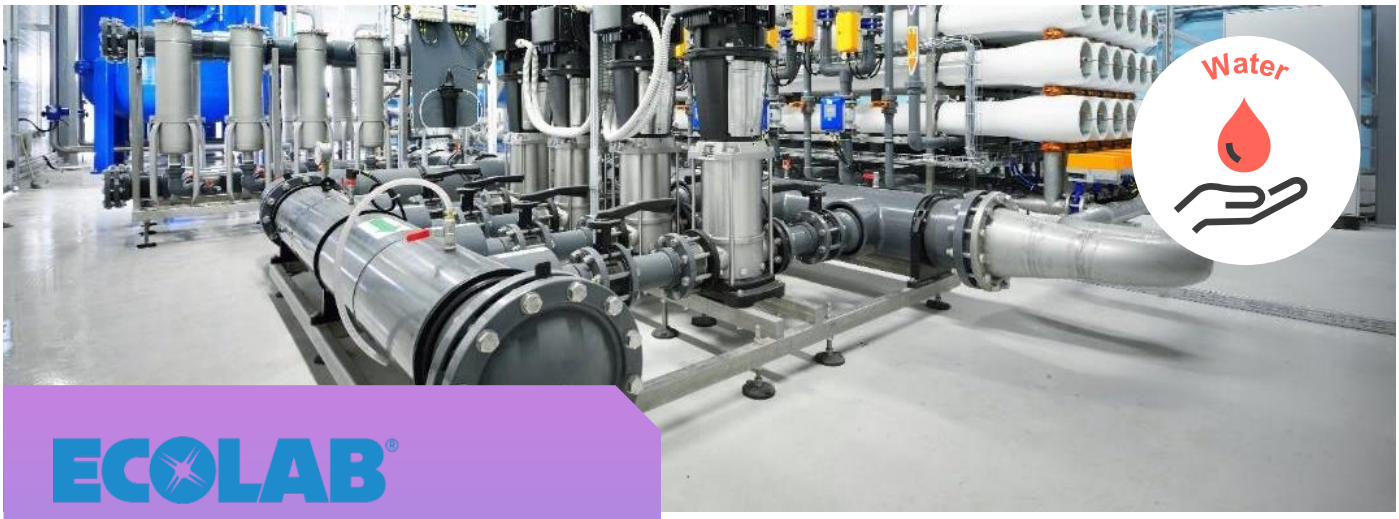
- Significant reduction in energy, water and VOC for paint shops
- Intellidivide technology reduces wood waste for Homag's woodworking customers
- Improvements in air quality and lower emissions from Clean Technology Systems solutions

IMPACT

- Supports more sustainable industrial production
- Enables transition toward electric vehicles
- Enables wood-based construction of buildings

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
EV order intake (€m)	-	278	400	650	776.4	1,100	1,100
R&D expenditure (€m)	-	121	111	108	124	137	151
Work related accidents per 1 million hours worked (#)	7.0	7.2	7.0	4.7	5.3	8.2	6
Total scope 1 and 2 emissions (mt tonnes)	62,590	61,224	56,683	49,359	48,372	34,929*	25,269

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.durr.com/en.



ECOLAB®

Theory of change

Water, energy, food and health are closely interlinked. Clean water is a key to health, as water pollution was estimated to represent 1.8m deaths in 2015 according to the Lancet. Efficiency in water use is increasingly critical to the sustainability of economy activities. In 2019, Ecolab helped our customers save 206 billion gallons of water, equivalent to the annual drinking water needs of 712 million people, save 28 trillion Btu of energy and avoid 1.5 million metric tonnes of greenhouse gas emissions, safely protect more than 36% of the world's packaged food and 44% of the global milk supply.

Pathway of change

INPUT

- Capital investment in production capacity ($)
- R&D expenditure in the discovery of new products and processes ($)

OUTPUT

- Number of sites serviced (#)
- New product launches (#)

OUTCOME

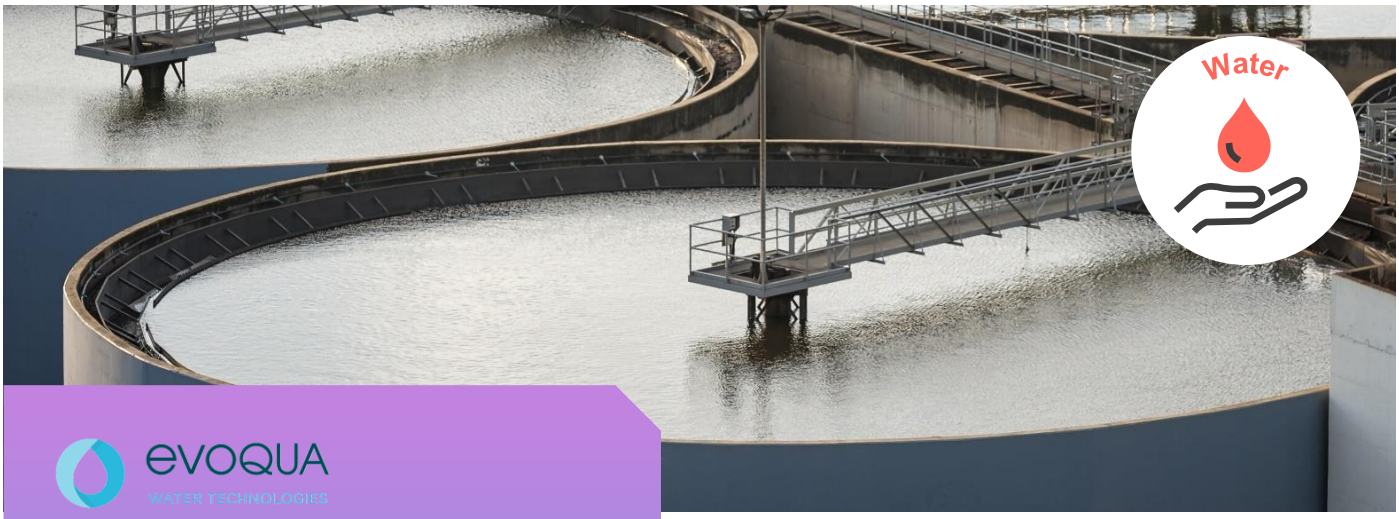
- Water withdrawals avoided (m3)
- GHG emissions avoided (t)
- Waste avoided (t)

IMPACT

- Mitigation of global warming
- Decoupling of manufacturing growth with environmental damage

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
GHG emissions avoided (mt tonnes)	-	1,088,435	1,500,000	3,500,000	3,600,000	3,600,000	3,800,000
Water withdrawals avoided (billion gallons)	-	855*	867*	787*	814*	829*	855
GHG emissions scope 1 and 2 (mt tonnes)	-	460,055	469,175	335,126	330,999	386,076	382,211
Total hazardous waste (mt tonnes)	-	-	25.204	22.861	28.028	43,881	71,949
Total water used (m^3)	-	-	2,182	1,902	1,847	1,857	2,446

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.ecolab.com. *Metric restated.



EVOQUA WATER TECHNOLOGIES

Theory of change

Water quality is a major health and environmental issue. Water pollution was estimated to represent 1.8m deaths in 2015 according to the Lancet. In 2015, diseases caused by air, water & soil pollution were responsible for 9 million premature deaths, that is 16% of all global deaths. Emergent contaminants are getting more attention, such as PFAS, selenium, microplastics, or pharmaceutical compounds, among others. The solution is to implement high purity water treatment solutions and increase water re-used within industrial processes so as to reduce water withdrawals and discharges. Evoqua[1] is the leader in sophisticated water treatment solutions, and is providing service-based solutions for companies to implement better water treatment in their operations.

Pathway of change

INPUT

- Investment in Water One systems ($)
- Investment in BOO systems ($)
- R&D investment ($)

OUTPUT

- Increased water recycling rates (%)
- Removal of PFAS compounds (t)
- Removal of water contaminants (t)

OUTCOME

- Avoided freshwater withdrawals (m3)
- Avoided wastewater discharges (m3)
- Avoided emissions from water treatment (t)
- Higher purity water (m3)

IMPACT

- Lower carbon emissions from industrial activities
- Lower water footprint from industrial activities
- Healthier aquifers
- Lower risk of infection from water contaminants

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Outsourced water backlog ($m)	-	607.4	179.3	165.6	275.6	377.1	-
R&D expenditure ($m)	-	15.9	15.3	13.2	13.4	15.4	-

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.evoqua.com. [1]Acquired and no longer reported.

HASI

Theory of change

The International Renewable Energy Agency (IRENA) forecasts that the United States will need invest USD14.1bn from 2015 to 2050 in energy efficiency, renewable energy and energy infrastructure if global warming is to be kept under two degrees. Hannon Armstrong Sustainable Infrastructure (HASI) is the first listed US company whose business model is solely dedicated to financing climate solutions, ranging from behind-the-meter assets, such as energy efficiency improvements of buildings, to renewable energy, such as solar land. Given Hannon's stellar impact performance, our engagement with HASI will be limited, and will predominantly focus on incentivising further governance changes.

Pathway of change

INPUT

- Long-term, programmatic relationships with the leading energy service companies ('ESCOs'), manufacturers, project developers, utilities, owners and operators
- Deep domain expertise in climate solutions investing

OUTPUT

- Capital invested in climate positive investments ($):
- Energy efficiency
- Renewable energy
- Sustainable infrastructure

OUTCOME

- Wind, solar, and solar-plus storage farms are constructed, increasing the supply of renewable energy
- Energy efficiency investments significantly lower the carbon footprint of the built environment
- Ecological sites are restored
- Stormwater remediation projects provides climate change adaption capacity

IMPACT

- Part of the funding gap for climate change solutions, estimated to be between $2.5-4.8 trillion, is effectively addressed
- Global warming and its related effects are mitigated

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Carbon reduction (million mt tonnes)	-	496,000	384,000	2,000,000	-	-	760,000
CarbonCount (mt tonnes of CO_2 offset/$1,000 invested)	0.6	0.4	0.3	1.0	0.5	0.4	0.3
Water savings (billion gallons)	0.6	0.3	0.4	0.6	0.2	2.0	0.7
WaterCount (mt gallons of water saved/$1,000 invested)	-	-	293	303	140	1,180	300
Carbon reduction (million mt tonnes)	0.5	0.5	0.4	2.0	1.0	0.6	0.8
Gender board diversity (%)	-	29	29	33	33	33	36
Racial/ethnic minority board diversity (%)	-	-	-	11	11	22	18

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.hasi.com.

HOFFMANN GREEN CEMENT

Theory of change

Cement is the source of 8% of GHG emissions globally. Currently there are few economically feasible decarbonisation options for the industry, and it is coming under increased pressure to innovate. Hoffmann Green Cement has developed one of the few scalable low-carbon solutions, with a clinker-free process that reduces emissions by 5x while providing superior technical performance. This approach is in contrast to industry incumbents which are focused on improving existing processes, but these changes are slower, have high costs, and result in lower carbon abatement.

Pathway of change

INPUT

- Capex in new facilities ($)
- R&D for new cement technologies ($)

OUTPUT

- Low carbon cement (t)
- Use of waste by-products from other industries (t)

OUTCOME

- Avoided emissions (t)

IMPACT

- Lower GHG emissions from construction

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Avoided GHG emissions (mt tonnes)	-	-	-	711	4,620	1,789	8,486
Avoided limestone extraction (mt tonnes)	-	-	-	1,435	8,187	9,816	17,289

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.ciments-hoffmann.com.

HORIBA

Theory of change

Horiba has an 80% market share in emission measurement systems and their automotive test products help enable the automotive industry to accurately measure emissions of its vehicles. Moreover, Horiba provides an extensive array of instruments and systems for applications outside of auto including – process and environmental monitoring, in-vitro medical diagnostics, semiconductor manufacturing and metrology, to a broad range of scientific R&D and QC measurement.

Pathway of change

INPUT

- R&D expenditure ($)
- Capex ($)

OUTPUT

- Emission measurement systems (#)
- EV testing equipment and services
- Broad range of measurement equipment

OUTCOME

- Horiba products accelerate research and development process

IMPACT

- Enable transition towards cleaner ICE vehicles and EV's
- Mass flow controllers support the semiconductor industry to develop next generation chips which can support AI, IoT, VR, AR which will ultimately lead to productivity improvements across industries.

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (JPYm)	13,911	15,183	16,254	15,594	16,710	18,585	20,436

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.horiba.com.

ilika

Theory of change

Ilika is developing large format solid state batteries for use in electric vehicles with the potential for 6x faster charging, 4x longer charge retention and 2x increased energy density, with a better safety profile and easier recycling versus conventional lithium-ion batteries. Ilika has also developed micro solid-state batteries which have a class leading compact footprint, can operate at higher temperatures (up to 150°C) and with 40% higher energy density to alternative solutions. Ilika microbatteries are being used in implantable medical devices to reduce the size of implants and extend device life, reducing the need for more frequent medical interventions. Other applications include Industrial IOT where Ilika batteries can safely operate at high temperature.

Pathway of change

INPUT

- R&D expenditure (GBP)
- Capex expenditure (GBP)

OUTPUT

- Stereax microbatteries production: Solid state batteries for Medtech and IoT sensors (#)
- Goliath large-format solid state batteries for Electric Vehicles (#)

OUTCOME

- Solid state batteries deliver improved charge times, energy density and safety

IMPACT

- Solid state batteries support faster adoption of electric vehicles through improved charge times, energy density and safety
- Stereax microbatteries enable smaller medical devices, extended battery life and less need for invasive surgery

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (£m)	2.1	2.0	2.1	2.3	2.3	4.8	4.1

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.ilika.com.

kardex

Theory of change

Kardex is a global leader in intralogistics solutions for automated storage, retrieval and material handling systems. Kardex intralogistics' solutions improve the efficiency of logistics processes within manufacturing or distribution centres through automation and can drive an 80-85% reduction in space requirements which significantly improves the carbon footprint of operations.

Pathway of change

INPUT

- R&D expenditure (CHF)
- Employees (#)

OUTPUT

- Remstar installations (#)
- Mlog installations (#)

OUTCOME

- Floor space saving (m2)
- Increased operating efficiency

IMPACT

- More sustainable consumption and production through reducing land footprint and automation of logistics processes

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (CHFm)	10.3	11.4	11.3	11.0	12.0	12.7	18

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.kardex.com.

Lenzing
Innovative by nature

Theory of change

Fashion represents about 5% global CO2 emission, 20% of wastewater and 6% of global pesticide use. This is compounded by the fact that a new garment is used only about 60 times, before being discarded, and is down from about 120x 10 years ago. 87% of garments are incinerated or landfilled. Wood-based cellulosic fibres from Lenzing use 10x less water than cotton, have a lower carbon footprint, are highly biodegradable, and almost exclusively use chemicals that are recycled in a loop process. Lenzing is also developing a technology that can include 30-50% recycled cotton together with Lyocell.

Pathway of change

INPUT

- Capacity additions in Brazil, Thailand and possibly the US (t)
- Low chemical use (%)
- Low energy use (%)
- R&D investment ($)

OUTPUT

- Biodegradable fabrics (t)
- Fabrics that integrate post-industrial and post-consumer textile waste (t)
- Carbon sequestered in wood plantations and textile products (t)

OUTCOME

- Avoided emissions vs cotton and synthetics (t)
- Avoided water use vs cotton and synthetics (t)
- Avoided aquatic pollution vs cotton and synthetics (t)
- Avoided waste vs cotton and synthetics (t)

IMPACT

- Lower global warming potential from textile
- Lower water use from the textile industry
- Lower waste to landfill from textile
- Lower microplastic pollution to marine ecosystems

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (€m)	-	27.7	24.6	16.2	24.0	29.2	69.1
GHG emissions scope 1 and 2 (mt tonnes)	-	1,750,000	1,640,000	1,380,000	1,610,000	1,270,000	1,340,000

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.lenzing.com.

Lonza

Theory of change

Biologic, large-molecule drugs are currently growing twice as fast as their small-molecule counterparts, owing to their exceptional efficacy and ability to address previously untreatable conditions, such as cancers and autoimmune diseases. However, the manufacturing of biologics is complex, expensive more resource-intensive than ever before. As the world's leading contract manufacturing and development company (CDMO), Lonza allows biotech companies to outsource that process manufacturing process, thereby helping them to develop more potent, complex medicines at lower cost and increased speed-to-market.

Pathway of change

INPUT

- Manufacturing and development sites (#)
- Employees (#)
- Production platforms for next-generation biologics modalities, such as mRNA and antibody-drug conjugates

OUTPUT

- Pre-clinical & clinical small and large molecules (#)
- Commercial small and large molecules (#)

OUTCOME

- Biotechnology companies are able to manufacture more efficacious, complex, and safe therapeutics at lower cost and higher speed

IMPACT

- Biopharmaceutical products are more efficacious, safe and can treat previously untreatable conditions, thereby improving global health
- Improved speed-to-market allows faster treatment for critical diseases, benefiting patients

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Commercial molecules (#)	-	290	310	245	245	190	195
Pre-clinical and clinical molecules (#)	-	575	730	820	780	825	880
Non-recycled or treated waste intensity (mt tonnes/CHFm)	-	24.0	26.4	27.9	10.0	9.9	10
Water intensity (million m^3/CHF)	1,720	1,422	1,326	1,111	6,831	500	458

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.lonza.com.

Munters

Theory of change

Munters is the pioneer and market leader in desiccant dehumidification (c.50% market share), a key technology required for lithium-ion battery plants. Manufacturing of lithium-ion batteries is a highly sensitive process requiring strict temperature and dryness parameters (<1% relative humidity) to ensure safety, quality and production yield. Munters have also developed a patented technology for data centre cooling (SyCool) providing significant energy and water savings which is driving strong order intake and market share gains.

Pathway of change

INPUT

- R&D Expenditure (SEK)
- Employees (#)

OUTPUT

- Dessicant dehumidification equipment (#)
- Data center cooling equipment (#)

OUTCOME

- Energy savings for industrial dehumidification driven by Munters Green PowerPurge heat recovery solutions.
- Water saved using Munters SyCool Data Centre cooling equipment (mt gallons)

IMPACT

- Enabling the safe and efficient production of lithium ion batteries
- Enabling more environmentally sustainable data centre cooling

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (SEKm)	167	217	197	186	162	236	360
Total recordable incident rate (TRIR)	-	-	-	-	1.7	1.8	1.2

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.munters.com.

Theory of change

460 million people have diabetes. As prevalence increases above 10% today (from 8% a decade prior), the patient population is expected to grow 50% to 700m by 2045. Of all people with diabetes, 50% are diagnosed, 25% have access to care, 12% get decent care, and 6% reach good levels of blood glucose. The cost of diabetes is expected to reach $2.5th by 2030. Obesity is the 21st century epidemic. 650m people are obese globally, and this is expected to rise to 1bn by 2025. If untreated, the cost of complications is expected to reach $1.2tn globally by 2025, due to comorbidities such as diabetes and cardiovascular disease. Today 26m of the 425m diabetic patients are treated with Novo Nordisk products across the treatment cascade, and the company is a key innovator providing treatment to improve outcomes, and is one of the few companies with obesity medicine.

Pathway of change

INPUT

- Capital investment in production capacity ($)
- R&D expenditure ($)

OUTPUT

- Patents filed (#)
- Number of patients treated (#)
- Number of patients reached by access programmes (#)

OUTCOME

- Lower occurrence of severe hypoglycemia (%)
- Lower occurrence of cardiovascular disease (%)
- Lower BMI of obesity patients (#)

IMPACT

- Increased healthy life expectancy
- Lower disease burden of diabetes
- Lower disease burden of obesity
- Lower healthcare expenditures for diabetes
- Lower healthcare expenditures for obesity

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Patients reached (#m)	-	29.2	30.0	32.8	34.6	36.3	40.5
Patients reached with access programmes (#m)	-	0.3	2.9	3.2	1.7	1.8	2.4
Product recalls (#)	-	3.0	4.0	0.0	1.0	3.0	2.0

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.novonordisk.com.

Ørsted

Theory of change

Electricity generation from fossil fuels is responsible for 25% of GHG emissions, 10% of freshwater withdrawals, air pollution leading to 5m preventable deaths each year. These disproportionally affect low-income populations. Wind energy could supply up to around 34% of global electric power demand in 2040 from 4% today, and eliminate those negative externalities. Offshore wind enables large-scale decarbonisation because projects are typically much bigger than other renewable technologies, and are not affected by land use issues.

Pathway of change

INPUT

- Opex/MW ($)
- Capex/MW ($)
- Renewable energy MW installed (MW)

OUTPUT

- Renewable energy LCOE ($)
- Renewable energy GWh installed (MW)
- Green energy share (%)
- Load factor (%)

OUTCOME

- Avoided emissions (t)
- Avoided water use for power generation (m3)
- Avoided deaths from air pollution (#)

IMPACT

- Lower carbon emissions from the electricity grid
- Life expectancy improvement from better air quality

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Avoided carbon emissions (mt tonnes)	6,700,000	8,100,000	11,300,000	13,100,000	15,100,000	18,200,000	10,218,000[2]
Installed renewable generation (MW)	16,700	17,200	20,118	25,424	29,050	35,641.0	35,641
GHG emissions scope 1 and 2 (mt tonnes)	4,000,000	3,528,000	1,850,000	1,853,000	2,142,000	2,511,000	1,586,000

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.orsted.co.uk. [2]Methodology changed.

Theory of change

Productivity growth across OECD countries was lower in the decade leading up to 2016 than it was in any other decade from 1950 (UN). While technological progress and innovation has continued, the adoption of Industry 4.0 solutions with potential to deliver significant productivity improvements remains low, particularly from small and medium sized enterprises where the costs of upgrading can be prohibitive. PTC's solutions drive digital transformation while increasing productivity and efficiency of R&D by reducing design time by up to 30%, make manufacturing more efficient and less wasteful with up to 30% reduction in prototypes, thereby reducing costs and raw material use, and reduce the time to market by up to 57%.

Pathway of change

INPUT

- R&D expenditure (USD)

OUTPUT

- CAD product designs (#)
- PLM solutions deployed (#)
- Industrial IOT devices connected (#)
- AR applications deployed (#)

OUTCOME

- Time to market for new products reduced
- Material savings from lower use of physical prototypes
- Cost savings due to lower R&D costs
- Lower downtime due to predictive maintenance
- Lower transport costs and emissions with use of AR solutions

IMPACT

- Increased innovation through faster and better R&D
- Improved sustainability and productivity of industrial manufacturing

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure ($m)	236.0	250.0	246.9	256.6	299.9	338.8	394.4

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.ptc.com/en.

Theory of change

Despite influencing 70% of medical decisions, lab or diagnostic tests are estimated to only account for 2-5% of healthcare spending (HIDA, Akhmetov & Bubov 2015). HIDA estimates that appropriate diagnostic test use could help to avoid $900m of healthcare costs in the US alone. By empowering users without sophisticated expertise in molecular biology to use molecular diagnostic technologies, taking them straight from the biological sample to actionable insight, Qiagen expands the adoption of molecular diagnostics, improving patient outcomes.

Pathway of change

INPUT

- Employees (#)
- R&D expenditure ($)

OUTPUT

- Sample to Insight molecular diagnostic tests (i.e. tuberculosis, prenatal screening, liquid biopsy) (#)

OUTCOME

- Increased adoption of molecular diagnostics enables earlier detection/screening, enables better treatment guidance and monitoring

IMPACT

- Increased use of molecular diagnostic tests in healthcare contributes to cost-savings and improves clinical outcomes, thereby structurally improving health systems
- Molecular diagnostics application expands beyond infectious diseases, broadening population health benefits

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (€m)	166.9*	190.9*	176.3*	170.0	224.5	181.0	192.2

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.qiagen.com/us. *Metric restated.

SARTORIUS

Theory of change

As a leader in providing single-use (SU) equipment, Stedim is significantly driving down the cost of and improve the speed of bioprocessing, helping manufacturers make biologic drugs more affordable and help to bring new, innovative therapies to market. Moreover, its products provide an enhanced safety profile, lowering the risk of cross-contamination, as well as a significantly lower environmental footprint than their stainless-steel alternatives.

Pathway of change

INPUT

- Employees (#)
- Production sites (#)
- Patents and trademarks (#)

OUTPUT

- Single-use bioprocessing equipment and consumables (#)

OUTCOME

- Biological therapies and vaccines are produced at lower cost and higher speed
- Single-use equipment lowers risk of cross-contamination, thereby improving therapeutic safety
- The environmental footprint (water and carbon) of biological drug manufacturing is reduced

IMPACT

- Improved affordability of, and thus access to, biological therapies for non-communicable diseases and biological vaccines for communicable diseases improves global health
- Health conditions previously considered untreatable are treated, improving or saving patient lives

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Patents and trademarks (#)	197.0	154.0	222.0	339.0	234.0	353.0	435.0

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.sartorius.com/en.

Stevanato Group

Theory of change

Biologic medicines, which range from antibodies to gene therapies, represent approximately 30% of the pharmaceutical industry today. However, growth rates of biologic modalities are significantly in excess of the market, given their unprecedented ability to treat largely unmet disease areas, such as non-communicable diseases. Stevanato is the leading provider of primary container solutions, such as pre-fillable syringes and vials, which are critical for the safety, efficacy and quality of biologic therapeutics.

Pathway of change

INPUT

- Capital expenditure ($)
- Research & development expenditure ($)
- Human capital ($)

OUTPUT

- High quality container solutions (vials, syringes and cartridges) (#)
- Drug delivery systems (#)
- Assembly, visual inspection, packaging and glass converting machines (#)"

OUTCOME

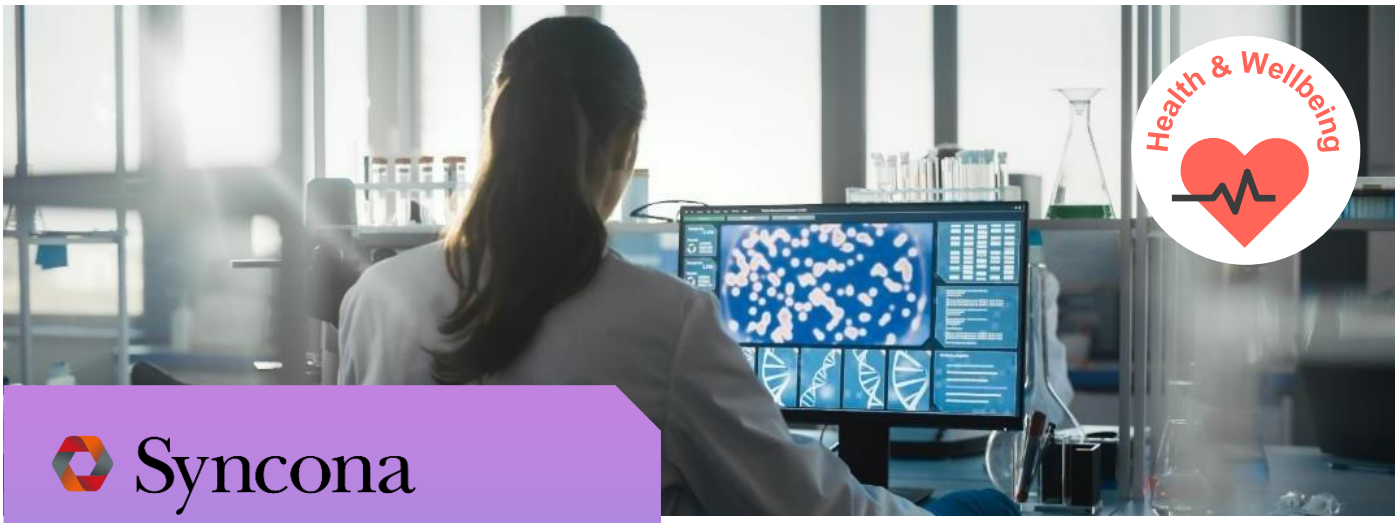
- Improved safety, efficacy and quality of biologic therapeutics
- Improved speed to market for biologic medicines
- Optimised drug administration

IMPACT

- Improved ability of biologics to treat areas of high unment need, such as non-communicable diseases

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (€m)	-	-	-	17.4	29.6	34.4	35.7

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.stevanatogroup.com/en.



Syncona

Theory of change

Fundamental to each of Syncona's investments is a novel treatment which can be delivered to patients through solutions developed by its portfolio companies. Syncona is able to draw upon the networks of two of its top shareholders; the biomedical charities Wellcome Trust (c28%) and Cancer Research UK (c3%). The first to have a commercial treatment was Blue Earth diagnostics, whose Axumin scan targets and images prostate cancer cells with treatment plan changes resulting in 61% of patients who receive the scan. Syncona therefore provide primary capital and operational guidance to fledgling healthcare companies which address unmet needs through transformational solutions.

Pathway of change

INPUT

- Primary capital invested into life science companies (GBP)
- Experienced management team with strong scientific expertise and network

OUTPUT

- No of life science portfolio companies (#)
- Pipeline of clinical trials

OUTCOME

- Approved cell & gene therapy treatments with potential to provide cure for diseases with significant unmet need
- Contribution towards scientific understanding of diseases with significant unmet need

IMPACT

- Transformational treatments for patients for diseases with significant unmet need

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Cumulative capital invested in life science portfolio companies (£m)	116	235	383	590	780	1,000	1,200
Portfolio companies (#)	7	8	10	9	11	13	13

Portfolio holdings are subject to change at any time and are not recommendations to buy or sell any security.
Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.synconaltd.com.

TOMRA

Theory of change

By 2050, the Ellen MacArthur Foundation estimates that there will be more plastic than fish in the sea, partly due to the meagre 14% recycling rate of plastic packaging. Tomra helps increase this recycling rate, with its reverse vending machines (RVMs) enabling the collection and recycling of used drink containers such as plastic bottles, and by providing superior sorting technologies to the recycling, food and mining industries. Tomra is clearly a mission-driven company, having set the explicit 2030 goal to increase global recycling collection by 40% and increase plastics in the closed loop system by 30%.

Pathway of change

INPUT

- Capital investment in production capacity ($)
- R&D expenditure in the discovery of new products and processes ($)
- External: Container deposit scheme regulations introduced (#)

OUTPUT

- Reverse Vending Machines (RVMs) installed (#)
- Food, mining and recycling sorting machines installed (#)

OUTCOME

- Beverage containers collected through RVMs (#)
- Waste, food, and mined material sorted/recovered (tonnes)
- Carbon dioxide avoidance through products sold (tonnes)

IMPACT

- Closed-loop recycling reduces the need for resource extraction
- Land and marine ecosystems benefit from fewer plastic pollutants
- Yield on food production increases, improving food security

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
RVMs installed (#)	82,000	83,100	77,500	78,000	81,000	82,000	85,000
Sorting machines installed (#)	13,470	16,323	17,578	19,468	21,430	22,800	22,800
Carbon dioxide avoidance through products sold (mt tonnes)	27,520,000	27,800,000	17,010,000	18,040,000	19,440,000	21,140,000	2,285,400
Reportable injuries (#)	102	113	142	71	92	147	105

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.tomra.com.

umicore

Theory of change

Umicore helps solve two supply chain bottlenecks for EV's. On the raw material side, the company's know how and investment in battery recycling will ensure that EV batteries can be recycled at end of life, while reducing the strain on the earth's scarce metals such as nickel and cobalt. Umicore's innovation in the chemistry of high-nickel cathode materials, which are a key component in the performance of EV batteries, helping extend range, can lessen fears over range anxiety. Umicore's significant investments into new capacity for NMC cathode material is helping enable OEM's to make the switch to EV and ultimately helping EV's move towards reaching cost parity with ICE vehicles.

Pathway of change

INPUT

- Capital expenditure (EUR)
- R&D expenditure (EUR)

OUTPUT

- Capability to recycle complex materials with high recovery rates
- Automotive catalysis products produced
- Cathode material produced for EV batteries

OUTCOME

- Recycled materials have a smaller environmental footprint, resulting in greenhouse gas emissions avoided vs use of virgin material
- Catalysis products help reduce pollution from ICE vehicles, notably resulting in nitrogen oxide and particulate emissions reduction
- Cathode materials used in EV's result in greenhouse gas emissions avoided vs ICE vehicles

IMPACT

- Increased use of recycled materials reduces the burden on the environment, helping keep production within planetary boundaries
- Higher deployment of EV's would lead to more environmentally efficient transport, which will help reduce greenhouse gas emissions from transport

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
R&D expenditure (€m)	175	196	211	223	245	315	281
Capital expenditure (€m)	365	478	553	403	389	470	857
Scope 1 CO_2e emissions (mt tonnes)	364,139	417,140	389,101	330,619	372,699	346,439	317,849
Scope 2 CO_2e emissions – Market based (mt tonnes)	269,565	350,562	402,795	401,926	473,738	338,554	314,093

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.umicore.com.

Valeo

Theory of change

Transport needs profound change: it represents 14% of global greenhouse gas emissions; an estimated 5m people die prematurely every year as a result of air pollution, of which transport is a major contributor; road accidents are the 9th source of death globally, representing 2.2% of deaths, or 1.3m cases every year. Much of this could be avoided by a shift to electric vehicles with higher degrees of automation. An average EU electric car is already close to 3x better in terms of emissions than an equivalent conventional car today. Autonomous vehicles could also reduce crashes by up to 90% and free up as much as 50 mins each day previously dedicated to driving.

Pathway of change

INPUT

- Capital investment in production capacity ($)
- R&D expenditure in the discovery of new products and processes ($)
- % revenue from innovative products (%)

OUTPUT

- Volume of EVs produced with Valeo technology (#)
- Volume of vehicles with ADAS produced with Valeo technology (#_

OUTCOME

- Avoided emissions from EVs (t)
- Avoided emissions from higher efficiency hybrids (t)
- Reduction in rate and severity of car accidents

IMPACT

- Lower GHG emissions from transport
- Lower air pollution from transport
- Lower accidents from road transport

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Share of innovative products in order intake (%)	50	53	47	56	45	62	73
Share of products contributing to the reduction of CO_2 (%)	50	50	57	60	60	60	57
GHG emissions scope 1 and 2 (mt tonnes)	-	1,045,000	1,162,000	631,000	775,000	708,000	708,600
Scope 3 downstream emissions product use (mt tonnes)	108,000,000	99,574,000	39,000,000	30,800,000	36,845,00	35,814,000	36,200,000

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.valeo.com/en.

xylem

Theory of change

Water is at the centre of most of sustainability issues. Water pollution may lead to nearly 2m deaths every year. Wastewater treatment is a major source of energy use; at about 5% of US use, and thus a major GHG emission contributor. In the last 25 years, the amount of freshwater available worldwide has fallen by 26% per capita. Freshwater and wastewater systems in developed countries have suffered decades of underinvestment, with as much as half of water leaking in many cities. In developing countries, improved sanitation means new infrastructure.

Pathway of change

INPUT

- R&D expenditure ($)
- Best-in-class digital technology (#)

OUTPUT

- Installed base of water pumps (#)
- Increased energy efficiency of products (#)
- Installed base of digitally enabled water equipment (#)

OUTCOME

- Increased water recycling rates (%)
- Avoided emissions through product use (t)
- Avoided energy use through product use (t)

IMPACT

- Increased water efficiency
- Lower non-revenue water in water systems
- Lower emissions of the water industry

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Avoided emissions from product use (mt tonnes)	-	-	300,000	700,000	730,000	2,800,000*	3,950,000
Non-revenue water reduced (m^3)	-	0.1*	0.1	0.5	0.4	0.5	0.8
Water treated for reuse (m^3)	-	0.4*	0.4	4.3	1.1	3.1	3
GHG emissions scope 1 and 2 (mt tonnes)	97,733	102,227	92,598	88,990	92,276	85,090	128,930

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.xylem.com. *Metric restated.

YDUQS

Theory of change

YDUQS is the second largest post-secondary education provider in Brazil, serving over 700k students. It provides a broad range of undergraduate, masters and other related programmes. The company is also the second largest player in medical courses. Access to higher education is central to Brazil's economic development and is regarded as a key catalyst for social mobility.

Pathway of change

INPUT

- Teachers employed (#)
- Distance learning centres (#)
- Approved medical seats (#)
- Education finance (BRL)

OUTPUT

- Curriculum developed and rolled out
- Total student base (#)
- Medical student base (#)

OUTCOME

- Improved quality of education
- Improved employment prospects of students
- Income effect of postsecondary education

IMPACT

- Development of Brazil's human capital and social mobility
- Improved access to post secondary education

Summary of Value	Year-ended						
Name	2017	2018	2019	2020	2021	2022	2023
Distance learning centres (#)	394	607	933	1,510	2,030	2,506	2,507
Total student base (#)	515,400	517,768	569,747	762,645	1,243,861	1,194,900	1,308,000
Medical student base (#)	3,300	3,570	4,028	5,378	6,463	7,500	8,700

Source: Company reports. Note: text in green indicates positive impact and text in red indicates negative impact.
Company website: www.yduqs.com.br.

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