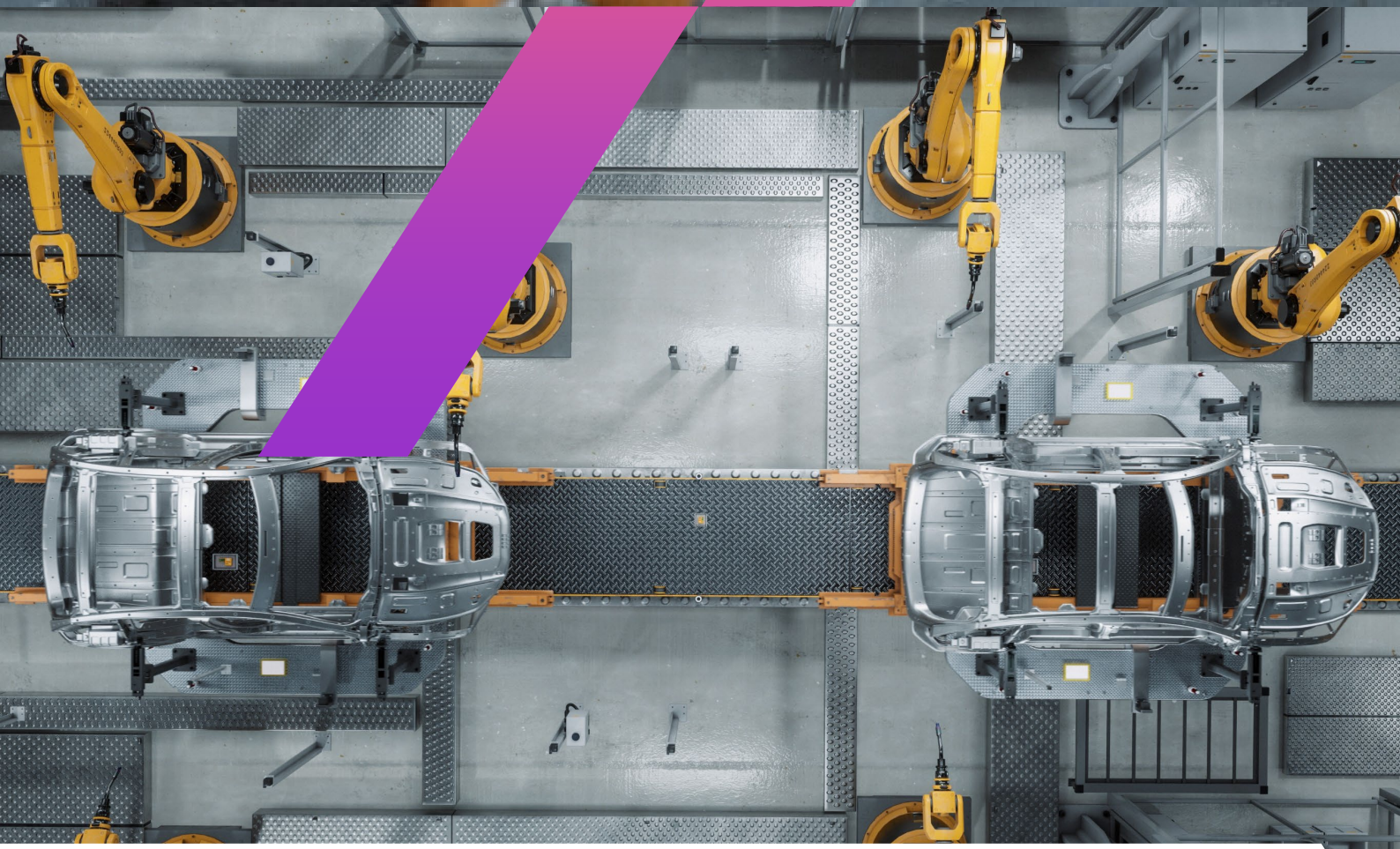
Annual

Impact Report 2022

Regnan Global Equity Impact Solutions Fund



Regnan

Regnan Global Equity Impact Solutions Fund

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

Tim Crockford
Senior Fund Manager,
Head of Equity Impact Solutions

Mohsin Ahmad
Fund Manager

Maxine Wille
Analyst

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Analyst

Fund Overview

- The Regnan Global Equity Impact Solutions Fund (**Fund**) aims to provide a return (after fees but before costs and taxes) that exceeds the MSCI ACWI Investable Market Index in AUD over rolling 5 year periods.
- The Fund is actively managed and invests in shares of companies which we believe aim to generate positive, measurable social and environmental impact, alongside a financial return.
- The Fund avoids investing in companies directly involved in areas such as tobacco production or manufacture controversial weapons or other activities considered by the Portfolio Manager to cause significant harm to society or the environment.
- The Fund is actively managed, will generally have less than 50 stocks and is benchmark agnostic.

Investment Approach

- The Fund actively invests in global equities 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.
- Drawing on SDGs and their targets, the team has built 'Regnan SDG Taxonomy' a comprehensive proprietary framework to identify these solution-providers: companies that provide solutions to the environmental and societal challenges facing the world.

Regnan SDG Taxonomy can be downloaded from the Pendal website

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Letter to investors

As we embark on our second annual report, it is crucial to remember the paramount objectives that impact investors strive to achieve for their clients. Such investments are purposefully made to deliver financial returns through companies whose products make a positive and measurable social and environmental impact.

Measurement is critical to our purpose. The data presented in this report seeks to elucidate a fundamental aspect of our proposition - the commitment to delivering long-term, active support to impactful, mission-driven enterprises.

Our approach integrates impact into our investment decision-making process. At each step of the way, we thoroughly assess the impact of potential investments, ensuring that our clients can have unwavering confidence in the positive change we strive to effect.

A satisfying observation from our experience is that companies are increasingly receptive to sharing information with us. They recognise that impact investing transcends short-term financial gains, aligning perfectly with our long-term investment horizon. The engagement perspective we adopt is warmly welcomed by most companies because they, too, aspire to improve and evolve positively. Our approach fosters a constructive feedback loop wherein these companies proactively seek to mitigate any adverse impacts on society and the planet—a testament to their commitment to becoming responsible corporate citizens and recognizing the financial benefits that such efforts can yield.

In 2022, we were excited to announce a partnership with Exeter University's Global Systems Institute, a leading research centre, and welcomed some of their researchers in London for a workshop on climate science. Their latest research, published in the prestigious journal, Science, updated their numbers on climate tipping points. These elements regulate the climate system, such as the Greenland Ice Sheet and the Boreal permafrost, which could see irreversible damage due to increased temperatures above 1.5 degrees Celsius, reinforcing adverse impacts from climate change. Our Regnan Insights and Advisory Centre has been particularly focused on the physical risks of climate change on company assets, and this continues to be top of mind.

Later in the year, there was also a tale of two COPs, both of which defied initially low expectations. The host country of COP27, the UN Climate Change Conference, was Egypt, whose acute vulnerability to rises in temperature emphasised the unequal impacts of climate change. For the first time, countries agreed that 'Loss and Damage' funding arrangements were insufficient for developing countries with high vulnerability to climate change impacts. At COP15, the UN Biodiversity Conference, countries agreed to a new set of targets and goals to 'halt and reverse' loss in biodiversity by 2030. Numerous targets and goals were watered down and funding remains a sticking point, but in our view the strength of political commitment and rising popular support for environmental action support of core thesis that the urgency of change will create opportunity for astute, patient investors.

Across the Atlantic, the US Inflation Reduction Act shows significant potential for further acceleration in the adoption of environmental solutions across our Sustainable Development Goal Taxonomy. The Act includes a set of incentives for renewable energy, battery manufacturing, electric vehicles, green hydrogen, carbon capture and storage. According to Princeton researchers, the Inflation Reduction Act could drive over $4.1 trillion in cumulative capital investment in new American energy supply infrastructure over the next decade. Pure-play US environmental solution companies have failed to outperform since the Act's announcement, suggesting that the market has failed to fully discount the structural tailwinds that the Inflation Reduction Act could catalyse.

In summary, our second annual report is a testament to our steadfast dedication to impact investing, where the pursuit of positive change is inseparable from financial performance. Through our transparent, rigorous, and engaged approach, we aim to empower our clients with meaningful, transformative investments in businesses that align with their values and contribute to a better future for all. As we always say, the impact case is the investment case.

Tim Crockford
Senior Fund Manager, Head of Equity Impact Solutions

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Regnan Global Equity Impact Solutions Fund Summary 2022

In 2022, the Fund witnessed an active year. We strategically exited holdings where operational changes compromised the scaling potential of impactful solutions, or when market expectations converged with ours. Investment proceeds released were channeled into fresh buy list selections. With new initiations, the team will often have completed the due diligence well in advance of investment, however the portfolio managers were awaiting a better entry point. The broader rotation in markets provided the opportunity to make some of the changes summarised in the coming pages.

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.

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Companies added to the Fund

Buys

ATS

Stevanato Group

Circular Economy

Health & Wellbeing

Theory of change

ATS, a Canadian automation system integrator, that fits into the Circular Economy theme and has some exciting solutions to help their clients – mainly in the Healthcare and Electric Vehicle (EV) battery producer industries. ATS' focus on battery manufacturing contributes to the faster ramp-up of electric vehicles, which have at least 1/5 lower emissions than ICE, their process also results in cost reductions which is key to making EVs more affordable which ultimately drives higher adoption. We believe leading businesses such as ATS, with solutions that help their customers deal with input cost inflation, will continue to benefit in this inflationary environment and long term as resource efficiency becomes more important. There were no sales over the period.

Containment systems interact with drug formulations and are thus critical for the safety and efficacy of therapeutics. Indeed, containment systems form part of the regulatory approval process for therapeutics.

High profile product recalls linked to container contamination and the rise of high-complexity and high value therapeutics are harbingers for greater regulatory stringency when it comes to containment systems. This should provide significant tailwinds for high quality containment providers with a stellar track record and innovative product portfolios.

Stevanato Group fits this bill. Stevanato's containment solutions ensure the safety and efficacy of therapeutics while reducing time to market and the total cost of ownership for its customers. The company is investing heavily in its High Value Solutions (HVS): premium, internally developed products characterised by their high complexity, superior performance and customizable nature. Stevanato's growing exposure to HVS should result in structurally higher gross margins and revenue.

Source: www.ats.com; www.stevanato.com

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Companies exited from the Fund

Sells

HOME REIT

SIEMENS Gamesa RENEWABLE ENERGY

ProCredit HOLDING

HANNON ARMSTRONG

Financial Inclusion | Energy Transition | Financial Inclusion | Energy Transition

Divestment Rationale

A forensic investment research firm published a short report for Home REIT making serious claims around Home REIT's dealings with its main tenants and related parties as well as its rent collection accounting. If proven correct, these claims will invalidate the investment thesis of the holding and the potential for their assets to sustainable deliver the social impact that we had expected, and regardless of their veracity, these claims are likely to have an adverse effect on the company's financing costs.

Despite having an attractive offshore wind business, Siemens Gamesa has been struggling with the turnaround of its onshore business. While in the first half of 2021 the business showed signs of improvement under new leadership, the situation started to deteriorate into the second half. Initiatives to pass on cost inflation through price increases led to a reduction in order volumes, which has affected SGRE and its competitors. Since there was no visibility on the amount of value destruction from the loss-making onshore business, we decided to exit the position.

ProCredit is a bank focused on financing small and medium sized enterprises in Eastern and Southeastern Europe. Geopolitical risk was a risk factor we identified for ProCredit, notably because of the exposure in Georgia and Kosovo, which had been affected by conflicts. ProCredit had 12% of its loan book in Ukraine. With Russia's invasion of Ukraine in February 2022, the subsidiary was directly impacted. Due to the inability to forecast what could happen to this division, and its impact on the group, we decided to sell.

The team divested out of this position due to concerns around the lack of transparency around its accounting practices that were called into question during the period. These concerns have the potential to raise the company's cost of capital further, in an environment when the company is already facing rising financing costs from higher interest rates, and the team no longer have the required conviction in their underlying cash flow expectations.

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

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Thematic recap – 2022 vs. 2021

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.

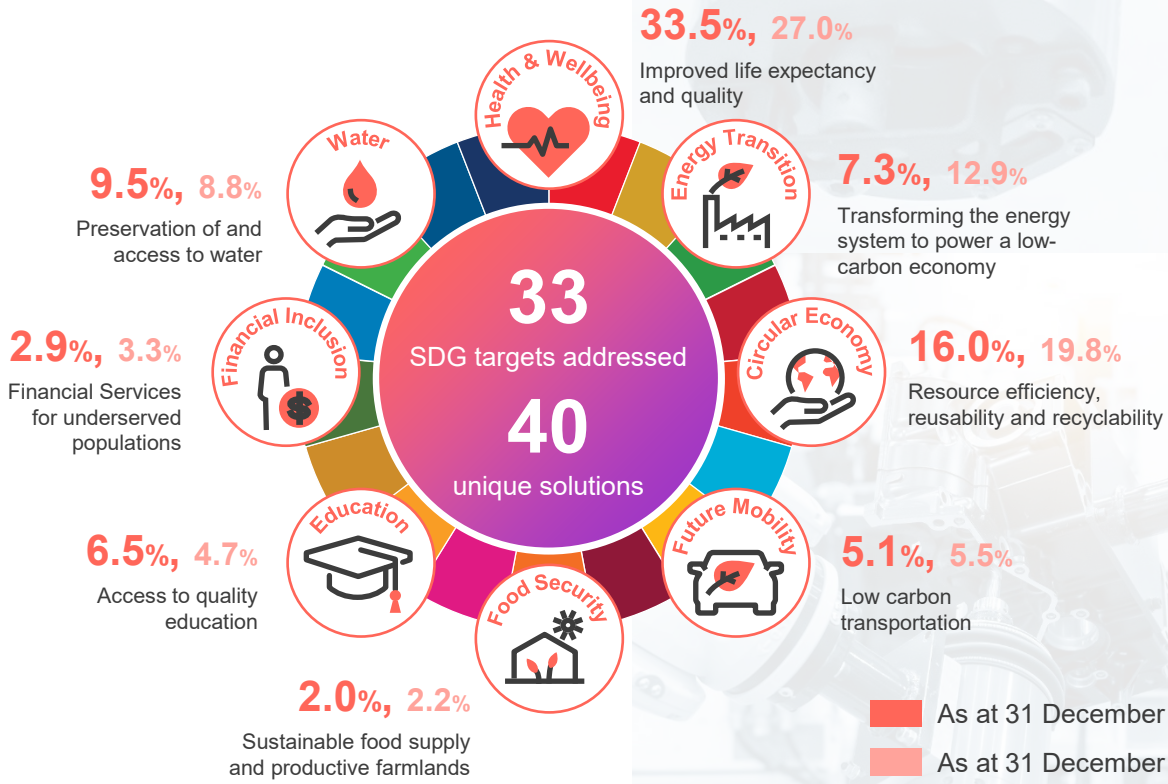
We do not explicitly target thematic exposures when constructing the Fund.

At year-end the collective theme exposure across the 8 themes was 84.3%. The number varies according to the individual Fund 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 were appropriate but recognise that the relationship between impact and corporate revenues can be ambiguous.

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

Fund exposure by impact theme

31 December 2022 vs. 31 December 2021



Source: Regnan/JOHCM as at 31 December 2022. 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 (SDGs).

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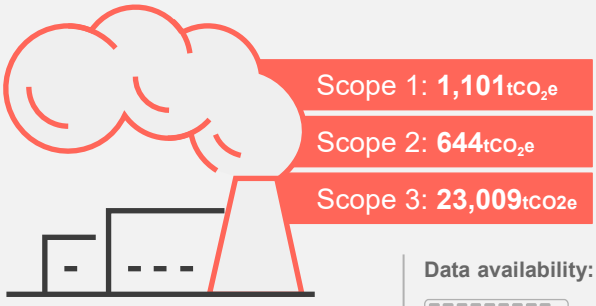
Fund level metrics – Estimated Operational Impact Indicators

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

GHG Emissions



Total emissions:
24,755 tCO_2e

Benchmark: 68,241tCO_2e

Data availability:
91.9%

Carbon Footprint

Total:
209
tCO_2e/m EUR (EV)

Benchmark: 576tCO2e

Data availability:
91.9%

Exposure to companies active in the fossil fuel sector

Total:
4.0%

Benchmark: 10.6%

Data availability:
94.5%

GHG emmission intensity of investee companies

Total:
916
tCO_2e/m EUR (EV)

Benchmark: 1,595tCO_2e

Data availability:
91.9%

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

Total:
58.6%

Benchmark: 51.6%

Data availability:
45.6%

Non-renewable energy consumption

Total:
93.3%

Benchmark: 73.8%

Data availability:
45.6%

Non-renewable energy production

Total:
0.0%

Benchmark: 0.0%

Data availability:
44.7%

Activities negatively affecting biodiversity sensitive areas

Total:
0.0%

Benchmark: 0.0%

Data availability:
94.4%

The Fund's estimated operational impact indicators shown above are based on ISS SFDR Principal Adverse Impact Data (**ISS Impact Data**). The ISS Impact Data has not been verified by us and may be inaccurate or incomplete. The estimate is therefore indicative only and is provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022 and the Fund's investment value of $185.7 million as at 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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Fund level metrics – Estimated Operational Impact Indicators

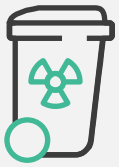
Emissions to Water

Total:
0.4
tonnes/mEUR

Benchmark:
2.14tonnes/mEUR

Data availability:
0.8%

Hazardous waste ratio



Total:
56.4
tonnes/mEUR

Benchmark:
25,271tonnes/mEUR

Data availability:
27.1%

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

Total:
0.0%

Benchmark: 2.2%

Data availability:
92.1%

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

Total:
19.3%

Benchmark: 28.6%

Data availability:
80.6%

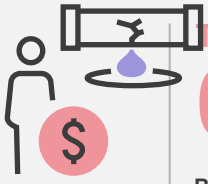
Exposure to controversial weapons (anti-personnel mines, cluster munitions, chemical weapons and biological weapons)

Total:
0.0%

Benchmark: 0.2%

Data availability:
94.5%

Board gender diversity (Ratio)



Total:
0.49

Benchmark: 0.49

Data availability:
94.5%

Companies without workplace accident prevention policies

Total:
10.4%

Benchmark: 32.3%

Data availability:
68.4%

Companies without water management policies

Total:
26.1%

Benchmark: 17.9%

Data availability:
60.7%

Companies without carbon emission reduction initiatives

Total:
39.1%

Benchmark: 50.8%

Data availability:
79.2%

Lack of a supplier code of conduct

Total:
12.3%

Benchmark: 26.6%

Data availability:
80.6%

The Fund's estimated operational impact indicators shown above are based on ISS SFDR Principal Adverse Impact Data (**ISS Impact Data**). The ISS Impact Data has not been verified by us and may be inaccurate or incomplete. The estimate is therefore indicative only and is provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022 and the Fund's investment value of $185.7 million as at 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

CASE STUDY

BEFESA

Befesa recycles hazardous waste from secondary aluminium and steel production processes while extracting and reselling the valuable materials such as zinc contained within it.

Issue

The market has focused engagements nearly entirely on reduction in GHG emissions, an issue we have also engaged upon. Whenever possible, the team engage on issues that have high additionality; i.e. material issues that other stakeholders currently do not engage on. In the case of Befesa we saw an opportunity to engage on health and safety practices. At the start of the engagement, Befesa's health and safety performance was materially below comparable waste management and mining companies, despite having shown significant progress in recent years. Its lost-time injury rate (LTIR) has improved by 65% since 2015. Aside from the welfare of employees, lost time due to injury can also have a significant impact on productivity and revenues due to negative operational impacts.

Objective of Engagement

At first glance, Befesa's LTIR targets looked ambitious. From 2019 to 2024, Befesa aims to reduce LTIR by another 50% from 2019-2024, which would translate into a total reduction of more than 80% from 2015 to 2024. In the long term, Befesa aspires to achieve zero accidents. However, we consider the implied LTIR still to be high in absolute terms. In addition, Befesa has set no concrete date to achieve its zero-accident ambition. Through our engagement, we aim to encourage Befesa to significantly exceed the reduction target set in place today.

Outcome

This is an ongoing engagement that has not reached the objective outcome. However, the responsiveness from the company has been encouraging, and we have seen material improvements since the start of our engagement. For instance, Befesa has continued to reduce its LTIR; falling from 2.1x in 2019 to 0.8x in 2021.We are also encouraged by Befesa's enhanced investor communication on its health and safety progress, notably as part of its quarterly reports.

Action

As we had anticipated, Befesa met its 2024 LTIR reduction target ahead of time. Befesa's promising improvement to date should pave the way for setting a more ambitious target. We remain invested.

CASE STUDY

EVOQUA WATER TECHNOLOGIES

Evoqua is the leader in sophisticated water treatment solutions and is providing service-based solutions for companies to implement better water treatment in their operations.

Issue

Evoqua has been in the early stages of establishing a sustainability strategy and reporting: its first sustainability report was published in 2021. This means that processes and reporting on key sustainability issues can be improved. This matters particularly to the most material issues: measurement of product impacts, human capital management, and decarbonisation of operations and supply chain. We believe that the company's adoption of a more systematic and transparent approach to sustainability issues will contribute to unlocking further value creation through higher operational quality recognised by the market.

Objective of Engagement

The engagement has had three priorities since initiating a position in 2020: systematic measurement and reporting of product impact metrics such as avoided water use; establish a comprehensive decarbonisation plan covering Scope 1, 2 and 3 emissions; improve human capital management notably related to diversity, equality and inclusion (DEI).

Outcome

Some of the engagement objectives have already been met: in 2021, the company appointed a senior executive in charge of sustainability, expanded its internal capabilities with a better-resourced sustainability team, and improved sustainability reporting. This has been externally validated by upgrades in ESG ratings. Beyond this, the company has been working on decarbonisation and is currently working on establishing a Science-Based Target and carrying out lifecycle analyses to better understand the carbon footprint of its various water treatment technologies. They put in place a "Sustainability Innovation Checklist", a systematic way to review new products to quantify avoided water use, avoided carbon emissions, end-of-life plans etc. They established several DEI initiatives, such as unconscious bias training and an inclusion network, which they rolled out in 2022.

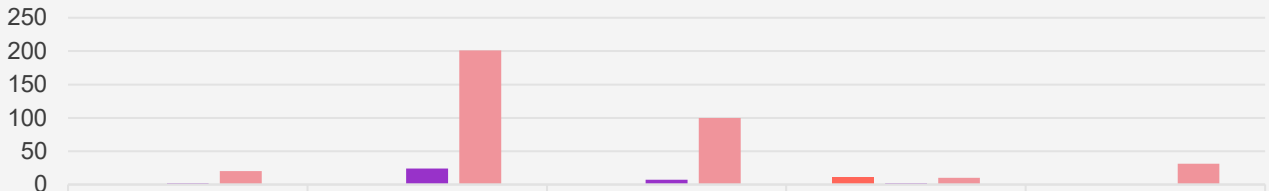
Action

In 2022, our engagement focused on deeper integration of product impacts (which the company refers to as "handprint"), not only in external reporting, but also throughout the company's R&D and product development processes. This enables deeper integration of sustainability issues from the design stage and is particularly important as the company has been investing more in R&D, notably opening a new R&D centre. We also discussed the potential to establish DEI targets to track progress on the company's DEI initiatives.

Proxy Voting

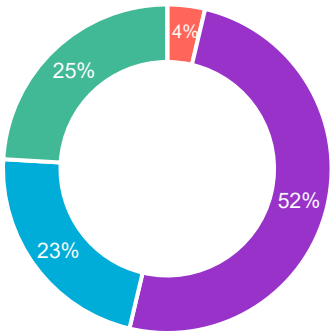
33	408	54	13%
Total number of **Meetings**	Total number of **Proposals**	Total number of **Significant Votes**	Percentage of **Significant Votes**

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



	Asia Pacific	Europe	North America	South America	United Kingdom
Abstain	0	0	0	11	0
Against	2	24	7	2	0
For	20	201	100	10	31

Significant votes by region

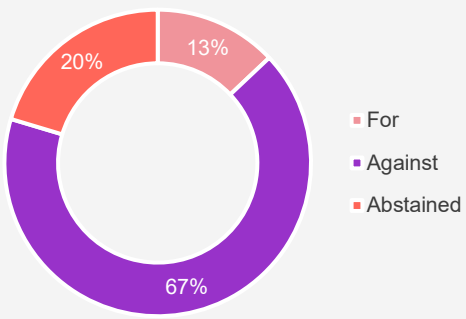


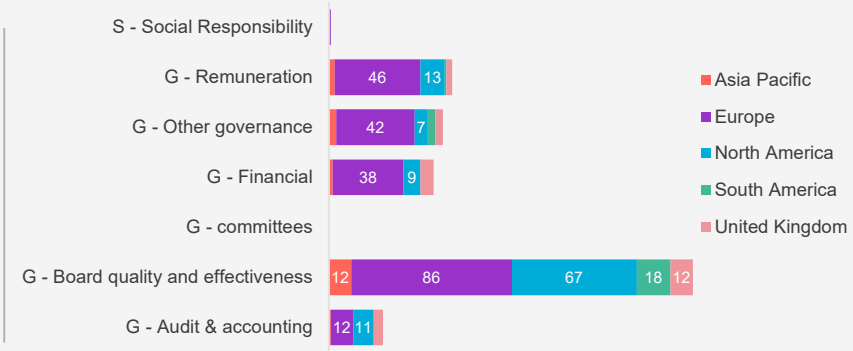
In reporting our voting activity to our clients, we believe the focus should be on significant votes. We define "significant" votes as votes where:

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





Note: 'G' abbreviated for 'Governance' in the reporting above
Source: Regnan for the period of 1 January 2022 to 31 December 2022
Proxy Voting Policy can be downloaded from: https://www.pendalgroup.com/about/corporate-governance/proxy-voting/

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Company specific impact metrics

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Company specific impact metrics

The team's aim is to both reduce negative impacts, as well as amplify positive impacts of companies held by the Fund; this is an important part of our investor impact. Where negative metrics have been identified, these represent a specific engagement target, while those in green relate to positive solution impacts.

Below table (p.16-18) shows each of the company's positive (green) and negative (red) impact metrics reported and tracked over time.

Summary of Value		Year-ended					
Company	Name	2017	2018	2019	2020	2021	2022
Abcam	Antibodies validated for third-party platforms/diagnostic use (#)	-	-	137	561	985	>1,000
	Share of product citations in global life science publications (%)	-	-	41	50	-	-
	Share of revenue of highly validated, in-house products (%)	-	-	47	54	61	>65%
Afya	Free consultations offered by Afya students (#)	-	-	270,000	427,184	341,286	471,107
	Aggregated number of physicians graduated (#)	-	-	8,306	12,691	17,000	18,104
	Student enrollment: Total medical student base (#)	-	4,724	6,597	11,030	16,017	17,968
	Total approved medical seats (#)	-	9,17	1,572	2,143	2,731	3,163
	Greenhouse gas emissions (mt tonnes)	-	-	-	1,664	4,048	5,459
Agilent	R&D expenditure ($m)	341	387	404	495	441	467
Alfen	CO_2e emissions avoided (m tonnes)	-	-	-	1.4	2.2	3.8
	Annual charge points produced (#)	-	12,200	25,800	55,000	114,800	265,600
	Annual substations produced (#)	-	1,800	2,930	3,320	3,240	3,065
	Potential households supplied with renewable energy (#)	-	-	-	142,000	206,000	283,000
	Lost Time Injury Frequency Rate/LTIFR (#)	-	4.5	5.5	2.7	2.5	0.8
Ansys	R&D expenditure ($m)	202.7	233.8	298.2	355.0	405.0	434.0
	Student free version downloads (#)	260,000	260,000	290,000	500,000	550,000	520,000
	GHG emissions scope 1 and 2 (mt tonnes)	-	-	16,531	16,634	16,287	13,359
ATS	Life science backlog (CA$m)	-	-	-	770	805	1,113
	Transportation backlog (CA$m)	-	-	-	385	272	293
Autolus	R&D expenditure ($m)	16.0	48.3	105.4	134.9	134.8	142.0
Bank Rakyat	BRILink agents (#)	279,750	401,550	422,160	504,233	503,031	627,012
	Micro Loans Outstanding (IDRt)	239.5	274.3	307.7	351.3	397	502.967
	Small and Medium Loans Outstanding (IDRt)	173.8	201.3	220.2	217.2	224.9	237.834
	Coal Fired Powerplant Loans outstanding (% loan book)	-	3.8	3.9	2.9	2.5	2.1
	Palm Oil Loans outstanding (% loan book)	-	6.7	6.3	6.1	5.8	6.3
Befesa	Recovered materials: waelz oxide and aluminium (mt tonnes)	-	600,000	1,175,000	1,278,000	1,442,000	1,649,000
	Recycled residues (mt tonnes)	1,170,900	1,234,700	1,493,000	1,477,000	1,643,000	1,845,000
	GHG emissions (mt tonnes)	609,000	664,000	655,000	650,000	797,000	1,037,000
	Lost Time Injury Rate/LTIR (#)	3.0	3.2	2.0	1.3	0.8	0.6

The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by each of the companies (sourced from their annual reports and/or sustainability reports and/ or other company reports). For 2022, the company specific impact metrics for Abcam (Estimated Impact Metrics) are estimated by Net Purpose, a third party data provider. The Impact Metrics and Estimated Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics and Estimated Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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Company specific impact metrics

Summary of Value		Year-ended					
Company	Name	2017	2018	2019	2020	2021	2022
Carl Zeiss Meditec	R&D expenditure (€m)	145.8	159.6	173.3	218.8	232.1	291.4
	Carbon dioxide emissions (mt tonnes)	206,466	213,308	208,302	124,783	37,863	62,255
	Carbon intensity (mt tonnes/€m)	73	71	47	35	9	13
Duerr	EV order intake (€m)	-	278	400	650	776.4	1,100
	R&D expenditure (€m)	-	121	111	108	124	137
	Work related accidents per 1 million hours worked (#)	7.0	7.2	7.0	4.7	5.3	8.2
	Total scope 1 and 2 emissions (mt tonnes)	62,590	61,224	56,683	49,359	48,372	27,762
Ecolab	GHG emissions avoided (mt tonnes)	-	1,088,435	1,500,000	3,500,000	3,600,000	3,600,000
	Water withdrawals avoided (billion gallons)	-	188	206	937.3	978.25	995.6
	GHG emissions scope 1 and 2 (mt tonnes)	-	460,055	469,175	335,126	330,999	386,076
	Total hazardous waste (mt tonnes)	-	-	25.204	22.861	28.028	43,881
	Total water used (m^3)	-	-	2,182	1,902	1,847	1,857
Evoqua	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 Sustainable Infrastructure	Carbon reduction (million mt tonnes)	-	-	496,000	384,000	200,000	-
	CarbonCount® (mt tonnes of CO_2 offset/$1,000 invested)	0.56	0.42	0.3	1.03	0.5	0.35
	Water savings (billion gallons)	0.6	0.3	0.4	0.6	0.2	0.2
	WaterCount™ (mt gallons of water saved/$1,000 invested)	-	-	293	303	140	1,180
	Carbon reduction (million mt tonnes)	0.5	0.5	0.4	2.0	1.0	0.6
	Gender board diversity (%)	-	29	29	33	33	33
	Racial/ethnic minority board diversity (%)	-	-	-	11	11	22
Hoffmann Green Cement	Avoided GHG emissions (mt tonnes)	-	-	-	711	4,620	-
	Avoided limestone extraction (mt tonnes)	-	-	-	1,435	8,187	-
Home REIT	Beds provided (#)	-	-	-	-	3,846	8,103
	Properties purchased (#)	-	-	-	-	711	1,585
	Tenant partners (#)	-	-	-	-	21	28
Horiba	R&D expenditure (JPYm)	13,911	15,183	16,254	15,594	16,710	18,585
Ilika	R&D expenditure (£m)	2.1	2.0	2.1	2.3	2.3	4.8
Lenzing	R&D expenditure (€m)	-	27.7	24.6	16.2	24	29
	GHG emissions scope 1 and 2 (mt tonnes)	-	1,750,000	1,640,000	1,380,000	1,610,000	1,270,000
Lonza	Commercial molecules (#)	-	290	310	245	245	190
	Pre-clinical and clinical molecules (#)	-	575	730	820	780	825
	Non-recycled or treated waste intensity (mt tonnes/CHFm)	-	24.0	26.4	27.9	10.0	9.9
	Water intensity (million m^3/CHF)	1,720	1,422	1,326	1,111	6,831	500
Novo Nordisk	Patients reached (#m)	-	29.2	30.0	32.8	34.6	36.3
	Patients reached with access programmes (#m)	-	0.3	2.9	3.2	1.7	1.8
	Product recalls (#)	-	3.0	4.0	0.0	1.0	3

The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by each of the companies (sourced from their annual reports and/or sustainability reports and/ or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

Regnan

Company specific impact metrics

Summary of Value		Year-ended					
Company	Name	2017	2018	2019	2020	2021	2022
Orsted	Avoided carbon emissions (mt tonnes)	6,700,000	8,100,000	11,300,000	13,100,000	15,100,000	18,200,000
	Installed renewable generation (MW)	16,700	17,200	20,118	25,424	29,050	35,641.0
	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
Procredit	Avoided CO_2 emissions (mt tonnes)	50,481	52,437	162,501	267,586	324,500	144,655
	Green loan number (#)	7,014.0	6,708.0	6,345.0	6,846.0	7,828.0	8,753.00
	Green loans volume (€m)	489.1	677.5	795.4	985.0	1,128.0	1,231.10
PTC	R&D expenditure ($m)	236.0	249.8	246.9	256.6	299.9	338.8
Qiagen	R&D expenditure (€m)	154.1	161.9	157.4	170.0	224.5	181.0
Sartorius	Patents and trademarks (#)	197	154	222	339	234	353
Siemens Gamesa Renewable Energy	Avoided GHG emissions (mt tonnes)	-	-	26,000,000	24,000,000	48,000,000	26,000,000
	Avoided Nox emissions (mt tonnes)	-	-	200,000	200,000	400,000	100,000
	Total wind installed capacity (GW)	82.070	89.504	99.034	107.502	117.666	127.500
	GHG emissions scope 1 and 2 (mt tonnes)	-	61,367	70,698	27,910	28,805	27,713
Stevanato	R&D expenditure (€m)	-	-	-	17	30	34
Syncona	Cumulative capital invested in life science portfolio companies (£m)	116	235	383	590	780	1,000
	Portfolio companies (#)	7	8	10	9	11	13
Tomra	RVMs installed (#)	82,000	83,100	77,500	78,000	81,000	82,000
	Sorting machines installed (#)	13,470	16,323	17,578	19,468	21,430	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
	Reportable injuries (#)	102	113	142	71	92	147
Umicore	R&D expenditure (€m)	175	196	211	223	245	315
	Capital expenditure (€m)	365	478	553	403	389	470
	Scope 1 CO_2e emissions (mt tonnes)	364,139	417,140	389,101	330,619	372,699	346,439
	Scope 2 CO_2e emissions – Market based (mt tonnes)	269,565	350,562	402,795	401,926	473,738	338,554
Valeo	Share of innovative products in order intake (%)	50	53	47	56	45	62
	Share of products contributing to the reduction of CO_2 (%)	50	50	57	60	60	60
	GHG emissions scope 1 and 2 (mt tonnes)	-	1,045,000	1,162,000	631,000	775,000	708,000
	Scope 3 downstream emissions product use (mt tonnes)	108,000,000	99,574,000	39,000,000	30,800,000	36,845,000	35,814,000
Xylem	Avoided emissions from product use (mt tonnes)	-		300,000	700,000	730,000	1,050
	Non-revenue water reduced (m^3)	-	0	0.12	0.5	0.44	0.47
	Water treated for reuse (m^3)	-	0	0.4	4.3	1.08	3.08
	GHG emissions scope 1 and 2 (mt tonnes)	97,733	102,227	92,598	88,990	92,276	-
YDUQS	Distance learning centres (#)	394	607	933	1,510	2,030	2,506
	Total student base (#)	515,400	517,768	569,747	762,645	1,243,861	1,194,900
	Medical student base (#)	3,300	3,570	4,028	5,378	6,463	7,500

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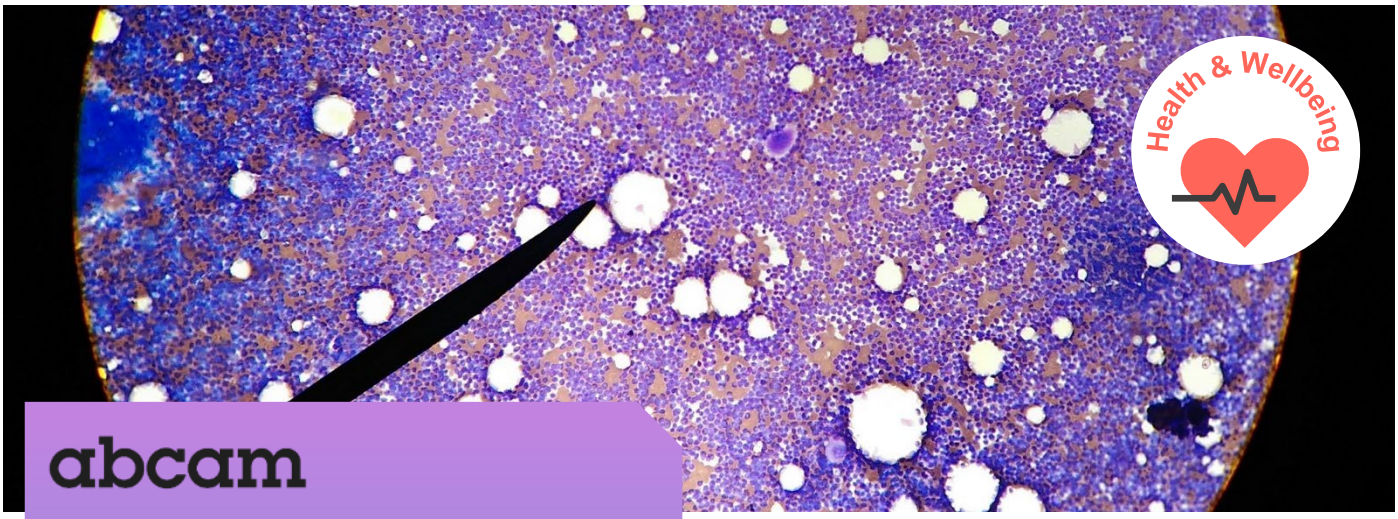


abcam

Theory of change

Biomedical research, which seeks to understand the biology of a vast range of diseases, ranging from cancer to types to autoimmune diseases, suffers from a reproducibility crisis. Abcam is helping to solve this challenge by providing highly validated antibody solutions, developed on its leading proprietary technology platforms, most notably RabMab technology. Abcam's highly validated antibodies ensure that antibodies perform as expected and significantly reduce batch-to-batch variability, one of the main causes of irreproducibility. Abcam's antibody solutions therefore increase the likelihood of success, and therefore the pace of advances in biomedical research.

Pathway of change

INPUT

- Antibody technology platforms (AxioMx, Epitomics)
- Online antibody catalogue
- Knock-out validation techniques
- Employees (#>1,500)

OUPUT

- Antibodies validated for third-party platforms/diagnostic use (#)
- Impact materiality (%)
- Share of revenue of highly validated, in-house products (%)

OUTCOME

- Increased reproducibility of biomedical research experiments
- Share of product citations in global life science publications

IMPACT

- Highly validated and effective antibodies result in significant cost savings, and thus improved R&D efficiency, for biomedical researchers
- Higher reproducibility of experiments significantly enhances their scientific value, thereby accelerating the pace of scientific progress

Summary of Value	Year-ended					
Name	2017	2018	2019	2020	2021	2022
Antibodies validated for third-party platforms/diagnostic use (#)	-	-	137	561	985	>1,000*
Share of product citations in global life science publications (%)	-	-	41	50	-	-
Share of revenue of highly validated, in-house products (%)	-	-	47	54	61	>65%*

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.abcam.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). For 2022, the company specific impact metrics for Abcam (Estimated Impact Metrics) are estimated by Net Purpose, a third party data provider. The Impact Metrics and Estimated Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics and Estimated Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

Theory of change

Afya 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

OUPUT

- 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
Free consultations offered by Afya students (#)	-	-	270,000	427,184	341,286	471,107
Aggregated number of physicians graduated (#)	-	-	8,306	12,691	17,000	18,104
Student enrollment: Total medical student base (#)	-	4,724	6,597	11,030	16,017	17,968
Total approved medical seats (#)	-	9,17	1,572	2,143	2,731	3,163
Greenhouse gas emissions (mt tonnes)	-	-	-	1,664	4,048	5,459

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.afya.com.br.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)
- Employees (#)
- Capital expenditure ($)

OUPUT

- 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
R&D expenditure ($m)	341	387	404	495	441	467

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.agilent.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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)

OUPUT

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

OUTCOME

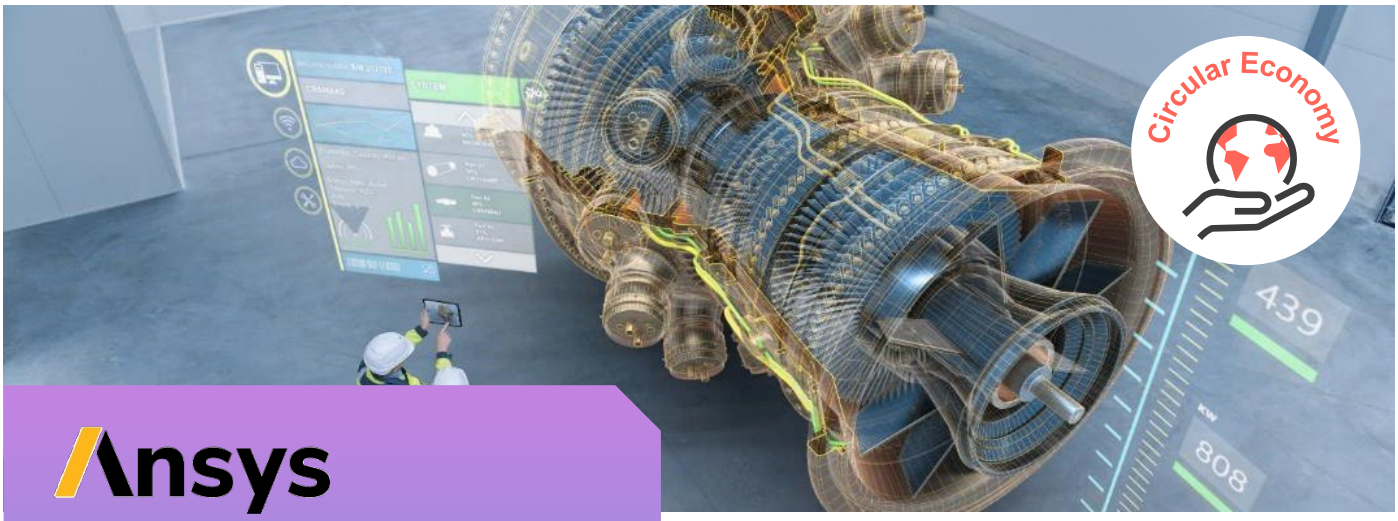
- CO_2e emissions avoided (mt) by Alfen charge points that have been powering electric vehicles and avoiding harmful emissions
- Potential households supplied with renewable energy from solar PV parks that were grid connected through Alfen's smart grid solutions (#)

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
CO_2e emissions avoided (m tonnes)	-	-	-	1.4	2.2	3.8
Annual charge points produced (#)	-	12,200	25,800	55,000	114,800	265,600
Annual substations produced (#)	-	1,800	2,930	3,320	3,240	3,065
Potential households supplied with renewable energy (#)	-	-	-	142,000	206,000	283,000
Lost Time Injury Frequency Rate/LTIFR (#)	-	4.5	5.5	2.7	2.5	0.8

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.alfen.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.



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 ($)
- Employees (#)
- Acquisitions in key growth areas ($)

OUPUT

- 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
R&D expenditure ($m)	202.7	233.8	298.2	355.0	405.0	434.0
Student free version downloads (#)	260,000	260,000	290,000	500,000	550,000	520,000
GHG emissions scope 1 and 2 (mt tonnes)	-	-	16,531	16,634	16,287	13,359

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.ansys.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

NEW INVESTMENT

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

OUPUT

- 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
Life science backlog (CA$m)	-	-	-	770	805	1,113
Transportation backlog (CA$m)	-	-	-	385	272	293

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.atsautomation.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)

OUPUT

- 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
R&D expenditure ($m)	16.0	48.3	105.4	134.9	134.8	142.0

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.autolus.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

BANKRAKYAT
بيڠكو رعيت

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 (#)

OUPUT

- 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
BRILink agents (#)	279,750	401,550	422,160	504,233	503,031	627,012
Micro Loans Outstanding (IDRt)	239.5	274.3	307.7	351.3	397	502.967
Small and Medium Loans Outstanding (IDRt)	173.8	201.3	220.2	217.2	224.9	237.834
Coal Fired Powerplant Loans outstanding (% loan book)	-	3.8	3.9	2.9	2.5	2.1
Palm Oil Loans outstanding (% loan book)	-	6.7	6.3	6.1	5.8	6.3

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.bankrakyat.com.my.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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

OUPUT

- 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
Recovered materials: waelz oxide and aluminium (mt tonnes)	-	600,000	1,175,000	1,278,000	1,442,000	1,649,000
Recycled residues (mt tonnes)	1,170,900	1,234,700	1,493,000	1,477,000	1,643,000	1,845,000
GHG emissions (mt tonnes)	609,000	664,000	655,000	650,000	797,000	1,037,000
Lost Time Injury Rate/LTIR (#)	3.0	3.2	2.0	1.3	0.8	0.6

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.befesa.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 (#)

OUPUT

- 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
R&D expenditure (€m)	145.8	159.6	173.3	218.8	232.1	291.4
Carbon dioxide emissions (mt tonnes)	206,466	213,308	208,302	124,783	37,863	62,255
Carbon intensity (mt tonnes/€m)	73	71	47	35	9	13

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.zeiss.co.uk.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)

OUPUT

- 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
EV order intake (€m)	-	278	400	650	776.4	1,100
R&D expenditure (€m)	-	121	111	108	124	137
Work related accidents per 1 million hours worked (#)	7.0	7.2	7.0	4.7	5.3	8.2
Total scope 1 and 2 emissions (mt tonnes)	62,590	61,224	56,683	49,359	48,372	27,762

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.durr.com/en.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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

OUPUT

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

OUTCOME

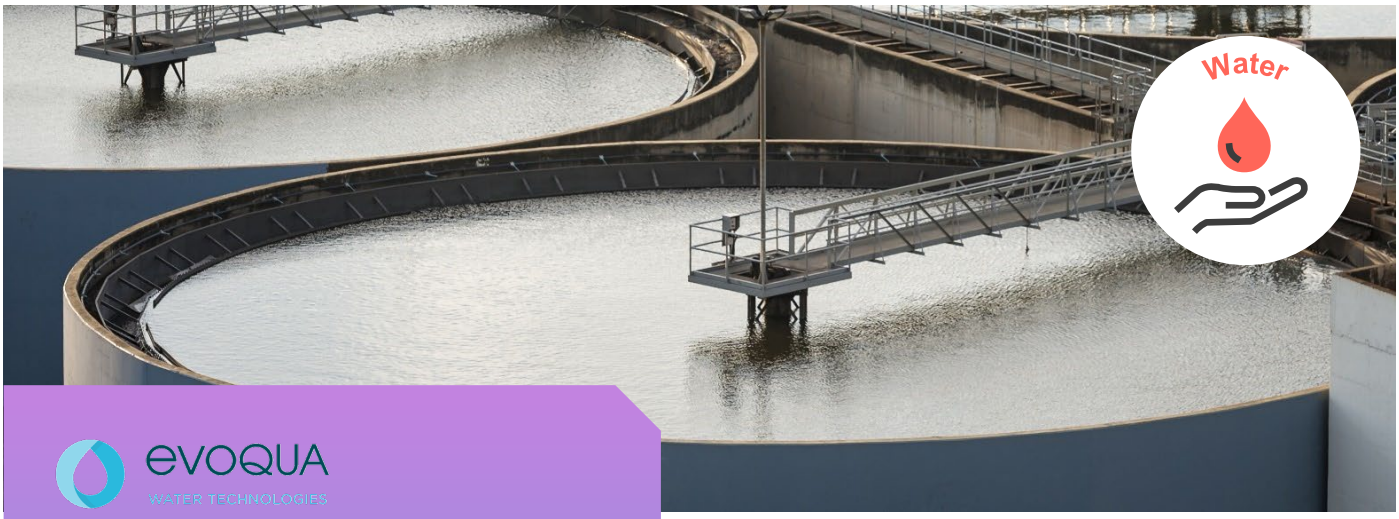
- Water withdrawals avoided (m3)
- GHG emissions avoided (t)
- Waste avoided (t)

IMPACT

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

Summary of Value	Year-ended					
Name	2017	2018	2019	2020	2021	2022
GHG emissions avoided (mt tonnes)	-	1,088,435	1,500,000	3,500,000	3,600,000	3,600,000
Water withdrawals avoided (billion gallons)	-	188	206	937.3	978.25	995.6
GHG emissions scope 1 and 2 (mt tonnes)	-	460,055	469,175	335,126	330,999	386,076
Total hazardous waste (mt tonnes)	-	-	25.204	22.861	28.028	43,881
Total water used (m^3)	-	-	2,182	1,902	1,847	1,857

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.ecolab.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.



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 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 ($)

OUPUT

- 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
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

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.evoqua.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

EXITED

HANNON ARMSTRONG

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

OUPUT

- 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
Carbon reduction (million mt tonnes)	-	-	496,000	384,000	200,000	-
CarbonCount® (mt tonnes of CO_2 offset/$1,000 invested)	0.56	0.42	0.3	1.03	0.5	0.35
Water savings (billion gallons)	0.6	0.3	0.4	0.6	0.2	0.2
WaterCount™ (mt gallons of water saved/$1,000 invested)	-	-	293	303	140	1,180
Carbon reduction (million mt tonnes)	0.5	0.5	0.4	2.0	1.0	0.6
Gender board diversity (%)	-	29	29	33	33	33

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.hannonarmstrong.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)
- R&D for new cement technologies ($)

OUPUT

- 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
Avoided GHG emissions (mt tonnes)	-	-	-	711	4,620	-
Avoided limestone extraction (mt tonnes)	-	-	-	1,435	8,187	-

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.ciments-hoffmann.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

EXITED

Theory of change

Home REIT is the first real estate investment trust dedicated to fighting homelessness in the UK. Since its IPO in October 2020, HOME has acquired over 3,000 beds throughout the UK for individuals and families that were homeless or threatened with homelessness. The accommodation that HOME provides is cost-effective in absolute terms and is materially cheaper than other forms of accommodation available to local authorities, such as bed & breakfasts (B&Bs) and hotels. All of the properties are recently refurbished to a high standard and provide individuals, as well as families, well-being support and a place to rebuild their lives and reintegrate back into society.

Pathway of change

INPUT

- Primary capital raise ($)
- Number of properties purchased (#)
- Number of tenant partners (#)

OUPUT

- Number of beds provided (#)
- Number of previously homeless individuals, in long term accommodation (#)

OUTCOME

- Support provided to residents by charity partners, including related to education, training, employment and health services.
- Savings to local authority versus alternative accommodation
- Increased education and skills of residents
- Improved health and wellbeing of residents

IMPACT

- Facilitating the reduction of homelessness in the UK
- Creating the structure to help individuals transition from homelessness to private rented sector

Summary of Value	Year-ended					
Name	2017	2018	2019	2020	2021	2022
Beds provided (#)	-	-	-	-	3,846	8,103
Properties purchased (#)	-	-	-	-	711	1,585
Tenant partners (#)	-	-	-	-	21	28

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.homereituk.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)
- Capex ($)

OUPUT

- 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
R&D expenditure (JPYm)	13,911	15,183	16,254	15,594	16,710	18,585

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.horiba.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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)

OUPUT

- 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
R&D expenditure (£m)	2.1	2.0	2.1	2.3	2.3	4.8

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.ilika.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)

OUPUT

- 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
R&D expenditure (€m)	-	27.7	24.6	16.2	24	29
GHG emissions scope 1 and 2 (mt tonnes)	-	1,750,000	1,640,000	1,380,000	1,610,000	1,270,000

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.lenzing.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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

OUPUT

- 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
Commercial molecules (#)	-	290	310	245	245	190
Pre-clinical and clinical molecules (#)	-	575	730	820	780	825
Non-recycled or treated waste intensity (mt tonnes/CHFm)	-	24.0	26.4	27.9	10.0	9.9
Water intensity (million m^3/CHF)	1,720	1,422	1,326	1,111	6,831	500

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.lonza.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 ($)
- R&D expenditure ($)

OUPUT

- 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
Patients reached (#m)	-	29.2	30.0	32.8	34.6	36.3
Patients reached with access programmes (#m)	-	0.3	2.9	3.2	1.7	1.8
Product recalls (#)	-	3.0	4.0	0.0	1.0	3

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.novonordisk.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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)

OUPUT

- 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
Avoided carbon emissions (mt tonnes)	6,700,000	8,100,000	11,300,000	13,100,000	15,100,000	18,200,000
Installed renewable generation (MW)	16,700	17,200	20,118	25,424	29,050	35,641.0
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

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.orsted.co.uk.
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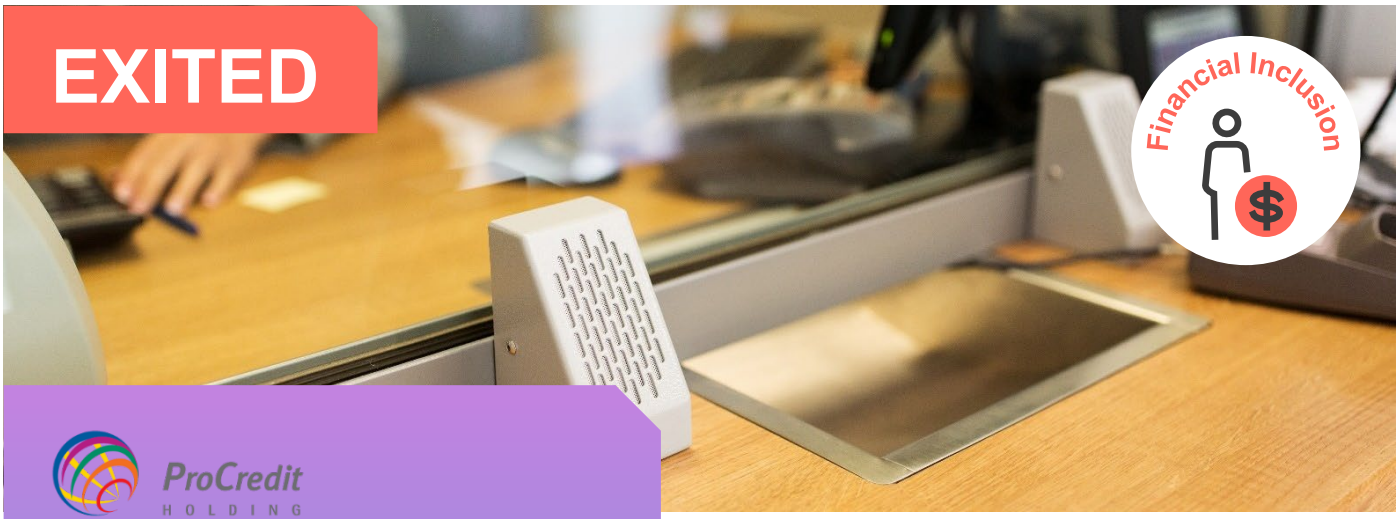

ProCredit HOLDING

Theory of change

SMEs are the core of Eastern and Southeastern economies, providing 60-80% of employment in those countries. High unemployment rates of 10-20% in the region vs 6.5% on average in the EU is in part driven by the lack of access to financing. Investments in renewable energy, energy efficiency projects and sustainable agriculture are also hindered by lack of financing, with traditional banks focused on consumer lending leading to a lending gap and over indebtedness. ProCredit is a bank focused on providing financing to SMEs, which represent 93% of its loan book, as well as green loans, at 17% of the loan book. They support employment creation and the avoidance of CO2 emissions by SMEs it finances.

Pathway of change

INPUT

- SME loan volume ($)
- Green loan volume ($)

OUPUT

- Increased investments made by SMEs ($)
- Increased investments made by SMEs in small-scale renewable energy and energy efficiency projects ($)

OUTCOME

- SME growth (%)
- SME employment (#)
- Avoided emissions (t)

IMPACT

- Employment in the economy
- Improved living standards
- Lower GHG emissions

Summary of Value	Year-ended					
Name	2017	2018	2019	2020	2021	2022
Avoided CO_2 emissions (mt tonnes)	50,481	52,437	162,501	267,586	324,500	144,655
Green loan number (#)	7,014.0	6,708.0	6,345.0	6,846.0	7,828.0	8,753.00
Green loans volume (€m)	489.1	677.5	795.4	985.0	1,128.0	1,231.10

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.procredit-holding.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

ptc

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)

OUPUT

- 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
R&D expenditure ($m)	236.0	249.8	246.9	256.6	299.9	338.8

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.ptc.com/en.
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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 ($)

OUPUT

- 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
R&D expenditure (€m)	154.1	161.9	157.4	170.0	224.5	181.0

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.qiagen.com/us.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 (#)

OUPUT

- 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
Patents and trademarks (#)	197	154	222	339	234	353

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.sartorius.com/en.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

EXITED

SIEMENS Gamesa
RENEWABLE ENERGY

Theory of change

Electricity generation from fossil fuels is responsible for about 25% of GHG emissions, 10% of freshwater withdrawals, and a major driver of air pollution leading to 5m preventable deaths each year. Wind energy could supply up to around 34% of global electric power demand in 2040 from 4% today and eliminate those negative externalities. SGRE is a leader in wind technology, especially offshore, and has been a key contributor to the development of the wind industry by providing world-leading wind turbine technology. Each of its new 14MW turbines can generate enough electricity for 18k average European households every year. SGRE's installed fleet of over 100 GW both offshore and onshore abates more than 260 million tons of CO2 emissions annually.

Pathway of change

INPUT

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

OUPUT

- Revenue linked to positive impact products/services (%)
- Wind turbines installed (#)
- Wind turbines serviced (#)

OUTCOME

- Carbon dioxide avoidance through products sold (tonnes)
- NOx avoidance through products sold (tonnes)
- Water withdrawal avoidance through products sold (m3)
- Particles emissions to air avoidance through products sold

IMPACT

- Reduced GHG emissions from electricity production
- Reduced water withdrawals from electricity production
- Reduced air pollution from electricity production

Summary of Value	Year-ended					
Name	2017	2018	2019	2020	2021	2022
Avoided GHG emissions (mt tonnes)	-	-	26,000,000	24,000,000	48,000,000	26,000,000
Avoided Nox emissions (mt tonnes)	-	-	200,000	200,000	400,000	100,000
Total wind installed capacity (GW)	82.070	89.504	99.034	107.502	117.666	127.500
GHG emissions scope 1 and 2 (mt tonnes)	-	61,367	70,698	27,910	28,805	27,713

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.siemensgamesa.com/en-int.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

NEW INVESTMENT

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 ($)

OUPUT

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

OUTCOME

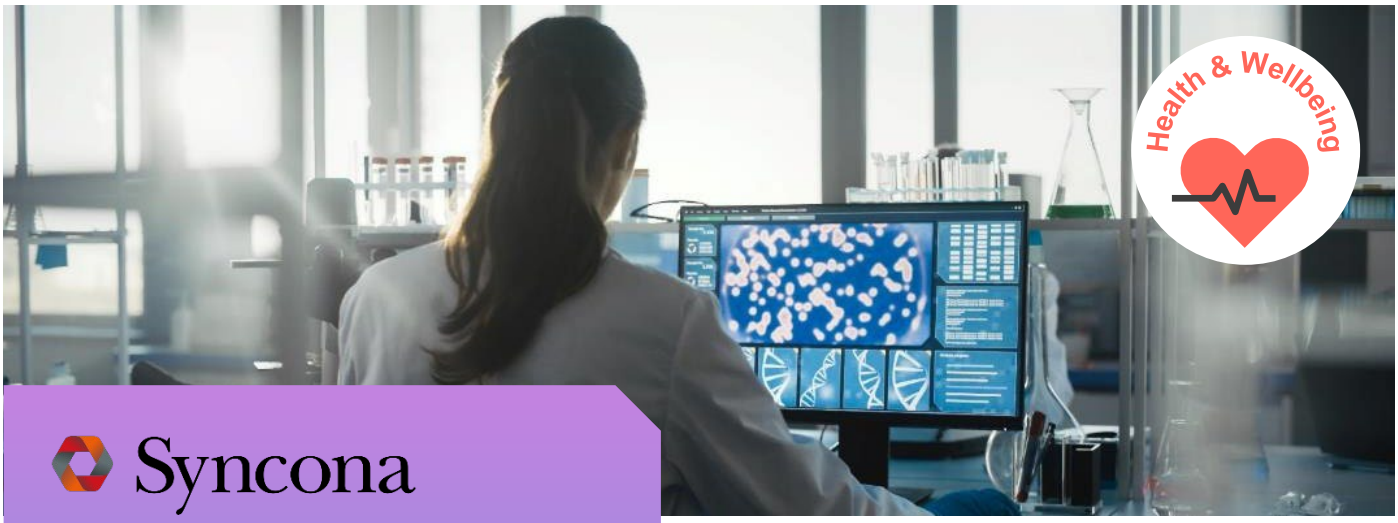
- Improved safety, efficacy and quality of biologic therapeutics
- Improved speed to market for biologic medicines
- Optimised drug administration

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
R&D expenditure (€m)	-	-	-	17	30	34

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.stevanatogroup.com/en.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.



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

OUPUT

- 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
Cumulative capital invested in life science portfolio companies (£m)	116	235	383	590	780	1,000
Portfolio companies (#)	7	8	10	9	11	13

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.synconaltd.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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 (#)

OUPUT

- 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
RVMs installed (#)	82,000	83,100	77,500	78,000	81,000	82,000
Sorting machines installed (#)	13,470	16,323	17,578	19,468	21,430	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
Reportable injuries (#)	102	113	142	71	92	147

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.tomra.com.
The company specific impact metrics for 2017, 2018, 2019, 2020, 2021 and 2022 (Impact Metrics) shown in the table above are based on the impact metrics reported by the company (sourced from its annual reports and/or sustainability reports and/or other company reports). The Impact Metrics have not been verified by us and may be inaccurate or incomplete. The Impact Metrics are therefore indicative only and are provided for illustrative purposes and should not be relied on for the purpose of making investment decisions. The reported numbers are for the period of 1 January 2022 to 31 December 2022. Actual results may differ and subsequent changes in circumstances may occur at any time that impact the accuracy.

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)

OUPUT

- 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
R&D expenditure (€m)	175	196	211	223	245	315
Capital expenditure (€m)	365	478	553	403	389	470
Scope 1 CO_2e emissions (mt tonnes)	364,139	417,140	389,101	330,619	372,699	346,439
Scope 2 CO_2e emissions – Market based (mt tonnes)	269,565	350,562	402,795	401,926	473,738	338,554

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.umicore.com.
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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 (%)

OUPUT

- 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
Share of innovative products in order intake (%)	50	53	47	56	45	62
Share of products contributing to the reduction of CO_2 (%)	50	50	57	60	60	60
GHG emissions scope 1 and 2 (mt tonnes)	-	1,045,000	1,162,000	631,000	775,000	708,000
Scope 3 downstream emissions product use (mt tonnes)	108,000,000	99,574,000	39,000,00	30,800,00	36,845,00	35,814,000

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.valeo.com/en.
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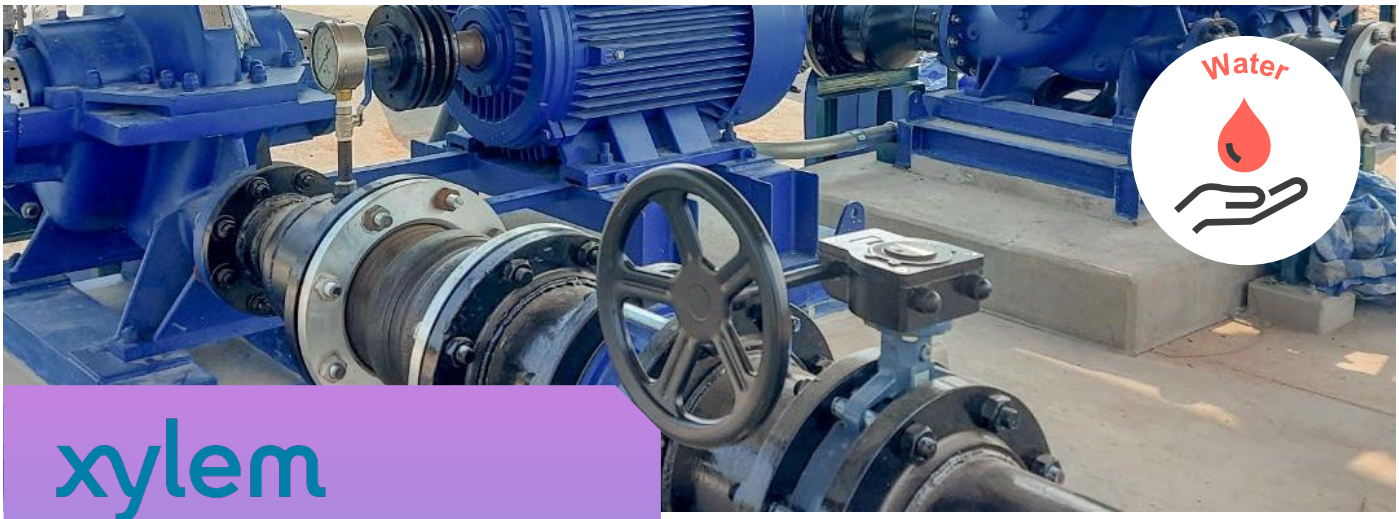

xylem

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 (#)

OUPUT

- 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
Avoided emissions from product use (mt tonnes)	-		300,000	700,000	730,000	1,050
Non-revenue water reduced (m^3)	-	0	0.12	0.5	0.44	0.47
Water treated for reuse (m^3)	-	0	0.4	4.3	1.08	3.08
GHG emissions scope 1 and 2 (mt tonnes)	97,733	102,227	92,598	88,990	92,276	-

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.xylem.com.
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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)

OUPUT

- 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
Distance learning centres (#)	394	607	933	1,510	2,030	2,506
Total student base (#)	515,400	517,768	569,747	762,645	1,243,861	1,194,900
Medical student base (#)	3,300	3,570	4,028	5,378	6,463	7,500

Note: The company's impact metrics reported is shown in green (positive impact) and red (negative impact), in the above table.
Source: JOHCM / Regnan (Theory of Change and Pathway of Change). Company website: www.yduqs.com.br.
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[17]ICCT, 2022, https://theicct.org/publication/a-global-comparison-of-the-life-cycle-greenhouse-gas-emissions-of-combustion-engine-and-electric-passenger-cars/

[18]World Health Organisation, Global Health Estimates, 2020.

[19]OECD, 2021

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