



# Federated Hermes Impact Opportunities Fund

**Impact Annual Report 2020**





# 2020 highlights

Using our proprietary Federated Hermes Impact Database, we are able to estimate the total impact of the companies in which we are invested<sup>1</sup>. We present highlights below:

**48.4** million MT of CO<sub>2</sub> avoided,  
with only **6.1MT** released

**97.1** million MWH of clean  
energy generated

**1.29** billion meters<sup>3</sup> of water  
saved, vs. **166m** consumed

**219.9** million patients treated, and  
**5.2m** lives extended

**948k** Tons of waste recycled (through product solutions) plus a  
further **503k** through recycling programs in operations

Source: Net Purpose, Federated Hermes Impact calculations. As at 31 December 2020.

The Federated Hermes Impact Opportunities Fund  
returned **29.11%** in 2020<sup>2</sup>, outperforming the MSCI All  
Country World index which returned 16.25%.

The fund's outperformance came predominantly from stock  
selection in **Europe** and **North America**.

Sector allocation was neutral; however, our **underweight  
position in Financials and Energy** sectors had a positive  
effect.

● North America ● Europe



In 2020, we engaged with

**77%**

of companies in our portfolio.

We voted against management on the  
following issues...

**9%** board structure

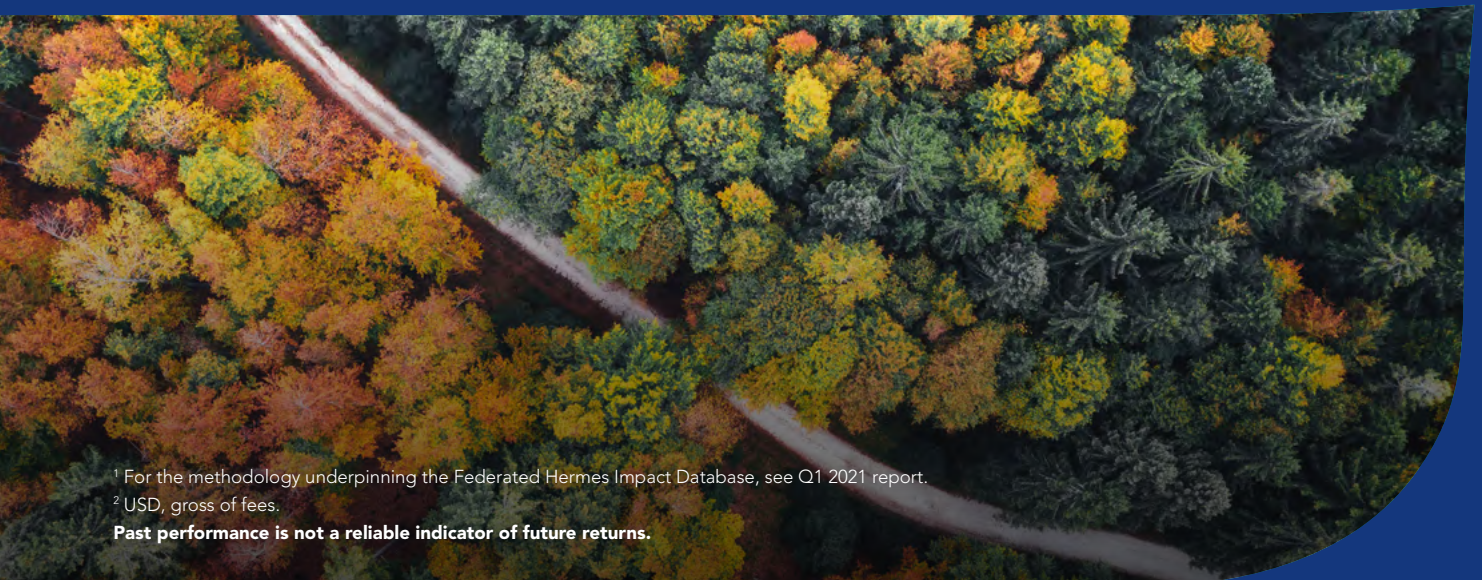
**29%** remuneration

**18%** other

<sup>1</sup> For the methodology underpinning the Federated Hermes Impact Database, see Q1 2021 report.

<sup>2</sup> USD, gross of fees.

Past performance is not a reliable indicator of future returns.





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## SECTION 2

## Fund philosophy

**We aim to outperform the broad global equity market by:**



**Investing in** companies that provide solutions that have a positive impact on people and the planet



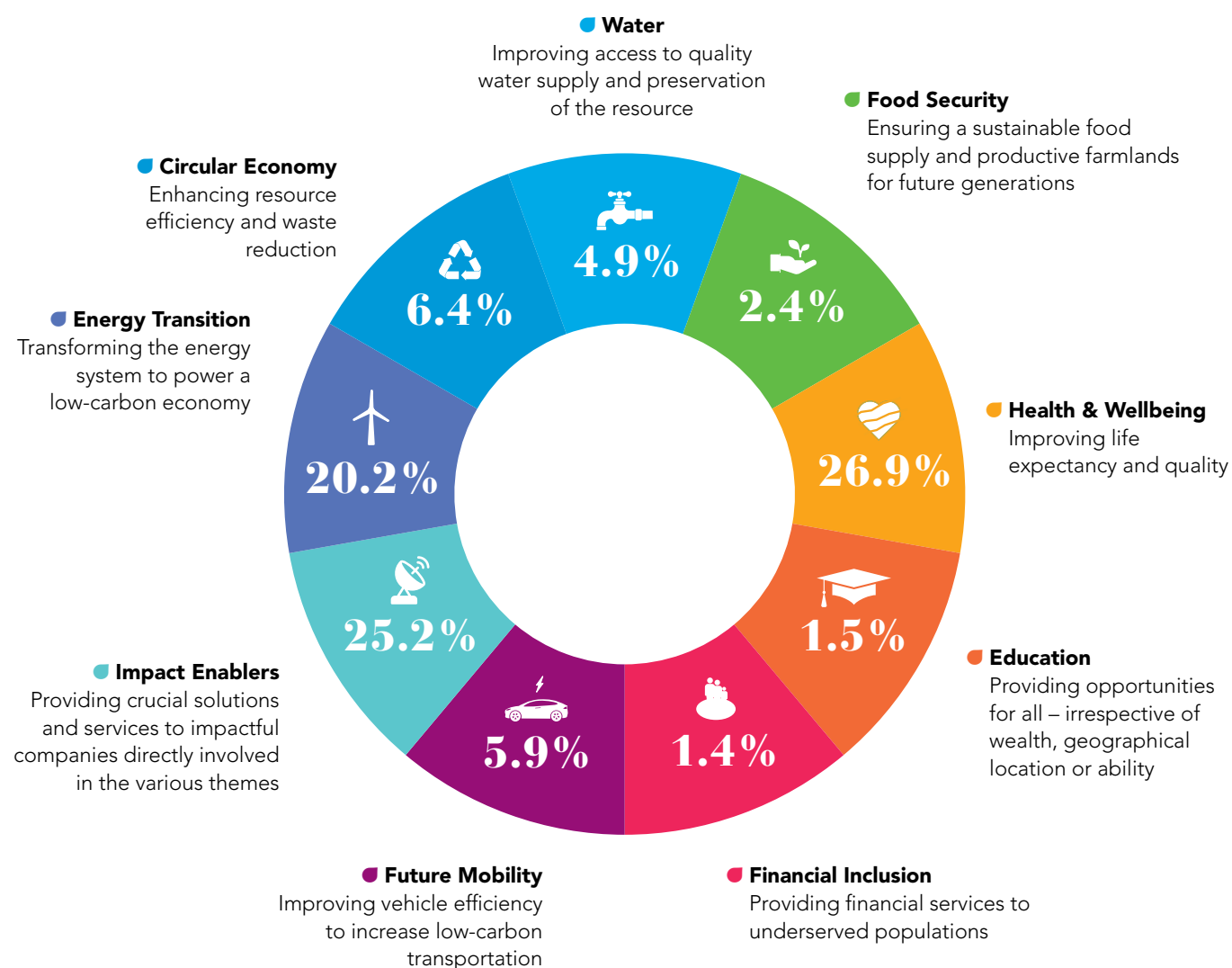
**Identifying** emerging growth opportunities that meet a structural, underserved need



**Taking advantage** of market inefficiencies in pricing long-term change



A thematic approach: our holdings fit into one or more of nine impact themes that are aligned with the SDGs.



Source: Federated Hermes, as at 31 December 2020. Note: as at 31 December 2020, 3.4% of our exposure was not directly related to any of our nine impact themes, while 1.8% was held as cash.



## Impact performance, 2020

### Total company level impact of stocks held, 2020

Using our proprietary Federated Hermes Impact Database, we are able to present our impact data on an aggregated, cross-company basis. Put simply, it depicts our estimation of the total impact that the companies in which we are invested have delivered in 2020. As aforementioned, our database draws on data from company, sector and impact industry reports<sup>3</sup>.

**48.4m MT**  
of CO<sub>2</sub> avoided, with only  
**6.1m MT** released



Average female manager  
and board representation  
of

**28.8%**  
and  
**30.3%**  
respectively



**21.7m**  
people given  
financial access



**\$3.3bn**  
SDG enabling R&D funded  
(excluding Healthcare)



**97.1m MWH**  
of clean energy  
generated



**1.3bn m<sup>3</sup>**  
of water saved vs

**166m** consumed



**219.9m**  
patients treated and

**5.2m**  
lives extended



**97.3k**  
students educated



**\$6.5bn**  
Healthcare R&D funded



**948k tons**

of waste recycled  
(through product  
solutions) plus a further



**503k** through recycling  
programs in  
operations

**18.0k**

life sciences lab budgets  
fully exhausted



**2.0m tons**  
of food waste avoided

**2.6k**

hectares of forest protected




Source: Net Purpose, Federated Hermes Impact calculations. 2020 data, as at 31 July.




## Impact achieved by capital deployed, 2020

As well as producing company-level impact, our database allows us to report on the impact of our Fund's assets under management. Put simply, we scale the metrics to demonstrate the impact accomplished through the capital we deploy – approximately \$450m as at 31 December 2020 – on behalf of our clients, thereby reflecting our ownership of each company held in our Fund.

**32.1k MT**  
CO<sub>2</sub> avoided, with only  
**2.7k MT** released



Average female manager  
and board representation  
of **28.8%**  
and  
**30.3%**  
respectively\*




**5.1k**  
people given  
financial access




**\$2.5m**  
SDG enabling R&D funded  
(excluding Healthcare)




**45.9k MWH**  
of clean energy  
generated



**698.5k m<sup>3</sup>**  
of water saved vs  
**65.2k** consumed



**163.9k**  
patients treated and  
**7.9k** lives extended



**276**  
students educated



**\$4m**  
Healthcare R&D funded




**1.2k MT**  
of waste recycled  
(through product  
solutions) plus a further



**248** through recycling  
programs in operations

**13**  
life sciences lab budgets  
fully exhausted



**3.9k tons**  
of food waste avoided

**2.5**  
hectares of forest protected



\*This metric is based on an average, and therefore does not change when scaled.

Source: Net Purpose, Federated Hermes Impact calculations. 2020 data, as at 31 July.











## Fund performance, 2020<sup>3</sup>

The **Federated Hermes Impact Opportunities fund** returned **29.11%** in 2020 (in USD, gross of fees), significantly outperforming the MSCI All Country World index which returned **16.25%**.

### Stock selection

Stock selection was particularly supportive in Health Care **(+542bps)**, Industrials **(+431bps)**, Utilities **(+259bps)** and Financials **(+258bps)**.

Largest stock contributors	Primary Impact theme	
Siemens Gamesa		These stocks particularly benefited from expectations of increased regulation and spending on sustainable infrastructure as more companies set targets for carbon emission reductions.
Hannon Armstrong		
Orsted		
Sartorius		Healthcare companies benefitting from Covid-19 testing and vaccine development.
Emergent BioSolutions		

Largest stock detractors	Primary Impact theme	
Cogna Educacao		Brazilian education company, sold during the period.
Valeo		Manufacturer of car components, sold during the period.
Livanova		Medical technology company specialising in drug resistant epilepsy and cardiopulmonary, since sold from the portfolio
Horiba		Semiconductor producer, sold during the period.

## Sector and regional biases

Sector allocation was neutral in the period



Positive effect from our underweight position in **Financials** and **Energy** sectors.



Negative effect of our underweight in **Information Technology** and **Consumer Discretionary** sectors.

Looking at regions, the fund's outperformance came predominantly from stock selection in Europe and North America.

This document does not constitute a solicitation or offer to any person to buy or sell any related securities or financial instruments. The value of investments and income from them may go down as well as up, and you may not get back the original amount invested. Any investments overseas may be affected by currency exchange rates. Past performance is not a reliable indicator of future results and targets are not guaranteed.

<sup>3</sup> Management fees are not included and will have the effect of reducing performance.



## Fund positioning, 2020








The portfolio remains high conviction and benchmark agnostic, with positioning driven by stock-specific fundamentals and a typical holdings range of between 30-40 companies.

The portfolio is underweight, relative to the benchmark, in Consumer Discretionary and Financials. Due to not holding any Facebook, Amazon, Apple, Netflix, and Google (FAANG) stocks, the portfolio also demonstrates a significant underweight in Information Technology and Communication Services.

**Figure 1.** Portfolio activity highlights, 2020

Last year, we utilised the heightened market volatility to add several new names to the portfolio, while selling out of names where we had less conviction.

Some of our purchases and sales are highlighted below:

Portfolio additions	Related impact theme
Dexcom	 Health and Wellbeing
Strategic Education	 Education
Straumann	 Health and Wellbeing
Ballard Power	 Future Mobility
Positions offloaded	Related impact theme
Duerr	 Future Mobility
Horiba	 Impact Enabler
Cogna Educacao	 Education

## Fund outlook

The vaccine rollout appears to be helping combat the spread of Covid-19, encouraging hopes of economies reopening, while also raising concerns of rising inflation and interest rates. This change in sentiment has led to a large rotation in market leadership in the first half of 2021. Value stocks – and, in particular, Financials and Energy stocks – were staging a strong recovery, with Growth underperforming. Nevertheless, governing bodies around the world still need to provide stimulus, and central banks will likely remain cautious in their measures.

Our overweight positions have come this year from Health Care and Industrials. On a country basis, we are also slightly overweight in European stocks and underweight in those from Asia Pacific and North America.

We have been encouraged by the resilience in earnings of most portfolio companies over the last year. We remain confident in our strategy's long-term outlook: impactful companies are essential in serving the unmet needs of the environment and society. Our approach not only stands to generate a positive impact, we are also exposed to enduring, secular growth opportunities.



**The pandemic has highlighted the importance of improving food and water security, as well as strengthening health care systems and supply chains.**

The pandemic has highlighted the importance of improving food and water security, as well as strengthening health care systems and supply chains. Whilst we already invest and engage on these topics, we hope that growing awareness of these issues leads to further investment and innovation. As governing bodies use stimulus to support economies, we believe companies addressing the SDGs remain best placed to benefit.



## Engagement: a force for change

The international business of Federated Hermes has stood at the forefront of responsible investing; catalysing corporate governance reform since our 1983 inception and engaging internationally from 1996 onwards, we have always championed investors' interests.

In 2004, EOS at Federated Hermes (EOS) was created to meet the needs of investors with a strong commitment to stewardship – a commitment consistent with our mission to generate Sustainable Wealth Creation. In 2005, EOS led the committee that drafted the Principles for Responsible Investment (PRI).

Today, EOS has one of the largest stewardship resources of any fund manager in the world, with a diverse team who engage globally on social, environmental, governance and strategic issues. The team primarily focus on board-level interactions and represent \$1.7tn in assets (as at 30 June 2021).

Within the Impact Opportunities team, we consider engagement an important feedback tool, and an opportunity to help drive positive change within and alongside businesses. As a result, active engagement and voting form a core part of our investment process, and we aim to engage alongside EOS wherever relevant to our portfolio holdings.

While we understand that outcomes can take time, we believe engagement is essential to encourage best practice and grow positive impact. Engagement also complements our long-term investment outlook.

To measure our progress and the achievement of engagement objectives, we use a four-stage milestone strategy.

**Figure 3.** Our four-stage milestone system

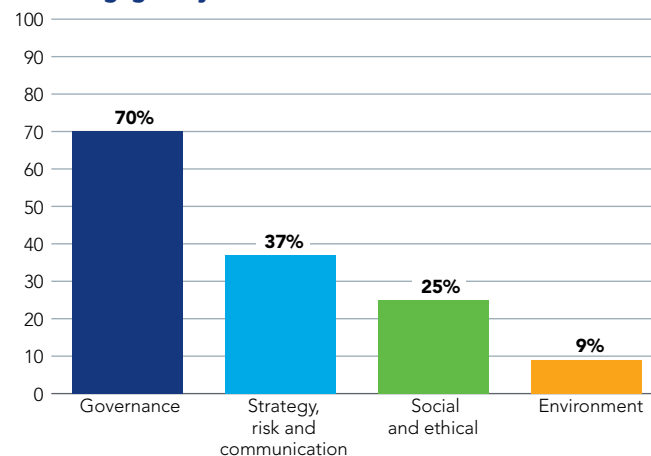


**Today, EOS has one of the largest stewardship resources of any fund manager in the world, with a diverse team who engage globally on social, environmental, governance and strategic issues.**

## Engagement

As at 31 December 2020, the Fund had engaged with 77% of companies on a plethora of topics.

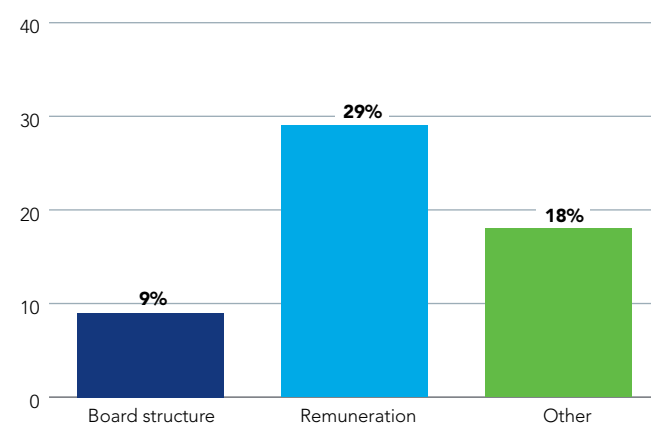
### AUM engaged by theme



Source : Federated Hermes, as at 31 December 2020

## Voting activity

We voted against management on the following issues:





Over the last year, we have had several constructive engagements with materials technology company, Umicore, regarding management's navigation of the pandemic and the business' greenhouse gas (GHG) emissions reduction program.

**The company announced significant progress in Q2 2021, with net-zero emissions reduction targets (scope 1 and 2) set for 2035 and a commitment to report against the TCFD framework.**

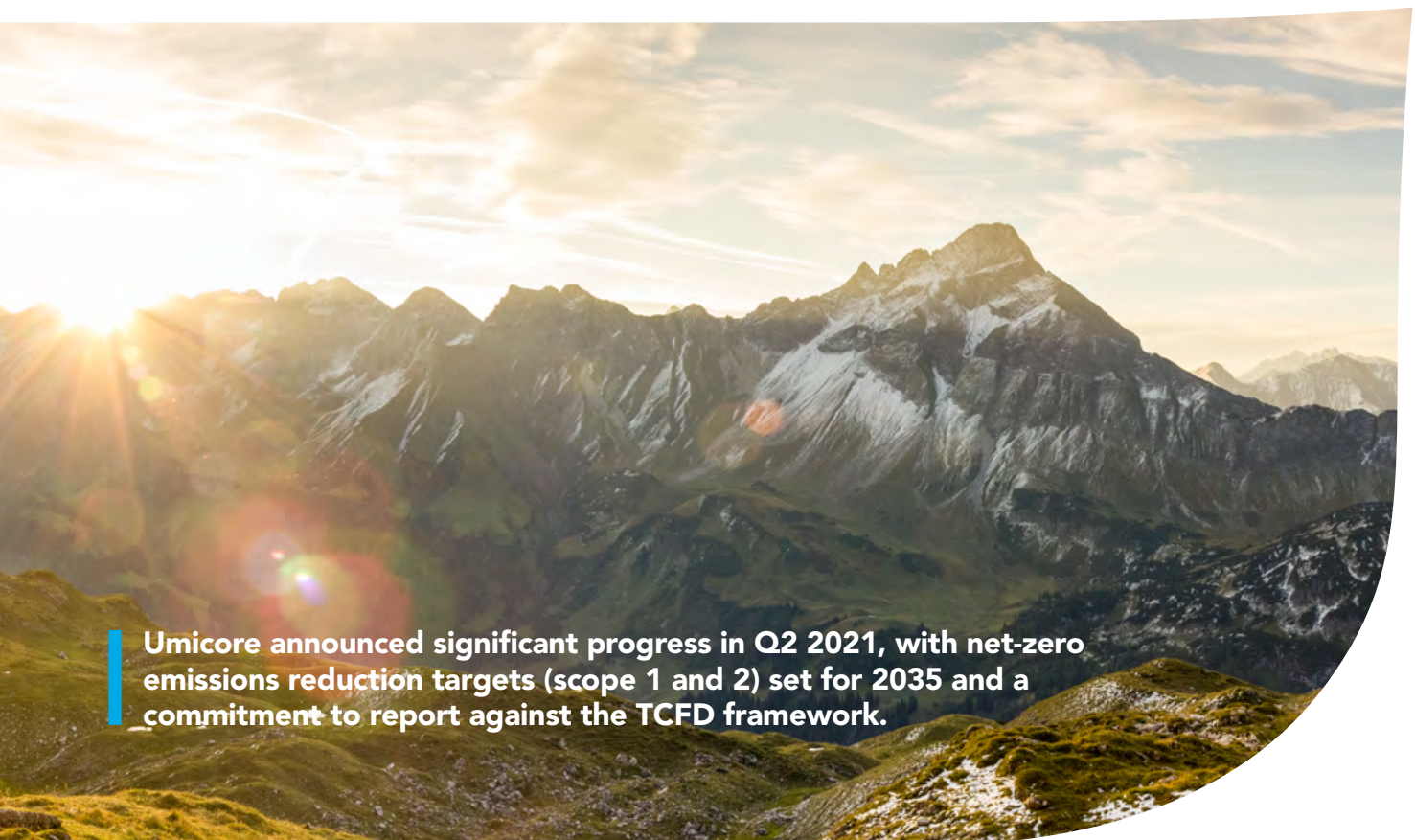
The pandemic had an undeniable impact on the company's automotive operations (catalysts and cathode materials), with factory closures in some regions. But while up to 10% of employees faced temporary unemployment,

encouragingly, the company topped-up their benefits. Umicore's third business segment – which relates to recycling – also helped offset this.

Despite the company producing battery technology for electric vehicles – which feeds into our Future Mobility theme and in turn reduces carbon emissions – Umicore's own emissions have recently gone up due to higher production. As such, last year we asked the company to set GHG reduction targets for the first time. The company acknowledged a lack of reporting and said we could expect absolute and intensity targets in the new strategy.

We also asked that the new strategy include waste and water targets, with much improved disclosure going forward. The company is looking into Task Force on Climate-Related Financial Disclosures (TCFD) reporting and acknowledges that while complex and time-consuming, this is something that needs to be done.

More recently, we had a positive call with the company's sustainability manager on the above issues. The company announced significant progress in Q2 2021, with net-zero emissions reduction targets (scope 1 and 2) set for 2035 and a commitment to report against the TCFD framework. Significantly, the company also committed to publishing a scope 3 reduction target in 2022.



**Umicore announced significant progress in Q2 2021, with net-zero emissions reduction targets (scope 1 and 2) set for 2035 and a commitment to report against the TCFD framework.**





Last year, our concerns around medical supply company, Qiagen's, governance and remuneration structures came to a head with the attempted takeover of the firm by ThermoFisher.



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**Qiagen acknowledged that the bid had been handled poorly and chairman of the board, Hakan Bjorklund – who presided over the deal – was ultimately forced to resign.**

Ahead of the 2020 annual general meeting (AGM), we contacted the company on its proposed remuneration framework for executive directors. In particular, we were concerned by a lack of disclosure relating to variable remuneration. The proposed severance arrangements

also exceeded what we deemed best practice, and payments in the event of a 'change in control' seemed to create incentives that were otherwise at odds with shareholder interests.

In addition, the 'conditional back-end resolution' proposed at the company's AGM included a top-up option, which would reduce the minimum acceptance threshold to 67.7% and enable ThermoFisher to forcibly buyout minority shareholders at a much lower level.

Taken together, these misaligned incentives – and the erosion of shareholder protection – represented poor corporate governance. We therefore voted against the two remuneration proposals and the back-end resolution.

Not long after, we made the decision not to tender our shares under an improved offer, on the basis that this still remained unattractive for shareholders. Fortunately, other shareholders agreed, meaning that with only 47% of shares tendered, the remuneration proposal and takeover offer were rejected.

In a meeting with the company, we expressed our disquiet over the proceedings. Qiagen acknowledged that the bid had been handled poorly and chairman of the board, Hakan Bjorklund – who presided over the deal – was ultimately forced to resign. As shareholders, we were pleased by this development, but have engaged further to ensure future safeguards are put in place.

## COMMENTARY: 2020 AND AN UPDATE ON OUR NINE IMPACT THEMES

In 2020, the coronavirus pandemic put a severe strain on health systems and economies worldwide.

But amid the crisis, there is an opportunity to re-envision our future and 'build back better'. Indeed, Covid-19 has resulted in a paradigm shift: it has thrown into sharp focus the need for resilient healthcare systems and supply chains, while also highlighting the climate change crisis and workers' rights issues.

Many of these themes fit with our thematic approach to impact investing. Here, we delve into each of our nine impact investment themes, offering updates relevant to the companies in our portfolio:



### Water

Improving access to quality water supply and preservation of the resource



### Food Security

Ensuring a sustainable food supply and productive farmlands for future generations



### Health & Wellbeing

Improving life expectancy and quality



### Education

Providing opportunities for all – irrespective of wealth, geographical location or ability



### Financial Inclusion

Providing financial services to underserved populations



### Future Mobility

Improving vehicle efficiency to increase low-carbon transportation



### Impact Enablers

Providing crucial solutions and services to impactful companies directly involved in the various themes



### Energy Transition

Transforming the energy system to power a low-carbon economy



### Circular Economy

Enhancing resource efficiency and waste reduction

<sup>4</sup> See Deloitte, 'Making a clean, green break for the future'.

<sup>5</sup> See Water.org, 'The Water Crisis'.

<sup>6</sup> Xylem, 'The Wastewater Industry and Climate Change: Cutting Global Emissions in Half', 2020.

<sup>7,8,9</sup> Deloitte Insights, Electric Car Statistics and Facts 2021.

<sup>10</sup> Allen and Overy, 'European Green Deal: roadmap to a climate neutral Europe', December 2019.

<sup>11</sup> Ecolab, 'ESG Investor Overview', June 2021.



## Water



### *Improving access to quality water supply and preservation of the resource*

Water is a vital resource. Yet 785 million people – or one in nine – still lack access to safe water and freshwater ecosystems, which are among the most degraded and threatened<sup>5</sup>.

As discussed in our [Q1 report](#), a large part of the problem is the resilience of water infrastructure, which is at best aging and at worst underdeveloped. Then, there is the issue of wastewater. While water that has not been treated is of course dangerous, transporting and treating water using inefficient equipment results in more than 86m metric tons of electricity-related emissions, globally<sup>6</sup>.

In this theme, we look for companies that improve access to quality water supply and protect water as a key resource. Xylem and Ecolab, held in the portfolio, provide products and services that help to preserve our water ecosystem by reducing water usage through more efficient processes.

## Education



### *Providing opportunities for all – irrespective of wealth, geographical location or ability*

Education plays a pivotal role in sustainable development; it is an underlying, elementary driver for the achievement of all 17 SDGs.

While the importance of this investment theme is undeniable, we believe a disciplined approach to investing in impact is necessary. Therefore, we will only commit capital to investments where we believe that there is a clear impact and investment case. In 2020, we added Strategic Education, who provide education services to adults looking for either first time higher education or vocational courses enabling a career change. The company endeavour to improve access to education via technology and affordable pricing.

We have since added Bright Horizons in 2021, as a leading provider of high-quality childcare and early education, workplace education services, and back-up care. The company support workforces by providing services that help working families and employees thrive personally and professionally; in particular, Bright Horizons encourage greater gender diversity in the workforce.

## Health and Wellbeing



### *Improving life expectancy and quality*

The Covid-19 pandemic has reinforced the need for robust healthcare systems and the importance of personal health and fitness. Healthcare companies providing essential services were particularly resilient in 2020, with many required to continue operating throughout lockdown.

Nevertheless, the pull-back in markets did provide an opportunity to buy into some companies that were more affected by the restrictions, such as Planet Fitness, a fitness club operator, and Straumann, who are a leading dental implant business.

This information does not constitute a solicitation or offer to any person to buy or sell any related securities or financial instruments.

## Food Security



*Ensuring a sustainable food supply and productive farmlands for future generations*

With the growing population and increased consumer awareness of environmental issues around food production and farming practices, we believe pressure is mounting to ensure a sustainable food supply and productive farmlands for future generations. It is estimated that by 2050, the global population will increase by 30%, driving a 35% increase in demand for food and a 25% increase in energy usage<sup>11</sup>.

Hygiene and food safety are also more prominent issues now, thanks to the pandemic. We should therefore see growing demand for companies providing sanitation solutions.

## Future Mobility



*Improving vehicle efficiency to increase low-carbon transportation*

Transport is responsible for nearly 30% of the EU's total CO<sub>2</sub> emissions, of which 72% comes from road transportation<sup>7</sup>. Improving vehicle efficiency is vital to increasing the adoption of low-carbon transportation. This is also a theme that is likely to benefit from increasing regulation; in the UK, for example, work is underway to enlarge low-carbon zones, while increasing costs and taxes for high emission vehicles.

Figures from April 2021 show that the number of electric vehicles in use worldwide has grown to over 5.6m, an increase of 64% since 2018<sup>8</sup>. Yet despite this impressive growth, the electrification revolution is still in its infancy, with electric vehicles only making up 3% of total passenger vehicle sales today<sup>9</sup>.

Companies exposed to this theme are in their early growth phase, but we believe that through investment, they are today positioning themselves as the solution-providers of tomorrow's low-carbon economy.

## Energy Transition



*Transforming the energy system to power a low-carbon economy*

As discussed in our [Q2 report](#), any strategy looking to reduce carbon emissions needs to take sustainable energy production into account. With global demand for electricity set to double by 2050<sup>4</sup>, there is an urgent need to develop a sustainable energy system.

Whilst this has been a particularly volatile area of the market over the last 12 months, we believe there remains significant opportunity. We estimate around 200 companies sit within this theme, representing ~\$1tn in addressable market capitalisation and providing exposure to secular growth opportunities spanning decades. These include companies aiding the production of sustainable energy, key hardware and software manufacturers, names enabling electrification and, importantly, companies which help improve energy efficiency.

Tailwinds to the Energy Transition theme include green energy policy changes, corporates seeking to reduce their own emissions and shareholder engagement. The UK government is the latest to dramatically accelerate decarbonisation plans in keeping with the likes of the EU Green Deal, the impending US Green Recovery, and prospective unilateral agreements between the US and China, as well as Climate Change Conference of the Parties (COP 26) delegates.



## Impact Enablers



### *Providing crucial solutions and services to impactful companies directly involved in the various themes*

The pandemic has increased demand for companies with a focus on life sciences, such as our holdings Qiagen and Sartorius, which provide testing and lab technology solutions. Companies important in the development of the Covid-19 vaccine – with scalable, contract-based manufacturing operations – also saw demand for their services increase. This included biotechnology company and current holding, Lonza.

We believe the pandemic has triggered a positive structural shift that has improved long-term prospects for these stocks; they will likely benefit from an improved reimbursement and funding environment over the next few years. In the case of Qiagen, there's been a shift in how testing is perceived – particularly polymerase chain reaction (PCR) testing – greater investment in infrastructure – which promises to expand the market for consumables – and unprecedented interest in distinguishing between virus strains, especially during flu season. For Sartorius and Lonza, the Covid-19 vaccine has not only created enduring demand, it has increased levels of investment across the board. For example, the National Institute of Health's (NIH) budget proposal for 2022 is \$52bn – a 60% increase relative to 2016.

With respect to private healthcare, we see a big tailwind for the sector, with biotech funding reaching record levels.



## Circular Economy



### *Enhancing resource efficiency and waste reduction*

In this theme we are looking for companies that provide innovative solutions to help reduce materials usage and promote recycling.

After switching away from fossil fuels, protecting and restoring forests and other ecosystems is considered the second most effective solution to climate change. The EU Green Deal found that 50% of GHG emissions – and more than 90% of biodiversity loss and water stress – were due to resource extraction, as well as the processing of materials, fuels and food<sup>10</sup>.

With increasing awareness and regulation around pollution and material usage, we see a growing market for companies which are helping to provide solutions in these areas. Accordingly, we have invested in recycling company, Tomra; materials technology company, Umicore; and pooling company, Brambles, which specialises in reusable pallets, crates and containers.

## Financial Inclusion



### *Providing financial services to underserved populations*

As an enabler of economic prosperity and upward mobility, financial inclusion underpins the majority of SDGs. According to the World Bank, there are still more than 1.6bn adults worldwide that do not have a bank account. Finding the tools to foster financial inclusion is not straightforward; the situation is largely dependent on local context.

We believe there are opportunities to invest in companies providing easier access to banking and financing for individuals and small businesses. Portfolio holding, Bank Rakjat, exemplifies this.

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We publish two investment case studies from the Impact Opportunities portfolio each quarter. Please find four included here: Hannon Armstrong (originally published in Q2 2021), Dexcom (published in Q1 2020), Itron (published in Q1 2021), Xylem (published in Q1 2021).



**Hannon Armstrong**  
is the first US  
public company  
solely dedicated to  
investments in climate change solutions.



**Impact theme:** Climate Solutions

Some \$150bn was invested in clean energy last year, in developing economies alone<sup>12</sup>. While this is a vast sum, the International Energy Agency (IEA) believes if we are to deliver a net-zero world, that figure must hit \$1tn by 2030.

Our holding, Hannon Armstrong, is uniquely positioned in this regard: the company aims to reduce carbon emissions by providing capital to businesses with a clean energy focus.

### Fuelling the transition to a low-carbon future

Hannon Armstrong's portfolio, which focuses on three main areas – behind-the-meter technology, grid-connected assets, and sustainable infrastructure – grew 38% to total

\$2.9bn, as of 31 March 2021<sup>13</sup>. Despite the backdrop of the global coronavirus pandemic, it continues to perform well. Portfolio yield increased quarter-on-quarter to 7.7% and, for the one-year period to 31 March 2021, the company's total revenue increased by 27% (\$51.7m)<sup>14</sup>.

Hannon Armstrong is currently well-positioned, as climate change solutions are likely to be crucial in the world's recovery from the ongoing pandemic, and the company should benefit from a higher interest environment. A steep yield curve allows the company to add projects to its balance sheet priced at long-term rates and funded by lower short-term rates<sup>15</sup>.

The company seeks to make \$1bn-worth of climate-positive investments each year. The company estimate that 87,000 metric tons of carbon emissions will be avoided annually by the transactions closed in Q1 2021<sup>16</sup>. In July 2020, Hannon Armstrong announced a partnership with ENGIE – the largest independent power producer and energy efficiency services provider in the world – to invest approximately \$540m in a 2.3GW portfolio of wind and solar projects in the US<sup>17</sup>. The agreement significantly grows and diversifies Hannon Armstrong's balance sheet portfolio.

### Improving our climate future

Today, the challenge of protecting the environment is immense, but the debt and equity financing Hannon Armstrong provides is directly fuelling the transition to a low-carbon economy.

So far, the company's investments have had a significant societal and environmental impact. The CO<sub>2</sub> reductions from the group's investments in 2019 were equivalent to taking 83,000 cars off the road<sup>18</sup>.

### 2019 impact measurement highlights for Hannon Armstrong:

**385k MT**  
of CO<sub>2</sub> avoided with  
**75 MT** emitted



**1.4m m<sup>3</sup>**  
of water saved vs  
**337** consumed



**970k MWH** of renewable energy generated



Source: Net Purpose, Federated Hermes Impact calculations, as at 31 December 2020. We have chosen to highlight what we believe to be the largest impact metrics for each company; please note, not all impact metrics are relevant to all companies. Drawing on qualitative and quantitative data from company, sector and impact industry reports, our proprietary Impact Database estimates the impact of our portfolio on an aggregated, cross-company basis. Our methodology is described in detail in our [Q1 2021 report](#).

<sup>12</sup> See IEA: To reach net-zero, renewable energy investment in developing nations must increase sevenfold

<sup>13, 14, 15</sup> "Hannon Armstrong announces first-quarter 2021 results and declares dividend," published by Hannon Armstrong in March 2021.

<sup>16</sup> In periods when the yield curve is flat or inverted, the company will add fewer projects to its balance sheet portfolio but can still provide earnings growth from securitizations.

<sup>17</sup> The majority of these deals are scheduled for Q4 2021.

<sup>18</sup> "Hannon Armstrong announces third-quarter 2020 results and declares dividend," published by Hannon Armstrong in November 2020.





**SDG target 3.4:** By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

**SDG target 3.8:** Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all

### Theory of Change

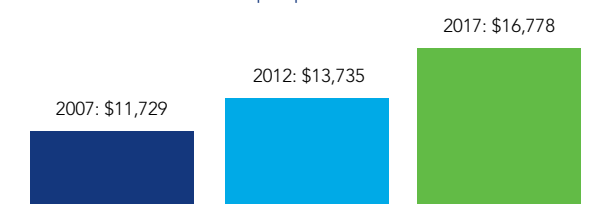
Medical devices company Dexcom is leading the way in changing the standard of care for glucose monitoring in diabetes through its continuous glucose monitoring (CGM) devices. These devices can help patients better manage the disease and reduce the costs associated with it. It is the only pure play company in this fast-growing sector and currently holds about 70% market share of the insulin intensive segment in the US.

Diabetes has the potential to cause numerous debilitating health complications, often resulting from poor management of the condition. Traditionally, finger sticks have been used to manage diabetes, a painful process that does not provide a precise reading and results in non-optimal insulin dosage. However, CGM systems provide patients with a less invasive and painful way to manage the disease, resulting in better monitoring outcomes. This is an area in which Dexcom, a recent addition to our portfolio, plays an important role.

Through its CGM products, Dexcom helps to deliver positive impact by reducing cost burden to the health system and simplifying disease management, which in turn improves a patient's quality of life. For example, according to the American Diabetes Association, the cost of diabetes per patient (including comorbidities such as kidney disease and retinopathy) stood at \$16,778 in the US in 2017<sup>19</sup>. In a separate study of mostly type-2 non-intensive patients, which compared a sample wearing Dexcom's G-6 CGM to a sample using finger sticks, the total annualised cost saving was \$5,000 per patient<sup>20</sup>.

**Figure 2. The cost burden of diabetes**

US annual healthcare costs per person with diabetes



Source: Dexcom, Centers for Disease Control and Prevention, as at July 2017.

### Innovation solutions to unmet needs

In 2018, Dexcom's G6 CGM became the first device permitted by the US Food and Drug Administration to be used as part of an integrated system with other compatible medical devices. As a result, the company has established partnerships with insulin delivery device manufacturers and insulin producers, helping to drive adoption and awareness.

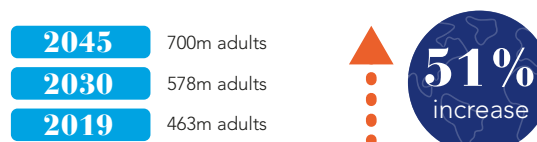
Dexcom continues to innovate, with its latest G7 model expected to be released in 2021. The release will mark the next major inflection point in CGM technology: it will be the smallest device to date; have a longer life with a 14-day sensor, factory calibration (i.e. no finger sticks) and a fully disposable design. The G7 model should be more affordable, which in turn should broaden its appeal and make it the standard of care for diabetes management.

### Future growth

Today, Dexcom is the market leader in the US, with a market share estimated at 70% in insulin-intensive diabetes. The company is tapping the non-intensive segment of the market which could benefit from intermittent monitoring and/or screening. It consists of a market opportunity of 27m type-2, 4m gestational and 14m hospital patients, while an additional 84m pre-diabetes patients could benefit from screening.

The global opportunity is significantly larger: 463m adults suffer from diabetes worldwide, and this is expected to more than double by 2045. What's more, three in every four people suffering from diabetes live in developing countries. The growth potential is both secular and scalable as new markets represent five times the total addressable market relative to Dexcom's core markets.

**Figure 3. The number of adults with diabetes worldwide is set to double by 2045**



Source: International Diabetes Federation, as at 2019.

These scalable market opportunities are reflected in the company's financials: its revenue increased to \$1.47bn in 2019, up 42% year-on-year and 20 times higher its level in 2011 (when it stood at \$76m). It also posted a 37% compound annual growth rate since 2015. We expect Dexcom will continue its strong growth trajectory, thereby offering investors attractive impact and financial returns.

<sup>19</sup> Note: this data is published every five years. This study included only 24.7m diagnosed patients.

<sup>20</sup> This excludes the cost of the device.



**Itron is a Global leader in energy efficiency technology, offering innovative products to optimise energy and water resource management.**

**Impact theme:** Energy Transition



Compared to a traditional grid, an active grid – which leverages the Internet of Things (IoT) to better match supply with demand and monitor inefficiencies/outages – can reduce electricity usage by 12%.<sup>21</sup> The active grid will increasingly draw focus through the energy transition, as demand for electricity rises due to vehicle and home electrification.

Our holding, Itron, is a leader in this market. The company provides hardware and software solutions that are critical to smart and active grid management, with a product offering that is focused on improving resource efficiency.

### Powering energy efficiency through the smart/active grid

Itron derives 100% of its income from resource management hardware and software deployed in energy (60%), water (20%) and gas (20%). The company has three key product areas, which together accounted for 66% of its revenue base in 2019.<sup>22</sup>

- **Smart/Active Meters (40%):** Itron manufactures both smart and active meters: the former use a one-way communication model; the latter use two-way communication, meaning the operator is able to both monitor and communicate with the end-point meter.
- **On-Grid Hardware (11%):** The company's offering includes automated distribution equipment and monitoring kits.
- **Software and Analytics (15%):** Itron is focused on management software, which is sold into the utilities sector to optimise grid operations.

In the US, Itron holds a 50% market leading share in communicating meters, and a 30% market leading share in on-grid hardware and management software. With respect to the company's future prospects, Itron's continued spend on research and development is encouraging.

### The real economic and environmental cost of grid inefficiency

Inefficiency across the grid is a costly affair, both economically and environmentally.

Faulty equipment wastes around 5% of electricity generated in the US<sup>23</sup>, while out-of-service end points that are left connected are similarly troublesome. Itron identified that for one client, inactive metering was wasting around 456GW of electricity annually, which is equivalent to the yearly electricity consumption of 54,000 homes<sup>24</sup>.

The grid is also not particularly resilient, despite representing vital infrastructure for millions of people. It is vulnerable in the event of natural disasters, which are becoming more prevalent thanks to climate change.

By allowing operators to identify faults more efficiently, the equipment produced by Itron directly improves recovery times and, in turn, saves energy. In 2019, Itron's solutions meant 3.5m metric tonnes of CO<sub>2</sub> emissions were avoided.<sup>25</sup>

### 2019 impact measurement highlights for Itron:

**3.5m MT**

of CO<sub>2</sub> avoided, with

**1.7k MT**

emitted



**301 MT**

of waste recycled with

**416 MT**

of waste generated



**22%**

female board representation with

**43%**



female management representation

Funding of

**\$202m**

to SDG enabling research and development (R&D)



**92.6k m<sup>3</sup>**

of water saved with

**11.4k m<sup>3</sup>** used



Source: Net Purpose, Federated Hermes Impact calculations, as at 31 December 2019.





## CASE STUDY

## Xylem

**Xylem is one of the biggest water technology companies in the world, providing a full suite of solutions across the water cycle – from smart water infrastructure analytics to water treatment.**

**Impact theme:** Water



It is estimated that around three in 10 people worldwide currently lack access to safe drinking water, with six in 10 having no access to safely managed sanitation services.<sup>26</sup>

And while demand for fresh water is rising due to population growth, industrial expansion and increased agricultural development, availability is declining. Experts have warned of a 'water crisis' by 2040.<sup>27</sup>

A large part of the problem here is the resilience of water infrastructure. While in developed markets inadequate funding means aging pipes are beginning to leak, in emerging markets water systems remain underdeveloped.

Then there is the issue of wastewater. Lack of treatment creates dangerous water pollution, while transporting and treating water using inefficient, outdated equipment results, globally, in more than 86m metric tons of electricity-related emissions – the equivalent of 9.7bn tons of gasoline.

Our holding, Xylem, generates a far-reaching impact by offering unique and innovative solutions that encompass all stages of the water cycle.

## 'Let's solve water': innovation and emerging markets water infrastructure

We see Xylem's product range, which is focused entirely on water technologies, as addressing a number of issues aligned to the UN SDGs.

Two things really stand out about Xylem's proposition. First, the company is a clear leader in water management technology, bringing innovation to market since acquiring smart-metering company, Sensus, in 2016. See, for example, Xylem's offering in sensors and data analytics, which allows users to identify leaks more quickly and optimise water use. Xylem also created the world's first large-scale ultraviolet/chlorine process, which is being used to turn wastewater to drinking water in Los Angeles.

Secondly, the company are helping to build new water infrastructure in emerging markets – which accounted for 21% of Xylem's sales in 2020 – through local partnerships with the likes of universities and non-governmental organisations (NGOs).

Xylem's impact therefore goes beyond the utilities and industrial sectors, which together accounted for 85% of the company's sales in 2020. We see Xylem as having the ability to empower communities and transform the lives of millions.

### Leading by example

Reducing the environmental impact of products such as pumps and mixers is a key area of focus for Xylem.

But Xylem have also set goals to improve the environmental impacts of their own operations. For the five-year period to 2019, the company achieved a 20% reduction in water use intensity and a 28% reduction in greenhouse gas emissions<sup>28</sup>. Targets for 2025 include reaching 100% renewable energy and 100% process water recycling at major facilities.

In addition, Xylem's Carbon Disclosure Project (CDP) scores have improved from 2017, when the company was awarded a 'C' for Climate Change Disclosure and a 'B' for Water Security Disclosure. Xylem now scores an 'A-' in both areas, respectively<sup>29</sup>.

### 2019 impact measurement highlights for Xylem:

**40.0k MT**

of CO<sub>2</sub> avoided with

**10.3k MT**

emitted



**22.2k MT**

of waste recycled with

**33.9 MT**

of waste generated



**18%**

female board  
representation  
with

**24%**



female management  
representation

Funding of

**\$191m**

to SDG enabling research  
and development (R&D)



**520m m<sup>3</sup>**

of water saved with

**37.2k m<sup>3</sup>** used



**Endnotes:**

<sup>21</sup> As reported by the American Council for an Energy-Efficient Economy

<sup>22</sup> Please note, we argue that Itron's 'Device Solutions' division – which accounted for 34% of 2019 sales – had minimal to no discernible impact. This is because it supplies non-communicating meters, which play no role in the smart or active grid, and therefore have very limited implications for resource efficiency. It is worth noting that this division is in decline, having accounted for +45% of revenues in 2017, a trend which looks set to continue.

<sup>23</sup> See <https://www.eia.gov/tools/faqs/faq.php?id=105&t=3>

<sup>24</sup> Source: Commonwealth Edison (ComEd), performance metrics 2018.

<sup>25</sup> Source: Federated Hermes, as at 31 December 2019. Note: The Impact Opportunities portfolio has been harmonised for calendar year impact.

<sup>26</sup> (Xylem Sustainability Report 2019).

<sup>27</sup> See: <http://safcei.org/wp-content/uploads/2015/06/Anglican-Water-Rio+20-.pdf>.

<sup>28</sup> See: [https://www.business-standard.com/article/international/water-crisis-looms-large-in-pakistan-may-face-absolute-scarcity-by-2040-121032200050\\_1.html](https://www.business-standard.com/article/international/water-crisis-looms-large-in-pakistan-may-face-absolute-scarcity-by-2040-121032200050_1.html)

<sup>29</sup> See: <https://www.xylem.com/siteassets/sustainability/2019/xylem-2019-sustainability-report.pdf>.



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