

## INVESTMENT STRATEGY OBJECTIVES AND PROCESS

The investment strategy focuses on the opportunities created by the transition to healthy, low carbon and sustainable economies. The investment team selects high-quality companies from nine broad themes with strong growth characteristics to create a globally diversified portfolio. We develop long-term relationships with company management to promote the best environmental, social and economic outcomes.

# IMPACT MEASUREMENT METHODOLOGY



# Calculating impact

## Introduction

This document describes the methodology that is used to collate and calculate the positive impact associated with WHEB's investment strategy. At its core, WHEB is an impact investor. All the investments made by our investment strategy have positive social and/or environmental impact. By this we mean that we invest 'in companies, organisations and funds with the intention to generate social and environmental impact alongside financial return'<sup>1</sup>. We subscribe to this definition of impact investing and believe, like others, that there are four core characteristics. These are detailed in the table below, with WHEB's approach in each of these areas also highlighted.

**Figure 1: Defining impact investing**

Core characteristics of impact investing <sup>2</sup>	WHEB's approach
<b>Intentionality:</b> The intent of the investor to generate social and/or environmental impact through investments is an essential component of impact investing.	Our intention is to deliver superior financial returns by investing in companies that deliver social and/or environmental value as a core part of their business operations.
<b>Investment with return expectations:</b> Impact investments are expected to generate a financial return on capital and, at a minimum, to safeguard capital.	Our focus is on generating above market rate financial returns for our investors.
<b>Range of return expectations and asset classes:</b> Impact investments generate returns that range from below market to risk-adjusted market rate.	All our investments are intended to deliver superior risk-adjusted market rates of return.
<b>Impact measurement:</b> A core tenet of impact investing is the commitment of the investor to measure and report the social and environmental performance and progress of underlying investments.	We are committed to measuring and reporting the positive social and/or environmental impact of our investment funds. In this document we set out our methodology for doing this.

## WHEB's investment themes and the UN Sustainable Development Goals

It is our belief that long-term social, demographic, environmental and resource challenges are reshaping the global economic landscape, creating new investment opportunities for companies providing solutions to these challenges, and growing risks for those sectors that deplete human and natural capital. Finance is a critical catalyst for this change and we aim to invest in companies that are both beneficiaries and enablers of a shift to a more sustainable global economy over the coming decades.

WHEB's investment strategy covers five environmental and four social themes. These themes directly support seven of the UN's Sustainable Development Goals (SDGs). The positive impact of companies in each theme is assessed based on a set of indicators that relate to the products or services that the company supplies. For example, the positive impact of companies in the Cleaner Energy theme is measured in terms of MWh of renewable energy that is generated. In Sustainable Transport, the impact is assessed in terms of how much the product reduces harmful air emissions (including CO<sub>2</sub>e) from transport and, in Water Management, how many litres of contaminated water are treated.

The selection of each of these indicators has been made primarily with reference to existing measurement indicators that are used in WHEB's investment process. We have also drawn from the work of others in supplementing this list of

indicators. This review included the reporting frameworks put forward by asset owners, research groups and other institutions.<sup>3</sup>

Figure 2: Mapping WHEB’s investment themes onto the UN SDGs and relevant indicators

	WHEB INVESTMENT THEMES				WHEB INVESTMENT THEMES					
	Cleaner Energy	Resource Efficiency	Sustainable Transport	Environmental Services	Water Management	Health	Safety	Well-Being	Education	
Indicative areas of business activity	<ul style="list-style-type: none"> <li>- Renewable energy technologies</li> <li>- Renewable energy generation</li> </ul>	<ul style="list-style-type: none"> <li>- Energy efficiency products</li> <li>- Efficient buildings</li> <li>- Efficient lighting</li> <li>- Efficient manufacturing</li> <li>- IT to improve efficiency</li> </ul>	<ul style="list-style-type: none"> <li>- Intermodal and rail transport</li> <li>- Less polluting road transport (eg hybrid and electric vehicles)</li> </ul>	<ul style="list-style-type: none"> <li>- Environmentally preferable products</li> <li>- Environmental consulting</li> <li>- Pollution control</li> </ul>	<ul style="list-style-type: none"> <li>- Efficient water use</li> <li>- Waste water treatment</li> <li>- Fresh water provision</li> </ul>	<ul style="list-style-type: none"> <li>- Research and diagnostics</li> <li>- Cutting costs in healthcare</li> <li>- Therapies for ageing demographics</li> <li>- Tackling obesity</li> <li>- Preventative care</li> </ul>	<ul style="list-style-type: none"> <li>- Products making people safe</li> <li>- Making products safe</li> </ul>	<ul style="list-style-type: none"> <li>- Residential care for the elderly</li> <li>- Hearing, vision and oral health</li> <li>- Fitness</li> </ul>	<ul style="list-style-type: none"> <li>- Tertiary education</li> </ul>	
Portfolio Holdings (as at 31/12/18)	<ul style="list-style-type: none"> <li>- China Everbright International Ltd</li> <li>- Siemens Gamesa Renewable Energy S.A.</li> <li>- TPI Composites Inc</li> </ul>	<ul style="list-style-type: none"> <li>- AO Smith Corp</li> <li>- Acuity Brands Inc</li> <li>- ams AG</li> <li>- Ansys Inc</li> <li>- Daifuku Co. Ltd</li> <li>- Daikin Industries Ltd</li> <li>- IPG Photonics Corp</li> <li>- Johnson Controls International</li> <li>- Keyence Corp</li> <li>- Kingspan Group</li> <li>- Kion Group</li> <li>- Lennox International</li> <li>- National Instruments Corp</li> <li>- Nitto Denko Corp</li> <li>- Renishaw plc</li> <li>- Rockwell Automation Inc</li> <li>- Roper Technologies Inc</li> <li>- Spectris plc</li> </ul>	<ul style="list-style-type: none"> <li>- Aptiv plc</li> <li>- Hella KGaA Hueck &amp; Co</li> <li>- JB Hunt Transport Services Inc</li> <li>- Norma Group</li> <li>- TE Connectivity Ltd</li> <li>- Wabtec Corp</li> </ul>	<ul style="list-style-type: none"> <li>- Horiba Ltd</li> <li>- Koninklijke DSM NV</li> <li>- Lenzing AG</li> <li>- Linde plc</li> <li>- Smarfit Kappa plc</li> <li>- Stantec plc</li> </ul>	<ul style="list-style-type: none"> <li>- China Water Affairs Group Ltd</li> <li>- Ecolab Inc</li> <li>- Xylem Inc</li> </ul>	<ul style="list-style-type: none"> <li>- Agilent Technologies Inc</li> <li>- Centene Corp</li> <li>- Corner Corp</li> <li>- CSL Ltd</li> <li>- CVS Health Corp</li> <li>- Danaher Corp</li> <li>- Fresenius SE</li> <li>- HMS Holdings Corp</li> <li>- Premier Inc</li> <li>- Steris plc</li> <li>- Thermo Fisher Scientific Inc</li> <li>- Varian Medical Systems Inc</li> </ul>	<ul style="list-style-type: none"> <li>- Intertek Group Plc</li> <li>- Littellusa Inc</li> <li>- MSA Safety Inc</li> <li>- WABCO Holdings</li> </ul>	<ul style="list-style-type: none"> <li>- The Cooper Companies Inc</li> <li>- Henry Schein Inc</li> <li>- Nautlius Inc</li> <li>- Opes Group</li> <li>- Tivity Health Inc</li> </ul>	<ul style="list-style-type: none"> <li>- Grand Canyon Education Inc</li> </ul>	
Positive impact in 2018	464,000 MWh of renewable energy generated	218,000 tons of CO <sub>2</sub> e avoided			49,000 tons of waste recovered or recycled	2.6bn litres of waste water treated	3.5bn litres of water distributed	12,800 people received healthcare treatment. £31m of healthcare costs saved.	12,600 people benefitted from preventative care and/or healthy living programmes	29,000 days of tertiary education provided
	UN SUSTAINABILITY GOALS				UN SUSTAINABILITY GOALS					
Supporting	7 AFFORDABLE AND CLEAN ENERGY	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	6 CLEAN WATER AND SANITATION	3 GOOD HEALTH AND WELLBEING			4 QUALITY EDUCATION	

### Assessing the impact of products and services

Companies typically supply a range of products and services with differing levels of positive impact. We categorise every company we analyse into one of four bands ranging from ‘Degenerative’ at one extreme through to ‘Breakthrough’ at the other that capture the overall ‘blended’ level of impact that the company has.

Figure 3: Categories of impact

<b>Degenerative</b>	Degenerative activity covers business activity that creates economic value, but which is overwhelmed by related negative environmental/social externalities.
<b>Transitioning</b>	Depleting businesses create economic value but also undermine environmental/social systems. Over the medium term, these businesses may be able to transition (for example by altering the materials or business models that they use) into Mitigating or even Breakthrough businesses.
<b>Mitigating</b>	Described as ‘change as usual’, this covers business activities that create economic value by incrementally reducing environmental and/or social damage.
<b>Breakthrough</b>	‘Breakthrough’ businesses replace or transform established systems to deliver economic value alongside radically higher positive environmental/ social impact.

The thematic framework for WHEB’s investment strategy means that only companies that have a positive impact and qualify in either the Mitigating or Breakthrough categories qualify for the strategy. Companies with product or service

portfolios that have an overall degenerative or transitioning impact will never qualify as potential investments for WHEB's strategy.

Establishing a company's category is principally based on its products' performance relative to the average performance of incumbent technologies in the relevant industry or to a widely accepted reference scenario. For example, companies in the Cleaner Energy theme are assessed relative to carbon reduction targets that are consistent with a 'well below 2°C of warming' scenario<sup>4</sup>. In Resource Efficiency, the comparison is made based on the efficiency improvement made to a specific technology such as lighting or buildings. A percentage score can then be applied with Mitigating impact typically considered to be <30% and Breakthrough >30%.

Given the scarcity of absolute impact measures in businesses with a positive social impact, the impact rating for these companies is based on a qualitative assessment by WHEB's investment team. In the Health theme, for example, the impact assessment is focused on whether the product/service is leading to significant improvements in health/safety outcomes for the specific condition/issue compared with the incumbent approach. This judgement is made as part of the initiation profile that is prepared by the investment team and is backed up with a documented rationale.

## Assessing the quality of company policies and practices

In addition to the impact of the products/services provided by our portfolio companies (**what they do**), the WHEB investment process also assesses the fundamental quality of a company's policies and operational performance (**how they do it**). The analysis considers five aspects of business operations: market attractiveness, competitive position, value-chain operations, management quality and growth strategy and gives each a score which adds up to the 'WHEB quality score' ranging from 0-100. In assessing the fundamental quality of each aspect, we consider a range of measures relating to both financial and environmental, social and governance ("ESG") management and performance. Figure 4 below illustrates the overall mapping of portfolio holdings in WHEB's investment strategy as at the end of 2018.

**Figure 4: Mapping company quality and impact**



## Calculating company impact

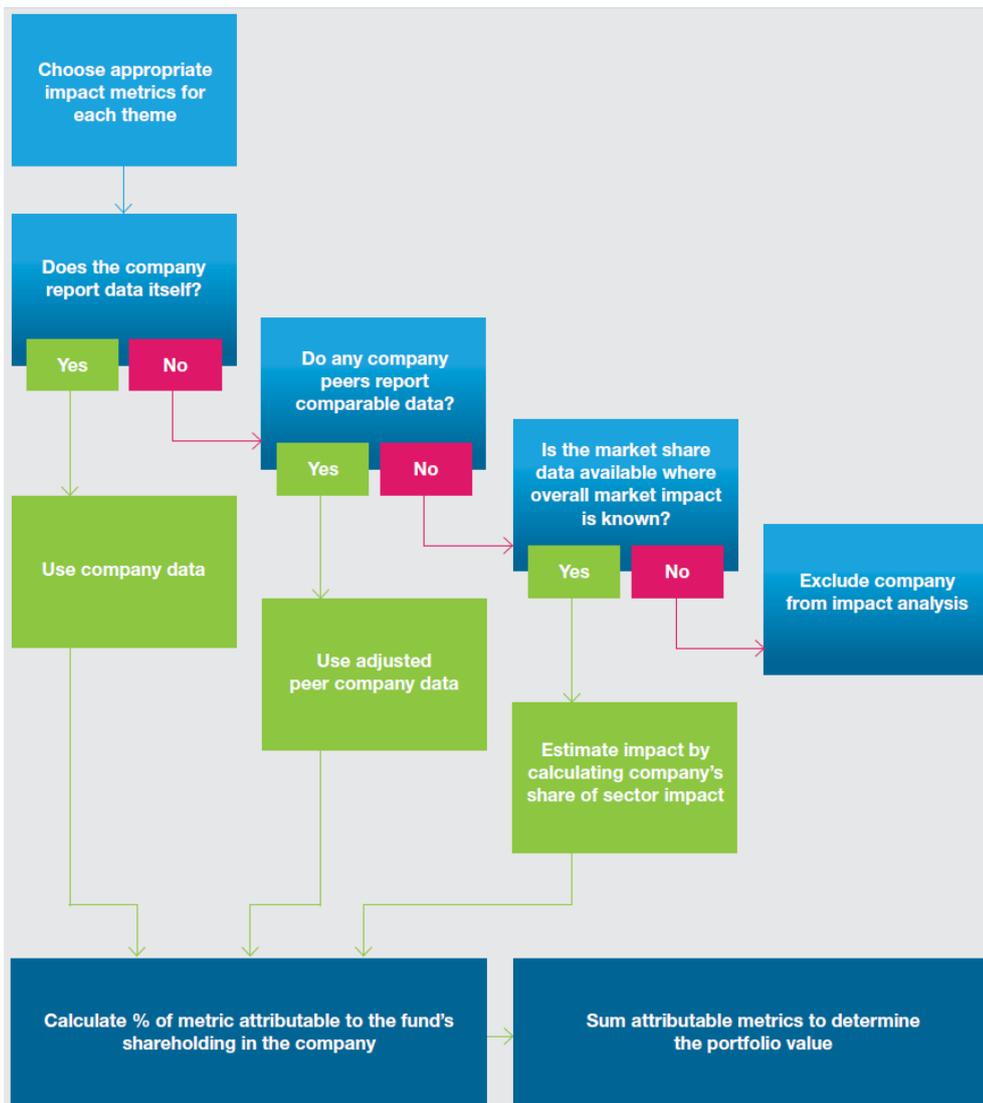
As part of WHEB's investment process, data is collected on the positive impact associated with the products and services sold by companies in the strategy. Many companies publish information on the product/service impact without collating this on a company-wide basis. In some cases, companies may collate data, but do not report it on an annual basis. Others may not report this data at all or it may be in a format that is not possible to aggregate.

Where data is made available by the company, we use this data to calculate the impact of a company's products over the year in question. Where such data is not available, we use a variety of estimation methodologies to determine company level impact.

- In some cases we have been able to use data that is reported by peer companies as a proxy. If we know the product-level impact, we can estimate company level impact based on the number of products or services that are sold.
- Where peer data is not available, we may be able to estimate impact by using information on the market share that a company has, and then using this to estimate the number of products sold.
- Where none of the above applies, we exclude the company from the analysis.

The 'decision-tree' in Figure 5 below illustrates how we select the best method for calculating company impact data.

**Figure 5: Calculating company impact**



## Product & service tiers

Another way we categorise the wide range of businesses we invest in is by using product and service ‘tiers’. We categorise businesses into four broad tiers:

**Figure 6: Product and service ‘tiers’**

Tier	Definition	Examples	Impact estimation
1	Complete product or service that can be used by ultimate customer	Completed wind turbines	Relatively straightforward where numbers of products are known or can be estimated
2	Components or materials used in combination with other components to provide the end product or service	Wind turbine blades or other components	More complex given components represent a proportion of the end-product
3	‘Platform’ or enabling technologies	Computer aided design software that improves the efficiency of wind turbine blades	Most complex as the product or service is an enabler and not necessarily present in the end product or service
4	Products or services that contribute to the distribution, on-going maintenance or monitoring of end-use products	Operation and maintenance services for wind farms	Complex to determine the contribution to impact of these ‘support’ type services

In general, data on the impact of tier 1 products or services is widely available and it is therefore relatively straightforward to estimate company level impact.

Tier 2 products tend to be more complex because the product being sold is merely a component of the end product. In these instances, where company-reported data is not available, the impact associated with the component is assumed to be equivalent to the value of the component as a proportion of the value of the final product. For example, for a company selling components into an electric vehicle (EV), we assume that the impact of the component is equivalent to the positive impact of the whole EV multiplied by the value of the component as a proportion of the value of the EV.

Tier 3 and 4 products/services are typically very complicated to calculate and tend to be excluded from our impact analysis<sup>5</sup>. As a result of this conservative approach, we believe that the reported aggregate figures for the strategy are highly likely to underestimate the real impact.

## Calculating the impact of the strategy

Having calculated the positive impact over the year that is associated with the products and services of each company, we then calculate the positive impact associated with the investment strategy’s specific holding in the company. The total positive impact of the company is multiplied by the fraction of the company’s market capitalisation that is owned in the strategy at the end of the calendar year. This gives the positive impact associated with the strategy’s investment in that company.

The positive contributions from each company are then grouped according to the mapping illustrated in Figure 2 and summed to give the total impact of the strategy on each indicator. This data is then converted into impact per pound (£) of investment by dividing by the amount of money in the strategy. It is this data that underpins the ‘impact calculator’.

Figure 7: The impact calculator

Owning £1m of The FP WHEB Sustainability Fund during 2018 was associated with:



## Calculating gross and net impact data

A more accurate assessment of the impact associated with an investment fund should include both the impact from the use of a company's products and services as well as the impact associated with their manufacture and supply. In

WHEB's strategy, all investee companies have products that generate a positive impact. However, the provision of these products and services typically entail negative impacts.

In a world of perfect data, all impact reporting would include both components, enabling overall net impact data to be reported. Given current limitations on data quality, we believe that it is currently only possible to report net impact data on carbon emissions. In our experience, the carbon emissions avoided through the use of products and services sold by portfolio companies is typically approximately ten times larger than the carbon emissions produced in those companies' manufacturing processes. We plan to include more net impact calculations as underlying data quality improves.

## Calculating impact in context

In our impact report, we have begun to report on how the strategy is helping to contribute to the global carbon emission reductions that are required to avoid dangerous levels of global warming. We have done this by using data provided by the United Nations on the levels of greenhouse gas (GHG) reductions that are needed to ensure that global warming does not exceed 1.5°C above pre-industrial levels by 2030<sup>6</sup>. We have calculated the annual global emission reduction requirement by 2030 by comparing this figure with the expected amount of GHG emissions in 2030 if the world's governments stick with their 'current policies'<sup>7</sup>. Using an estimate of the size of total global capital markets, we have then calculated the GHG emissions per £1m invested in global capital markets today, and what this would be under both a 'current policies' scenario and a '< 1.5°C scenario' in 2030.

The WHEB impact report includes an annual net carbon avoided figure that incorporates both product related and operational emissions for the WHEB strategy. Using this figure, we can then calculate the proportion of the total global annual carbon reduction that is required to avoid more than 1.5°C of warming that is contributed by the WHEB investment strategy.

## Weaknesses in the data

The quality and accuracy of the final strategy-level metrics are ultimately determined by the quality of the underlying data. Several methodological challenges remain in calculating strategy-level impact data. We describe five in Figure 8 that we have experienced in our work. We have also provided an assessment of the challenge and the likely impact on accuracy of the data.

**Figure 8: Sources of weakness in the data**

Weakness	Estimated effect on impact measurement	Explanation
Underlying data quality	<b>High</b>	Only a minority of companies report impact data themselves. Even this data is likely to be based on estimations and assumptions. The biggest source of error in our calculations is likely to be the accuracy of underlying company level impact data.
Changes to strategy during year	<b>Medium</b>	The composition of the strategy's portfolio changes over the course of the year, but the impact analysis is a 'snap-shot' based on the strategy's holdings at the end of the year. As a consequence, the calculation does not include contributions from companies sold during the year. However, given the strategy's low turnover (c.15%) we believe that the impact on the accuracy of the impact data is likely to be modest.
Gross vs. net data	<b>Medium</b>	As described above, using gross data on impact is an overestimation of the likely real impact. A more accurate measure would be based on net impact calculations

		which we have used for carbon data. However for other environmental indicators, based on preliminary analysis, we believe that the omission probably inflates the reported impact by <10% <sup>8</sup> .
Double-counting	<b>Low</b>	'Double counting' occurs when a positive impact is counted twice (or more) along a product value-chain. For example, counting the positive impact from the operation of a wind turbine while also crediting positive impact to the manufacturer of their turbines. In our view, the actual effect is likely to be quite limited at a portfolio level given the strategy's wide end market dispersion.
Time-frames	<b>Low</b>	Companies report data at different times of the year. Inevitably therefore the impact calculation is based on a mix of data from one year and the following year. In practice, however, year on year changes are usually modest and the effect we believe is therefore likely to be minimal.

We have no doubt that there are other sources of error in our calculations, but believe the above are the principal ones. We will continue to refine our methodology and work with investee companies to improve the quality of the data that they report on their impact.

## Reporting and transparency

We report quarterly on changes to the portfolio map (Figure 4) as part of our regular reporting to clients. These reports are publicly available from the WHEB website<sup>9</sup>. Quantitative impact data has also been published in an annual Impact report since 2017<sup>10</sup>. Additional information on the WHEB investment strategy including how it supports the UN Sustainable Development Goals and examples of engagement with portfolio companies are available from our Impact website<sup>11</sup>.

<sup>1</sup> <http://www.thegiin.org/cgi-bin/iowa/resources/about/index.html#2>

<sup>2</sup> Ibid

<sup>3</sup> Particularly helpful in this regard were the papers produced by among others, the Working Group of Dutch financial institutions and companies ([https://www.dnb.nl/en/binaries/SDG%20Impact%20Measurement%20FINAL%20DRAFT\\_tcm47-363128.PDF?2018020717](https://www.dnb.nl/en/binaries/SDG%20Impact%20Measurement%20FINAL%20DRAFT_tcm47-363128.PDF?2018020717)), the University of Cambridge's Institute for Sustainability Leadership (<https://www.cisl.cam.ac.uk/publications/publication-pdfs/impact-report.pdf>) and reports by EQ Investors and Tribe Impact Capital.

<sup>4</sup> According to the Transition Pathway Initiative, for 2020 this figure is 430kg CO<sub>2</sub>eq/MWh (<http://www.lse.ac.uk/GranthamInstitute/tpi/wp-content/uploads/2018/06/TPI-July-2018-report.pdf>).

<sup>5</sup> See for example the case study of Dassault Systèmes published in WHEB 2016 Impact Report (<http://www.whebgroupp.com/media/2017/05/WHEB-Impact-Report-2016-1.pdf>)

<sup>6</sup> [http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018\\_FullReport\\_EN.pdf?sequence=1&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018_FullReport_EN.pdf?sequence=1&isAllowed=y)

<sup>7</sup> Ibid

<sup>8</sup> Based on initial analysis by Impact Cubed on water, waste and carbon emissions.

<sup>9</sup> <http://www.whebgroupp.com/investment-strategy/fp-wheb-sustainability-fund/quarterly-reports/>

<sup>10</sup> <http://www.whebgroupp.com/impact>

<sup>11</sup> Ibid