

# INVESTMENT PRINCIPLES

Sustainable Future Technologies



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The value of an investment and the income from it can fall as well as rise and you may not get back the amount originally invested.

# INVESTMENT PHILOSOPHY

- We believe technology is the science of solving problems and responsible innovation and disruption can be a positive force.
- Our deep knowledge and extensive experience enables us to navigate the technology hype cycle to identify persistent, underappreciated growth opportunities that provide solutions to the global challenges faced by humanity – technology for good.
- We believe this approach will provide clients with positive environmental and social benefits from the development of a sustainable global economy, as well as the potential for attractive long-term returns.

#### Our foundations

The Sustainable Future Technologies (SFT) Strategy is built upon the foundations of the Janus Henderson Global Technology Leaders Strategy, founded in 1983, one of the largest and longest running technology strategies in Europe. The Global Technology Leaders (GTL) Team has been investing through a lens of innovation, disruption, navigating the technology hype cycle and integrating ESG factors for more than 20 years. The SFT Strategy has been born out of our experience, our research into sustainable technology investing as well as taking inspiration from the Janus Henderson Global Sustainable Equity Strategy, that was founded in 1991.

Our focus on technology companies means the strategy naturally avoids the most carbon intensive sectors of the economy and others that have negative externalities, such as environmental pollution, violence and armed conflict, and smoking.



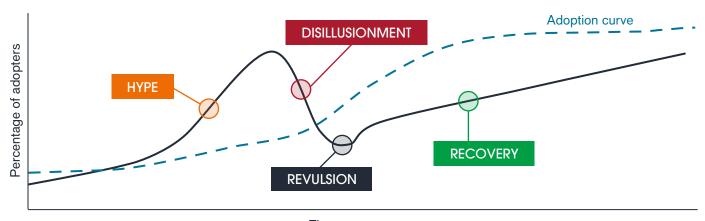
# Differentiated investment approach to sustainable tech investing

SFT's approach is based on our extensive investment experience, which allows us to better understand technology's impact on society and the environment. Innovation and disruption are two sides of the same coin, while there are also often conflicts between environmental and social sustainability.

- Positive and negative (avoidance) investment criteria are used to help navigate a course through to a sustainable investment strategy, while pro-active company engagement and portfolio management are required throughout the journey.
- Environmental and social factors are considered at all stages of the investment process. Only companies with a clear positive impact, generating at least 50% of current or
- future revenues from eight identified sustainable technology themes are eligible for investment.
- Our positive impact thematic overlay of sustainable technology themes and positive screening creates a 'technology for good' portfolio compliant with EU Sustainable Finance Disclosure Regulation (SFDR) Article 9 standards with sustainability as its objective.

# Navigating the hype cycle of sustainable future technologies

#### Innovation and growth sustained by pro-active ESG engagement



Time

We understand that the pace and ease of adoption of new sustainable technologies is not linear. The "hype cycle" was first popularised by research firm Gartner and is a visual representation of the maturity, market perception and adoption of new technologies. The solid grey line depicts "hype" ie. investors' perception of technology growth, while the dotted blue line represents actual tech adoption. Typically, the market will overestimate the short-term potential of any new technology or innovation and underestimate its long-term potential. These hype cycles have been observed consistently - notable examples being the internet bubble of 1999-2000 and the 2013-2014 3D printing bubble. These hype cycles create volatile movements both up and down for underlying stocks exposed to these technologies. Therefore, we believe it is vital to navigate these hype cycles with the aim of driving consistent long-term returns.

In "navigating the hype cycle" our experience and sector specialism is key. We identify the long-term adoption curve opportunities of our sustainable technology themes, assessing the growth opportunity and whether a company has a true competitive advantage or sustainable barriers to entry. This is a key part of our fundamental analysis to help us understand whether a company can grow profitably over a sustained period – generating undiscovered or unappreciated growth. By design, our high conviction investment approach seeks to identify new sustainable technologies and themes and identify the leaders in those areas, which have growth prospects not already reflected in stock valuation.

# Technology and sustainability - defined and aligned

We believe that technology is the science of solving problems – 'the application of scientific knowledge for practical purposes.'

#### 5 key global challenges:

The United Nation's Sustainable Development Goals have influenced our categorisation and identification of these global challenges and shaped our investment themes

#### Climate change



This is the greatest environmental and social challenge the world has ever faced and is impacting health, livelihoods, food security, water supply, human security and economic growth. There is an urgent need to transition to a low-carbon economic model.

Themes: Sustainable transport, Low carbon infrastructure, Climate care, Smart cities

#### Resource constraints



Due to population growth and a linear economic model, natural capital resources are being damaged and depleted faster than they can be replenished, undermining the ability of the global economy to generate adequate wealth to support social trends. Our technology focus means we avoid investing in companies and sectors that most damage or deplete natural capital.

Themes: Resource & productivity optimisation, Low carbon infrastructure, Climate care, Sustainable transport, Smart cities

#### Population growth



There will be growth in demand for many different types of goods and services that cater to the needs of a growing and changing population, ranging from basic necessities such as food, water and shelter to transportation, financial services, education, health, security and well-being. We seek to ensure that disruption caused by automation and artificial intelligence is responsibly managed and data usage is secure and fair to protect our fundamental human right to privacy and our digital identities.

Themes: Digital democratisation, Tech health, Resource & productivity optimisation, Smart cities, Sustainable transport, Data security

#### Ageing population



The world's population is ageing, driving rising demand for products and services catering to ageing demographics, such as healthcare, financial security and social protection, as well as solutions addressing declining workforce participation and rising dependency ratios. We seek to ensure that disruption caused by automation and artificial intelligence is responsibly managed and data usage is secure and fair to protect our fundamental human right to privacy and our digital identities.

Themes: Digital democratisation, Tech health, Resource & productivity optimisation, Smart cities, Sustainable transport, Data security

#### Poverty and inequality



Extraordinary economic growth and widespread improvements in wellbeing have failed to close the deep divides across countries and within society. We view the eradication of poverty and addressing inequality as necessary to unleash human and productive potential of each country's population and bring development towards a socially sustainable path. We seek to ensure that disruption caused by automation and artificial intelligence is responsibly managed and data usage is secure and fair to protect our fundamental human right to privacy and our digital identities.

Themes: Digital democratisation, Tech health, Smart cities, Sustainable transport, Data security

#### Investment framework

Navigating the hype cycle of sustainable future technologies is supported by the five interlinking pillars of our investment framework:

1. Positive screening



- Applied via a positive thematic overlay of long-term sustainable technology themes
- ▶ Aligned with United Nations Sustainable Development Goals (UNSDGs)
- 8 positive themes to guide idea generation
- 2. Negative screening



- Country and company exclusions combined to reduce the investment universe by 20%
- Norms-based screening
- ESG laggards
- 3. Bottom-up fundamental research



- Organic growth potential
- Competitive advantages
- ► Business model resilience
- ► Integrated ESG analysis
- 4. Valuation discipline



- Rational growth at a reasonable price
- Seeking underappreciated earnings growth potential
- ► Incorporate ESG insights
- 5. ESG insights and pro-active engagement



- Evaluate potential ESG issues
- Company engagement and progress reporting
- Utilise in-house Governance and Responsible Investment Team

# 1. Positive screening

#### Identifying companies on the right side of environmental and social trends

The positive impact thematic overlay and positive screening guides our ideas generation and identification of long termopportunities created by major technological shifts. Investments in the portfolio must derive at least 50% of current or future revenues from these sustainable technology themes. For thematic integrity the independent Governance and Responsible Investment (GRI) Team provides portfolio oversight ensuring true alignment with themes.

#### **Environmental themes:**

#### Climate care

Innovative technological solutions designed to reimagine the most carbon intensive areas of the economy meeting the challenge of resources constraints, population growth and climate change.

Renewable energy technology, battery technology, smart grids, smart power

#### Sustainable transport

Technology to enable the transition to zero emission vehicles, ride hailing, autonomous driving and automated logistics with the goal of climate change adaptation and mitigation.

EVs, computer vision, sensors, battery management, navigation, platforms

#### Low carbon infrastructure

Compute proliferation drives an exponential leap in power consumption, a climate change and resource constraint challenge that requires the transition to low carbon cloud and 5G architecture.

Datacentres, Moore's Law, 5G infrastructure, platforms, software

#### **Smart cities**

Sustainable cities need to be smarter to meet the challenges of a growing and ageing population, resource constraints and climate change necessitating digital transformation and greater connectivity.

5G mobility, Internet of Things (IoT), edge compute, smart communications

#### **Resource & productivity optimisation**

A growing and ageing population, resource constraints and climate change require technological innovation to boost productivity and to optimise the efficient use of scarce resources.

Digital design, collaboration tools, AI, digital productivity, asset tracking

#### Social themes:

#### **Digital democratisation**

A growing and ageing population beset by rising poverty and inequality requires technological innovation to enable access to quality education and promote financial inclusion.

Al, data analytics, fintech, edtech, platforms, data access

#### **Tech health**

A growing and ageing population beset by rising poverty and inequality requires technological innovation to enable access to quality healthcare and improved outcomes.

Medtech, AI, data analytics, platforms

#### **Data security**

A digital and AI world built on big data and analytics in the cloud requires secure and fair data usage to protect our fundamental human right to privacy and our digital identities.

Network security, secure cloud, identity protection, data privacy

# 2. Negative screening

Companies on the wrong side of these trends are subject to disruption



The negative global impact from the cost of economic externalities such as environmental pollution, violence and armed conflict and smoking is becoming increasingly recognised. We seek to avoid those businesses involved in activities that are harmful to society or the environment via clearly defined standards that govern the companies we exclude from our investment universe. Our exclusions provide ethical, social, environmental and financial benefits.

#### **UN Global Compact (norms-based screening)**

All holdings are compliant with UN Global Compact whose ten principles cover human rights, the International Labour Organization's Declaration on workers' rights, corruption and environmental pollution. This provides minimum safeguards for the investments in the strategy.

#### **Exclusion criteria**

At a corporate level, we utilise a third-party vendor to compare all companies, as well as their beneficial owners, and as appropriate, directors, against sanctions lists maintained by the Office of Foreign Assets Control (OFAC, US), the European Union, the United Nations and multiple countries including Canada, Australia, Switzerland and the UK.

The strategy naturally and explicitly excludes investment in multiple sectors which have many negative externalities, such as environmental pollution, violence and armed conflict and smoking, and have a detrimental effect on the global economy.

People	Environment	Animals
Production of Alcohol	Fossil fuel extraction & refining	Animal testing
Armaments	Fossil fuel power generation	Fur
Gambling	Chemicals of concern	Genetic engineering
Pornography	Contentious industries	Intensive farming
Tobacco	Nuclear power	Meat & dairy production

These exclusions are hard coded into our stock dealing system.

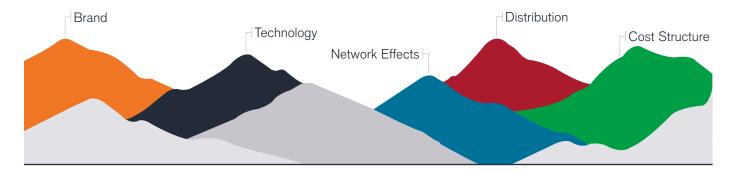
#### 'De minimis' limits

Given the technology focus of the strategy, no exposure with respect to the avoidance criteria is expected. However, there may be instances when we will apply a de minimis limit. A de minimis limit of 5% is a threshold above which investment will not be made and relates to the scope of a company's business activity; the limit may be quantitative (e.g. expressed as a percentage of a company's revenues) or may involve a more qualitative assessment. De minimis limits exist because sometimes avoiding an industry entirely may not be feasible given the complex nature of business operations. In such instances, we will invest in a company only if we are satisfied that the "avoided" activity forms a small part of the company's business and when our research shows that the company manages the activity in line with best practices.

Our exclusion and avoidance criteria are expected to reduce the strategy's investable universe by over 20%.

### 3. Bottom-up fundamental research

Seeking environmental advantages that increase difficulty for competing firms to capture market share



We assess the organic growth potential the size of the addressable opportunity, barriers to entry and management quality. The nature of the competitive advantage of the moat and whether that is increasing or decreasing has implications for margins. We look for companies where we believe the management quality, growth rate or the sustainability of that growth rate is underappreciated.

Via bottom-up fundamental research and proprietary forecasting we seek to identify unexpected earnings or cashflow growth as a core tenet of every investment case.

# 4. Valuation discipline

A belief in valuation discipline as a guide to unappreciated earnings growth

Valuation discipline is a key defining part of our bottom-up research. The focus is on rational growth at a reasonable price (GARP). We do not believe that pure "value" investing is appropriate in a dynamic sector like technology and seek to avoid companies that are in secular decline. We are disciplined in our approach utilising a variety of valuation approaches used by sector specialists, which are all focused on future earnings and cashflow. We also integrate sustainability and ESG criteria into our valuation assessment to help assess the appropriate premium/discount to the market. Our proprietary master valuation spreadsheet monitors all our target prices, earnings momentum and share price performance, while our ESG Process Monitor Control allows us to identify ESG indicators relevant to the valuation framework.

# 5. ESG insights & pro-active engagement

We believe that financial indicators have strong non-financial roots. As active managers with superb access to senior management, we take a pro-active approach to communicating views to companies and seeking improvements in performance and standards of corporate responsibility.

The SFT Strategy has sustainability as its objective and seeks to achieve this through its thematic overlay, considering the revenue-generating activities as well as the operational activities of investee companies. Each company held in the portfolio is reviewed in relation to its impact on the environment and society, and governance risks.

The investment team is responsible for its own research and mapping to sustainability themes guided by a dedicated sustainability research analyst.

We use a variety of information sources including security issuers and third-party research providers and consultants to rank and assess our investee companies. However, we recognise the limitations of static scoring of complex issues with imperfect data and disclosures and varying methodologies.

We engage directly with companies via formal and informal meetings, calls and in writing, providing thought leadership in engagement on complex social and environmental issues.

Engagement topics are wide ranging and have included carbon emissions, taxation, workers' rights, diversity and the balance of data security and privacy.

While the strategy will avoid ESG laggards, we will use engagement to promote best-in-class practices, for example related to governance, carbon targets and data privacy and security. We may hold companies that score poorly due to a lack of disclosure, notably smaller companies, or due to minor ESG issues if we have a positive outlook on near term improvements via engagement, which may be formalised via an engagement action plan including clear objectives and timeline.

The Governance and Responsible Investment (GRI) Team identifies any further issues and verifies progress on active engagement plans, as well as facilitates collaboration with other investors to increase engagement influence.

#### Governance

- Evidence of sound management structures, employee relations, adequate remuneration, tax compliance
- Good governance practice that shows alignment with long-term interests rather than short-term shareholder demands
- Diversity of Board, track record of management of environmental and social factors

#### **Environmental**

- Alignment with environmental themes
- Alignment with UNGC Principles 7-9
- Policies for risk mitigation, strategies for carbon reduction

#### Social

- Alignment with social themes
- Compliance with UNGC Principles 1-6
- Controversies monitored pro-actively and reactively

Note: The UN Global Compact's Ten Principles are derived from the Universal Declaration of Human Rights at Work, the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development and the United Nations Convention Against Corruption. For further information, visit https://www.unglobalcompact.org/what-is-gc/mission/ principles. For more information on issues covered visit https://www.unglobalcompact.org/library

#### Voting

The investment team exercises the voting rights on behalf of clients at meetings for all companies in which it has a holding. While Janus Henderson subscribes to proxy advisory firm Institutional Shareholder Services (ISS) and receives advice from the independent GRI Team, ultimately key voting decisions are made by portfolio managers and analysts. Shareholder proposals on ESG matters are assessed pragmatically, and the team will support them where they have the potential to enhance the sustainability or shareholder value of a stock.

# Integrated risk management

#### Reflected in portfolio construction

Portfolio construction considers a variety of risk factors focusing on managing thematic, liquidity and sustainability risk. A focus on liquidity control is an important aspect of navigating the hype cycle – to avoid overcrowded and overhyped areas of the sector.

- Independent Investment Risk Team, Liquidity Risk Team, dashboards and risk reports to monitor portfolio and liquidity risk and oversight meeting held quarterly.
- Financial Risk Team works closely with Risk Team and interacts with the investment team on regulatory risk monitoring.
- Independent Governance and Responsible Investment (GRI) Team works with the investment team, meeting for quarterly risk meetings where portfolios are examined in line with the framework outlined for ESG insights and oversees monitoring and progress on active engagement plans in accordance with this document.
- The Ethical Oversight Committee's oversees exclusion criteria:
  - Approves the appointment of an external research provider to advise the investment team on compliance with the avoidance criteria for the strategy.
  - Reviews any holding within the strategy that does not comply with the advice on the exclusion criteria offered by the external research provider.
  - Approves any changes to the avoidance criteria and the de minimis thresholds.
  - Complexity of issues and imperfect information means adherence can only be on a 'best endeavours' basis; wherever possible investments are made in accordance with SFT investment principles.

#### Sustainability risk management

During regular risk meetings, alongside risk-related questions we will also be questioned on the performance of portfolio companies using the team's own ESG Process Control Monitor as well as Janus Henderson's internal ESG risk report. The portfolios will be examined in terms of overall sustainability, controversial events, governance rating and carbon footprint compared to the benchmark. Where unexpected results are found, the team will ensure that these are addressed through engagement or further research in order that the issues are being dealt with or are at least considered immaterial to the investment case.

When assessing a potential investment based on the strategy's sustainability criteria, the team is dependent upon our own research and mapping to ESG factors. This is supplemented by information and data from the security issuer and/or third parties including research providers, index providers and consultants in the form of reports, screening, ratings and other related analysis. Such information or data may be incomplete, inaccurate or inconsistent. Gaps in disclosure or standard reporting may affect the investment team's ability to measure and assess the environment and social impact of a potential investment. In such situations our extensive experience, deep sector expertise, industry contacts and support from the GRI Team prove beneficial.



# Glossary:

**Barriers to entry:** factors hindering the ease of entering of an industry or business area such as high start-up costs, patents, brand loyalty etc.

**GARP:** Growth at a Reasonable Price investors seek companies that are undervalued (value investing) with solid sustainable growth potential (growth investing).

**Value investing:** value investors search for companies that they believe are undervalued by the market, and therefore expect their share price to increase.

**Digital democratisation:** the process by which access to technology rapidly continues to become more

accessible to more people. Drivers include new technologies and improved user experiences, increasing participation in the development of products, more affordable user-friendly products as a result of industry innovation and user demand.

**Proxy voting:** active investors use proxy voting to vote on identified issues on behalf of shareholders. It is used alongside company engagement to influence corporate behaviour on ESG factors.

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