
Creating a Better World Through Investing

How we enable people to invest in companies that
help to solve global problems – without
compromising returns

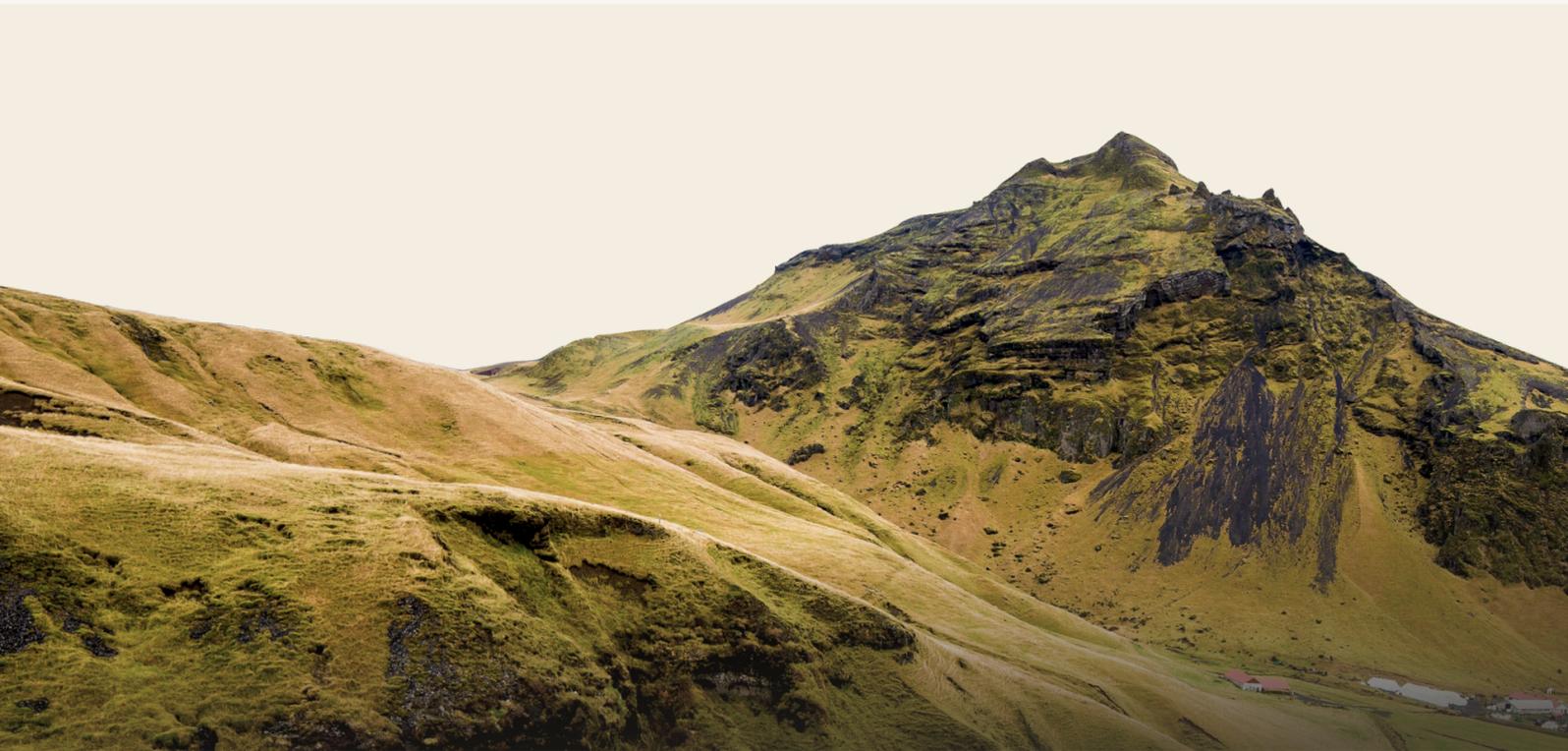


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Introduction: A new approach to impact investing

Every investment has an impact. Whether it's buying shares in a company championing carbon-neutral transport and gender equality, or financing a mining conglomerate that's expanding its fracking operations – progress tends to accelerate where capital flows.

Investing is a powerful tool for shaping the world (for good and for bad), and we're on a mission to empower people to grow their wealth, while investing in companies that help make the world cleaner, greener, and more socially responsible.

In the past, this kind of investing was only available to very wealthy customers of private banks. For the rest of us, investing sustainably meant putting our hard-earned money into high-risk projects, accepting very low returns, or falling for “sustainable” options that include companies such as Nestlé, Total SA, and Saudia Arabian Mining ([more on this below](#)). Worse still, through their bank deposits and pension investments, everyone else was unknowingly supporting the very companies fuelling the climate crisis and other major problems of our time.

Yova was founded to solve this problem. We digitised the investment methods of private banks, to create a sustainable investing solution that is accessible to everyone. With Yova, even small sums of money can be invested in a way that's diversified and risk-optimised – without compromising returns.

Transparency and personalisation is at the core of our approach. We are not selling a generic, one-size-fits-all solution. Nor are we cobbling together “green” funds. Instead, we enable our customers to invest directly in company stocks, and to make their own decisions on the topics and companies they support through their investment.

“ESG data, the north star in most sustainable investments, counts for only a small amount in Yova’s assessment.”

Unlike other sustainable investment providers, we focus on companies that champion impact topics such as renewable energy, transport of the future, disease eradication, and more. We call this the company’s “handprint”. Recognising that a company’s operations also have an impact, users can also select “footprint” topics such as gender equality, fair pay, and low emissions. ESG data, the north star in most sustainable investments, counts for only a small amount in Yova’s assessment – later in this whitepaper, we explain why.

Naturally, this approach raises questions. The most common being, “How do you assess companies?” and “How do you choose what companies go into my portfolio?”. The purpose of this whitepaper is to address these topics in detail. In the following pages, we outline the underlying methodology of how the Yova Engine creates investment portfolios. We detail exactly how the user’s chosen impact and exclusion topics are combined to create an investment portfolio that is completely personalised to them.

Pitfalls in sustainable investing

People are always surprised to hear that leading sustainability funds include companies such as Nestlé, Total SA and Saudi Arabian mining¹.

How is this possible? Many providers only look at historical data, focusing on the operational footprint of a company (for example, how much electricity it uses). Little consideration is given to the sustainability impact of the company's products and services.

Let's think about companies that produce equipment for the mining industry. Many have extremely efficient, modern factories, which results in comparatively low emissions. Therefore, many such companies satisfy the criteria to enter major sustainability investments, such as Blackrock iShares. But the question remains: Does a sustainably-minded person want to invest in a company that is so closely tied to an industry that contributes to environmental destruction?

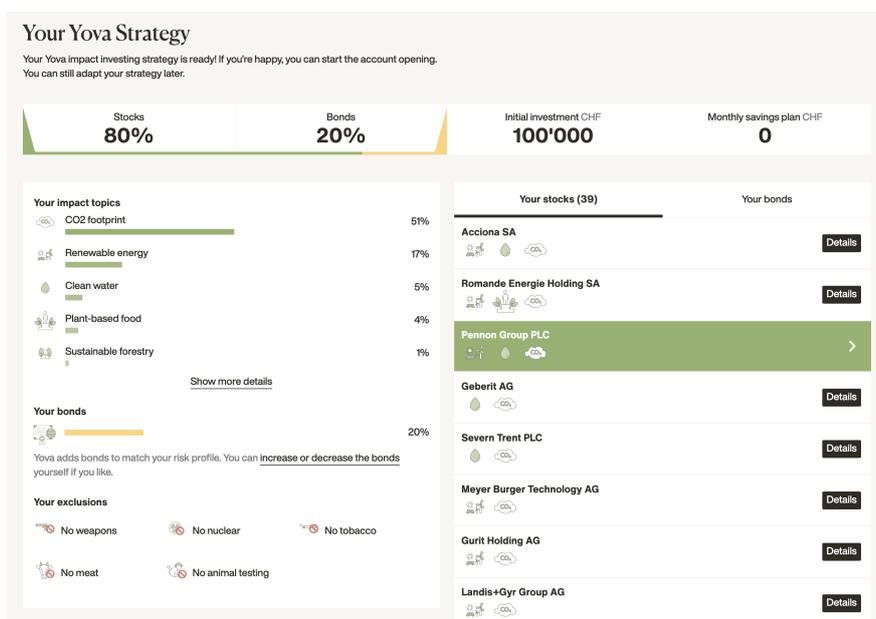


Exhibit 1: An example of what a Yova investment strategy can look like. Each strategy is unique to the user.

¹ We evaluated, among others, Blackrock's iShares MSCI EM SRI UCITS ETF and iShares MSCI Europe SRI UCITS ETF, which contain these stocks.

How we create your portfolio

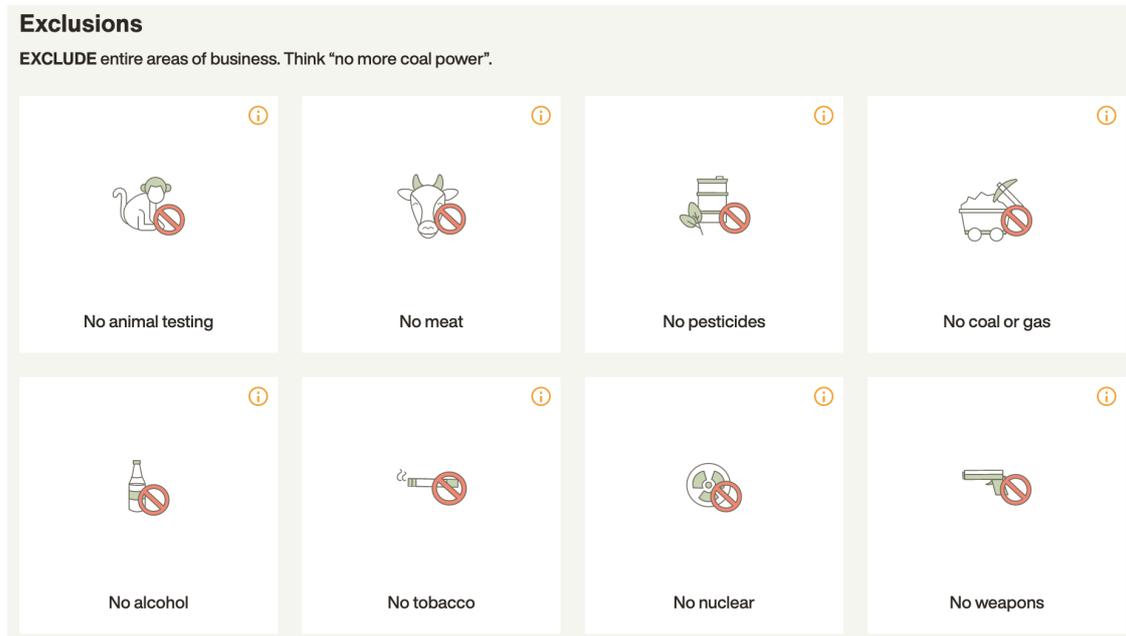


Exhibit 2: As well as selecting handprint and footprint topics, Yova users can choose to exclude up to eight business areas from their investment.

The flow chart on the next page gives an overview of how the Yova Engine creates each individual investment strategy. It starts when a person opens the free online tool at yova.ch, and picks the impact topics they are interested in, as well as topics they wish to exclude completely. In real-time, the Yova Engine analyses every company in the **Yova Universe**, and creates a personalised long list of companies, ranked according to how well they match the user’s criteria (we call this “match score”).

Companies that clash with the user’s **exclusion criteria** are completely eliminated from their strategy.

The Yova Engine works in real-time, creating the strategy as each option is picked – the investor sees exactly what stocks we recommend, and can make changes before making any commitment.

How the Yova Engine creates personalised impact investing portfolios

Sustainability

Impact topics selected by the user in the Yova app



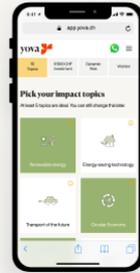
User's chosen handprint topics

User's chosen footprint topics

User's chosen exclusion criteria

Financial

Each portfolio is built according to investment best practices.



Expected time horizon for the investment

Age of the user

The user's overall asset allocation

The level of risk the user prefers

General ESG performance of each company

List of Companies

The Yova Engine ranks companies according to "match score".

Stock / Bond Split

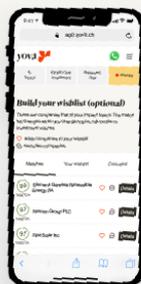
The Yova Engine calculates a ratio of bonds and stocks that's appropriate for the user. The user can override this recommendation, although we warn against it.

Diversification

The Yova Engine spreads the investment across different industries, currencies, regions, capitalisations, etc.

The Yova Engine adds "stability" positions to optimise risk in the overall portfolio

Diversified investment strategy



Further customisation

The user can add and remove companies. With every adjustment, the Yova Engine recalculates the portfolio so that it is financially sound.

Exhibit 3: A visualisation of how the Yova Engine builds each unique portfolio.

The Yova Engine also analyses the user's financial situation and risk preferences, producing a final strategy that is based on the following criteria:

1. The company's match score
2. State-of-the-art financial practices

In line with investment best practice, the final portfolio always consists of 30-40 stocks spread across different industries, countries, currencies, and capitalisations. Depending on the user's choices, several 'stability positions' might be included, to help diversify the portfolio. Although these 'stability' companies are not champions in any particular topic, they have an above-average sustainability footprint. Read more about how Yova uses the principles of the Nobel-Prize winning 'efficient frontier' theory [here](#).

“Don't like Tesla? No problem.
In one click, it's out of your portfolio. With every
adjustment, the Yova Engine recalculates the entire
portfolio to ensure it is financially sound.”

In addition to company stocks, a percentage of government bonds is included in each strategy². This percentage is calculated according to factors such as how long the user intends to invest their money for, their age, and how much of their wealth is invested in stocks. If the user is an experienced investor, they can adjust their ratio of stocks and bonds, according to the level of risk they are comfortable with.

² For this portion of the investment, Yova uses an ETF consisting of government bonds. This ensures the bond portion of the investment provides the investor with good liquidity and diversity.

Since personalisation is at the heart of Yova's offer, the user can also customise their portfolio by adding and removing specific companies (Don't like Tesla? No problem. In one click, it's out of your portfolio). With every adjustment, the Yova Engine recalculates the entire portfolio to ensure it is financially sound – the user never needs to worry about this.

As well as removing specific companies, a user can search the Yova Universe to add new companies to the portfolio. The Yova Engine will prioritise these selections – so long as this can be done while adhering to investment best practice. For example, if a user selects 30 American technology companies, the Yova Engine will not include all of them, since it doesn't satisfy our diversification criteria.

The Yova Universe

The Yova Universe is made up of all the companies it's possible to invest in through Yova (around 400 at the time of publication). New companies are regularly introduced – a recent example is the vegan meat alternative Beyond Meat, which was added to the Yova Universe following its initial public offering. In addition, we continuously monitor our universe to anticipate potential controversies and remove companies when appropriate.

“A company must also satisfy our stringent financial criteria to enter the Yova Universe.”

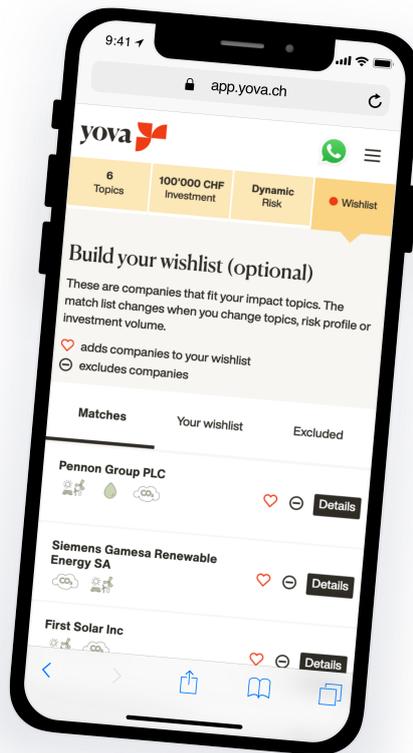


Exhibit 4: A snapshot of a Yova impact investing strategy

In addition to being a champion in at least one handprint or footprint topic, a company must also satisfy our stringent financial criteria to enter the Yova Universe. First, it generally must be part of the highest regulated segment of the following stock market indices: The S&P500, Stock 600, or the Swiss Performance Index (we consider companies from different indices if the market capitalisation is above CHF 200 million). If it is not part of these indices, it was handpicked by our team to fulfil certain criteria.

In addition, we have a variety of thresholds, such as average daily trading volume, to help ensure the market price for the stock is “efficient”. This means that the price of the stock will already reflect all public information about the company, including very recent announcements and news (it is thus considered a fair price). This

threshold also means all Yova portfolios have good liquidity. If a customer wants to withdraw their investment, they can sell their stocks and have cash in their account within a few days.

Importantly, we don't set a minimum ESG threshold for smaller companies to enter the Yova universe. As mentioned previously, ESG data has its limitations – and it typically punishes young and innovative companies, such as Nel ASA and SunPowerCorp.

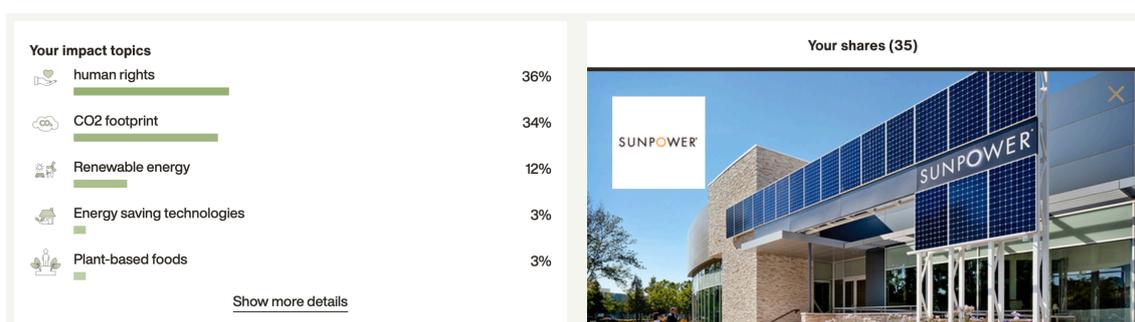


Exhibit 5: A snapshot of the Yova app.

Handprint: 12 topics that create a better world

At Yova, we believe a company's biggest environmental and social impact comes from the products and services it puts into the world. We call this the "handprint". Users can pick from the following 12 impact topics: Renewable energy, energy-saving technology, clean water, circular economy, sustainable forestry, plant-based food, access to medicine, disease eradication, digital champions, transport of the future, Swiss champions, and advancing education.



Renewable Energy

With power generation and heating responsible for close to 50 percent of global carbon dioxide emissions³, there's an urgent need to transition away from fossil fuels, and into cost-efficient and sustainable renewable energies.

To identify Renewable Energy champions, we analyse the share of energy produced from renewable sources (in the case of utility companies), or by the share of revenues generated through the production, supply, and instalment of advanced equipment to support this industry⁴. We source this information from the company's audited annual reports.



Energy-Saving Technology

This handprint topic captures companies that are developing technological solutions to help reduce energy consumption in domestic and commercial buildings. This includes, but is not limited to, next-generation heat pumps, insulation materials, and sensors that better manage energy resources.

To identify Energy-Saving Technology champions, we evaluate

³ Source: <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>, retrieved 20.05.2019

⁴ Given limitations in company reporting, we estimate this by dividing companies into categories: Companies exclusively active in renewable energy, companies that focus on renewable energy but are active in other segments, and companies that are active in multiple segments including renewable energy.

companies' audited annual reports to assess the share of business dedicated to products and technologies promoting energy efficiency.



Clean Water

Clean water is fundamental to life, yet it's scarce in many parts of the developed and developing world. This handprint topic includes companies that increase access to clean water, reduce water wastage and reduce water pollution.

To identify Clean Water champions, we evaluate audited annual reports to assess the share of revenue a company generates through the supply of water, wastewater treatment, or the development of related technologies. In scoring companies, we give the highest emphasis to those that develop technologies and equipment to help increase access and reduce wastage of water, and reduce water pollution.



Circular Economy

As the world's population increases, the responsible management of waste becomes significant a sustainability issue. This handprint topic consists of companies providing innovative recycling and waste solutions, or developing technologies to support this industry.

To identify Circular Economy champions, we evaluate the annual reports of relevant companies and assess the share of revenues generated through advanced recycling processes and technologies. In scoring companies, we emphasise those providing and developing new technologies and equipment.



Sustainable Forestry

When managed sustainably, large forestry areas act as the lungs of the world, while providing a renewable supply of wood for construction and heating. However, illegal and irresponsible logging puts this into jeopardy.

To identify Sustainable Forestry champions, we first research companies that own and manage large forestry areas. Then, we evaluate their certifications regarding biodiversity, forest protection, quick reforestation practices and responsible forestry management. We uprate companies that have certifications awarded by the [Programme for the Endorsement of Forest Certification](#) and the [Forest Stewardship Council International](#).



Plant-Based Food

Meat consumption creates heavy greenhouse gas emissions and water usage – eating less of it is one of the most impactful things an individual can do to help the planet. Many companies are innovating in this space, creating vegetable-based meat alternatives.

To identify Plant-Based Food champions, we research companies that produce or sell vegan and organic foods. We look at the company's overall product portfolio and assess the revenue share generated by products needed for vegan food. In addition, we include some additional food companies that have made a significant impact through veggie innovations.

Although these companies make plant-based food more accessible, it's important to note that some are traditional food companies that also

offer non-vegan products or suppliers needed by the meat industry. Users who wish to strengthen the meat-exclusion aspect of their portfolio can choose to add the additional exclusion criteria of “no meat” and “no animal cruelty”.



Access to Medicine

Healthcare can be extremely expensive, and many people cannot afford life-saving treatments. Pharmaceutical companies have a critical role to play in improving access to medicine, and this handprint topic promotes those with long-term strategies to provide access to those who can't pay the market cost.

To identify champions in this field, we use the Access to Medicine Index, an independent non-profit organisation funded by the UK and Dutch governments and the Bill & Melinda Gates Foundation. The index ranks pharmaceutical companies based on seven areas of behaviour linked to healthcare access: strategy, governance, R&D, pricing, licensing, capacity building and donations.



Disease Eradication

Medical innovations from pharmaceutical, biotechnology and medical technology companies save lives and increase quality of life. But this industry relies on large amounts of investment to fund research and development pipelines.

To identify Disease Eradication champions, we analyse companies on the Pharmaceutical Innovation Index and select those with above-average freshness scores. This score is defined by the share of revenues generated by licensed products that entered the market within the last 5 years⁵. We also analyse medical technology companies, selecting those with a significant investment in research and development, relative to turnover.

“This industry relies on investment
to fund research.”



Digital Champions

Although this topic is not directly related to sustainability, it is included because many Yova users want to supplement their impact investment with companies that make their lives easier, more enjoyable and more connected.

To identify Digital Champions, we turn to the [fastcompany.com](https://www.fastcompany.com) 50 Most Innovative Companies List, which ranks companies making a profound impact on an industry or popular culture⁶. One example is Shopify, a Canadian company that makes it easy for small business owners to effectively launch and run e-commerce operations.

In addition, Yova users can search and add specific companies that they know and love. These companies are prioritised in the final

⁵ Source: <http://ideapharma.com/pij>, retrieved 20.05.2019

⁶ Source: <https://www.fastcompany.com/most-innovative-companies/2019>, retrieved 20.05.2019

strategy proposed by the Yova Engine, but will only be incorporated if the overall strategy is financially sound.



Transport of the Future

Transport is the world's second largest source of carbon dioxide emissions, after electricity and heat production⁷. Our ability to reinvent the way we get from A to B will be a crucial factor for mitigating the climate crisis in the years to come.

To identify the champions of this impact topic, we look for companies that are already driving change by putting sustainable transport at the heart of their business model. We find companies in a variety of sectors, including companies that:

- Provide public transport (ranging from an operator of London buses, to the company that owns the Channel Tunnel).
- Make public transport more sustainable and attractive through innovations and technology (for example, companies that make high-speed trains, and therefore reduce reliance on short-distance flights).
- Design and manufacture electric vehicles.
- Provide car sharing platforms and other services that reduce reliance on car ownership.
- Develop technology to reduce car emissions (for example through electric, hydrogen or biofuel engines).

We assess each company according to the innovativeness of its solutions and the potential to save greenhouse gas emissions.

⁷ Source: <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>, retrieved 20.05.2019

Companies that exclusively produce electric vehicles or fuel cells receive the highest scores. Lower scores are given to companies that also have products based on fossil fuels.



Swiss Champions

Many Yova users are enthusiastic about investing in leading global companies that call Switzerland home. This handprint topic enables customers to support companies that drive Switzerland's economy by providing local workplaces, paying taxes, and putting the country on the innovation map.

We define a Swiss Champion as a company that's headquartered in Switzerland, and has at least 25 percent of its value creation taking place in the country. In cases where reliable data is not accessible, we estimate this based on correlated metrics, such as the percentage of employees in Switzerland and local business assets. This information is found in the annual reports of each company. Companies with a higher share of value creation in Switzerland receive a higher match score.

From this group, Yova's analysts select only the most interesting and innovative companies for the Yova Universe.



Advancing Education

Quality education and training is an important building block for society to innovate and solve the world's most pressing challenges.

To identify the champions that are advancing education, we look for companies providing innovative educational services and products – ranging from online education solutions to kindergartens operators. We assess the annual reports of each company, to estimate the share of revenues generated in education. Companies with a larger focus on education receive a higher score.

“Quality education and training is an important building block for society to innovate and solve the world’s most pressing challenges.”

Footprint: 4 pillars of good business practice

Although Yova’s match score is primarily driven by handprint topics, we also give users the choice to add four high-impact footprint topics to their investment. These are: low carbon emissions, gender equality, fair pay, and human rights.

When the Yova Engine calculates the overall match score of each company, it gives less weighting to how well a company matches the footprint topic, and more weighting to the handprint topic.

Regardless, these footprint topics are a powerful option for a user who wants to steer their investment into specific impact areas. Let’s take

Vestas and Siemens Gamesa for example. Both companies are exclusively dedicated to wind energy, but Siemens Gamesa is more environmentally friendly in its production.

“These footprints topics are a powerful option for a user who wants to steer their investment into specific impact areas.”

If the user were to select the handprint topic “renewable energy”, as well as the footprint topic “low carbon emissions”, the Yova engine will give Siemens Gamesa a higher match score than Vestas. The following section explains how we assess companies for each of the footprint impact topics.



Low Carbon Emissions

Emissions are a significant factor in the climate crisis and, as policymakers regulate to reduce emissions, this footprint topic becomes increasingly important not only for impact-driven investors, but financially-driven investors too⁸.

To identify the champions of the low carbon economy, we use scores provided by Refinitiv, the industry-leader for this analysis⁹. This score measures a company’s commitment and effectiveness towards reducing environmental emissions in its production and operational processes. It then ranks companies against industry peers. By selecting this footprint topic, user’s uprate companies like Siemens Gamesa,

⁸ Source: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_summary-for-policymakers.pdf, retrieved 21.05.2019

⁹ Refinitiv was formerly the financial and risk arm of Thomson Reuters, and was recently renamed.

which are “best-in-class” for carbon emissions in the industry they belong to.

Gender Equality

Gender equality is no longer just a social justice issue – a significant body of research highlights its positive impact on revenue and growth¹⁰. This footprint topic allows customers to put particular emphasis on companies that accelerate progress towards gender equality in the workplace.

To identify gender equality champions, we use Refinitiv data, which evaluates companies against a range of criteria, including the gender balance of the workforce, senior management and board of directors, as well as low pay gap. Based on Refinitiv’s assessment, companies in the Yova Universe receive higher or lower scores on this topic.

Fair Pay

From 1978 to 2016, the compensation of chief executives in the United States increased by more than 800 percent. That’s more than 70 percent faster than the rise in the stock market, and significantly faster than the 11.2 percent wage growth of a typical worker over the same period¹¹.

¹⁰ Source: <https://equileap.org/external-resources>, retrieved 21.05.2019

¹¹ Source: <https://www.epi.org/publication/ceo-pay-remains-high-relative-to-the-pay-of-typical-workers-and-high-wage-earners>, retrieved 21.05.2019

To identify fair pay champions, we work with Refinitiv, who comb the annual reports of companies, which are bound by regulation to declare the average employees' salary as well as the remuneration of the chief executive. We calculate a multiple of these two values and rank companies according to this multiple, with lower multiples resulting in higher scoring.



Human Rights

With globalisation accelerating and some consumer products getting impossibly cheap, many Yova users want their investment to emphasise companies that protect and promote human rights.

We use Refinitiv data to identify champions of this footprint topic. This data is based on numerous qualitative criteria, including the human rights policies a company has in place, compliance with international standards, and memberships to organisations that promote best practices. These assessments are combined into one score, which Yova uses as part of a company's overall match score when a user selects this footprint topic.

Footprint versus ESG: What's the difference?

Footprint: Specific high impact topics, which relate to a company's operations. For this analysis, Yova primarily uses data from Asset4.

ESG: General environmental, social and governance ratings provided by Asset4. Companies are evaluated on more than 400 ESG measures in 10 main themes – including resource use, corporate social responsibility, and human rights.

How Yova uses ESG data

When the Yova Engine calculates a company's match score, its handprint gets the most weighting, followed by its footprint, and then its generalised Environmental, Social, and Governance rating. In addition, large companies with low ESG scores are excluded.

As mentioned previously, ESG data does not give a complete picture of the impact a company has on the world – sometimes uprating companies like Nestlé, Total SA and Saudi Arabian mining¹². With that in mind, the Yova Engine focuses much more on the company's handprint. If the company is strong in the handprint topics selected by the user, this will be reflected by a higher match score, compared to a company that has a good ESG rating but a weaker handprint. However, if two companies score equally on handprint, the one with a lower ESG score will face a small penalty when the Yova Engine calculates its match score.



¹² Major sustainability funds such as Blackrock's iShares MSCI EM SRI UCITS ETF and iShares MSCI Europe SRI UCITS ETF contain these stocks.

Exclusion criteria: The deal breakers

Many Yova users feel strongly about “voting with their wallets” and divesting from companies involved in business activities that clash with their personal values (for example, nuclear power and animal testing). Yova gives users the choice to fully exclude eight such topics from their investment. This table shows how Yova defines each exclusion.

Exclusion topics	Definition
 No coal or gas	Excludes energy companies involved in fossil fuels, such as coal and gas.
 No nuclear	Excludes companies with interests in nuclear, including suppliers to the nuclear industry.
 No pesticides	Excludes companies producing chemicals used for agriculture.
 No alcohol	Excludes companies that produce or distribute alcohol.
 No tobacco	Excludes companies involved in smoking-related products.
 No meat	Excludes any food company that has meat products in its portfolio.
 No animal testing	Excludes companies that use animals in research or product development. This includes most pharmaceutical companies.
 No weapons	Yova excludes all weapon manufacturers regardless of this topic being selected. This criteria takes that a step further, by excluding all suppliers to the military and weapons industry, including IT and other services.

A blueprint for action

Yova's methodology for creating personalised impact investing portfolios draws off the state-of-the-art expertise from the industry and within our team. We continuously refine our methods in line with our ongoing exchange with sustainability and investing academics. We are also proud to have incorporated feedback and suggestions from our community of users.

If you are interested in seeing first-hand how the Yova Engine works, you can go to www.yova.ch to start your own personalised impact investing strategy (this is free and non-binding). If you have any feedback or questions, you are welcome to contact our team at info@yova.ch.



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