

A GREEN WAVE OF SWEDISH FINTECH

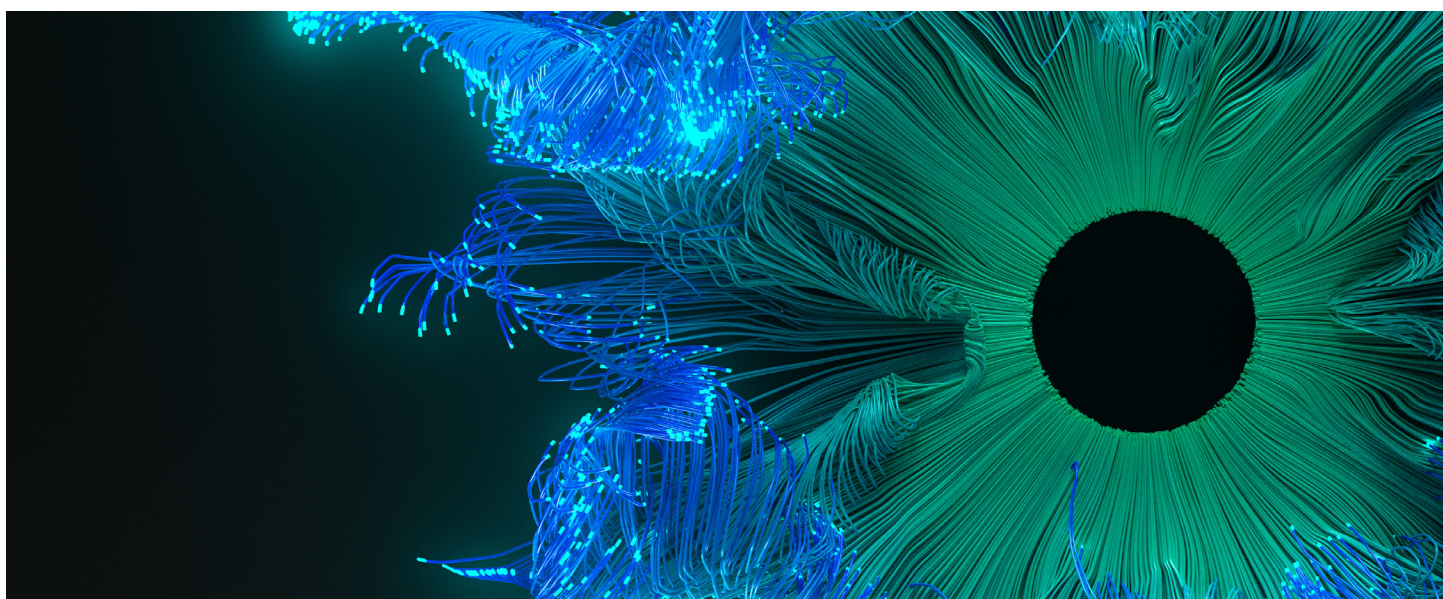
*How Sweden is pushing the frontier
in green fintech innovation*

A GREEN WAVE OF SWEDISH FINTECH

As the effect of climate change becomes more apparent, the finance sector's role is increasingly critical for allocating capital towards climate mitigating actions to reach the Paris Agreement targets. The financial industry is shifting its attention towards investments that have a positive environmental impact and this is being closely followed by a similar trend in fintech. Over the past five years, Sweden has a myriad of fintech business models established that are dedicated to addressing the Sustainable Development Goals (SDGs). The country now boasts over 50 green fintechs, and domestic and international investors are realising the industry potential. From an almost non-existent industry in 2016, the combined enterprise value in Sweden alone has now reached well beyond a billion euro*.

Sweden has combined a vibrant fintech ecosystem with an ambitious national climate agenda, creating an optimal environment for fintech companies to develop green innovations, apps, and solutions. A growing ecosystem of green fintech is beginning to emerge, with companies targeting the climate challenges and attracting record levels of ESG investments. Sweden's wave of green fintech unicorns cannot be ignored.

*Source: Dealroom (2022)



A GLOBAL GROWTH TRAJECTORY

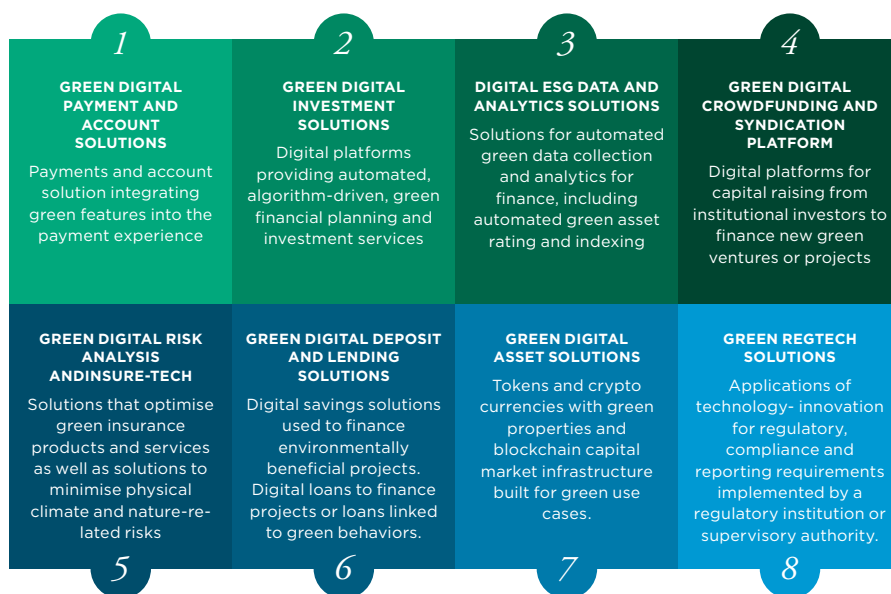
Green fintech provides solutions that address some of society’s most pressing issues. By mobilising capital and synthesising data for financial decision making, fintech can allocate capital towards creating solutions to meet the Sustainable Development Goals. In 2021, green fintechs across markets reached new levels of investor attention, receiving funding of a total of EUR 1.4 billion, accounting for 52 per cent of the investments made in the sector to date. This exceptional growth trajectory warrants the attention of global financial institutions and investors alike.

Europe is taking the lead in the sub-segment of climate fintech, which specifically address environmental impact. The EU’s policy on climate impact disclosure is a primary driver for Europe being at the forefront of the climate fintech boom. According to the industry organisation F10 (2022), Europe has 229 climate fintechs, North America has 120, 43 in APAC, and six in Latin America.

Both green fintech in general and climate fintech in particular can expect growth ahead, with evolving use cases and application areas.

Source: Climate FinTech Rise Insight Report, Barclays (2022)
Climate FinTech beyond the hype, F10 (2022)

THE GREEN FINTECH TAXONOMY



Source: Green FinTech Classification, Green Digital Finance Alliance 2022

WHAT IS GREEN FINTECH?

Green fintech is a digital technology solution method designed to convert the impact of the financial industry towards a more sustainable environment. Sustainable fintech solutions aim to address the 17 UN SDGs through different approaches, including providing ESG data for sustainable consumption or AML solutions to prevent crime and corruption.

WHAT IS CLIMATE FINTECH?

Climate fintech is a subset of green fintech which includes both software and hardware solutions that are aimed at achieving net-zero emissions. Primarily addressing goal 3, ‘climate change’; and 17 ‘clean and affordable energy’.

Source: Green FinTech Classification, Green Digital Finance Alliance, 2022

THE EVOLVING USE-CASES OF GREEN FINTECH



CONSUMER DEMAND FOR SUSTAINABILITY

Consumers are now learning that their most impactful actions for climate impact are through their financial decisions; both where to invest and where to transact their capital. In the future, consumers will be able to learn about their carbon footprint based on their financial transaction data. The solutions developed by green fintechs will become a standard user-experience application in the systems of major established banks. Carbon offsets will likely be integrated, and credits sold to compensate for their impact. As consumers demand tools to engage and take climate action, green fintech will be the enabler, and a major technology influence in the future.



FINTECHS THRIVE FROM EU POLICY ON CARBON ACCOUNTING

The progressive policy initiatives from the European Green Deal, including the Sustainable Finance Disclosure Regulation (SFDR), are a catalyst for solutions enabling carbon accounting and offsets. These platform providers have secured a place on the future green fintech scene. When corporations are increasingly mandated to disclose their emissions, fintech's ability to enable the identification, accounting, and offsetting of carbon will become critical and in demand.



EVOLVING DATA ACCESS

As more data sources are defined and new policy frameworks provide open data access, evolving standards for environmental reporting will take shape. Fintechs will be able to access more granular data on transactions, accounts, and investments, giving rise to new datasets, use cases, and products for accelerating innovation.



TECHNOLOGY CONVERGENCE

Green fintech's focus on technology to track carbon emissions allows for the convergence to other technologies, and even physical objects. Blockchain is highly relevant for green fintech, allowing both carbon emissions and energy consumption to be tracked. Blockchain allows for connecting incompatible systems and verifying the data at each connection. AI will allow for physical objects to capture, validate, and report on impact data that reflect the real-world effects on the environment. As a result, investors will be able to track huge volumes of metrics or physical assets without human intervention. As technological convergences evolve, this will open possibilities for new types of fintech.

SWEDEN – A NATURAL HOME FOR GREEN FINTECH

Sweden is a nation at the forefront of sustainability, boasts a high volume of ESG investments, and is home to a booming fintech ecosystem – all key factors which contributed to it becoming a leader in green fintech in Europe. Stockholm's thriving fintech ecosystem has naturally morphed with the growing impact investment community, creating an emerging ecosystem of companies, culture, and competence for green fintech.

AN ECOSYSTEM ON THE RISE

Sweden is home to one of Europe's largest and most diverse fintech clusters, ranking third in Europe based on a three-year average of fintech investments, and is home to over 500 fintechs, including some of Europe's fastest growing and highest valued companies.

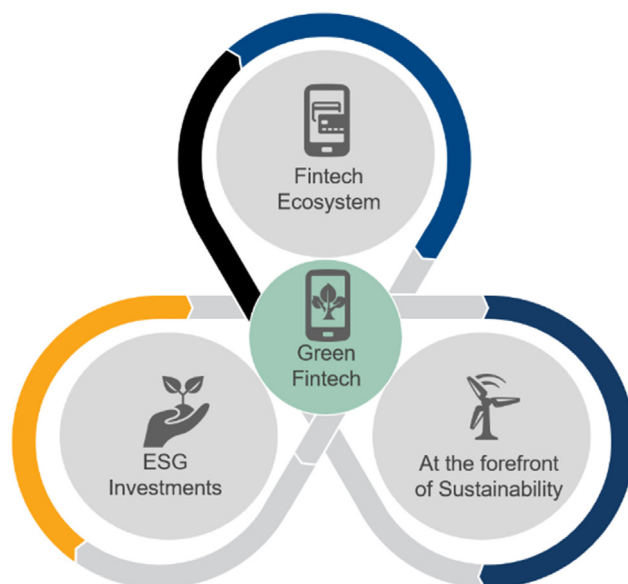
Between 2016-2021, the combined enterprise value of Sweden's fintech ecosystem has increased thirty-fold, with recent development driven by larger milestone investments in companies such as Klarna, iZettle, and Tink.

The Swedish tech scene consistently ranks as one of Europe's leaders, providing a network of support from accelerator programmes, industry organisations, and incubators.

Sweden has its sights set on ongoing fintech success, supported by an ecosystem of start-ups utilising advanced and easily accessible tech skills, and consumers eager to use the latest technology for managing their finances towards environmental action.

AT THE FOREFRONT OF SUSTAINABILITY

Sweden's progressive climate agenda has established the country as fertile ground for green fintech. Sweden was early with advancing climate impact, as the first country in the world to pass an environmental protection act in 1967, and today, the government of Sweden has set an ambitious target of being a fossil fuel-free nation by 2045. The country is already on its way, with 98.5 per cent of electricity coming from fossil fuel-free sources (renewables and nuclear). As a result, Sweden is ranked second in the UN Sustainable Development Report (2021) and Global Innovation Index (2021) and is first in the Global Sustainable Competitiveness Index.



RECORD LEVEL ESG INVESTMENTS

Sweden's dedication to sustainable impact has paved the way for a 'green model' of integrating business and sustainability. Sweden's vibrant ecosystem of ESG-driven start-ups with approximately 460 impact start-ups is an active investment destination, attracting the most funding towards ESG-driven start-ups in Europe.

Between 2020-2021, Sweden took the lead in attracting the most funding towards ESG-driven tech companies in Europe, at USD 6.5 billion worth of investments. This exceeds both the vibrant tech-scenes of Berlin and London. The combined enterprise value of Stockholm-based impact start-ups has grown twenty-fold since 2017, faster than any other European hub.

This exceptional level of investment in a relatively small country warrants the attention of investors, start-ups, and corporates alike.

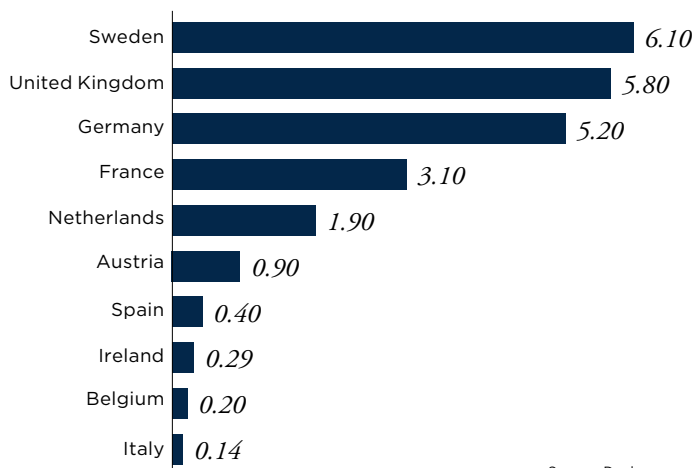
HIGH STANDARDS FOR ENVIRONMENTAL REPORTING

Swedish leadership in sustainable development is a response to national and international demands for innovative ways to address global challenges. With many Swedish companies at the forefront of adopting sustainable approaches and/or devising solutions for a range of relevant issues, corporate sustainable governance and reporting are standard practice and is continually evolving and being refined.

Following the new EU Taxonomy framework, non-financial reporting standards will accelerate Swedish corporations' maturity in capturing, utilising, and reporting on ESG data. These combined conditions create an ideal platform to pilot and co-develop green fintech solutions with partners in the region.

Source: Findexable, Global FinTech Index (2021), Our World in Data, Energy Mix (2020), Sweden Tech Ecosystem, Dealroom, (2022)

TOP 10 EUROPEAN CITIES BY FUNDING TO ESG-DRIVEN TECH COMPANIES, BUSD (2020-2021)



Source: Dealroom.co

A NATURAL ECOSYSTEM FOR GROWTH

The extensive Swedish fintech ecosystem, combined with impact investment and a national sustainability agenda has given rise to over 53 fintechs dedicated to pursuing one or more SDG.

Sweden's green model of integrating sustainability with business impact has paved the way for climate fintech, a sub-group of green fintech. This sub-group currently has over 25 companies and growing. Swedish climate fintechs are most active in the categories of green digital payment and account solutions, and green ESG data and analytics

MAPPING THE SWEDISH GREEN FINTECH LANDSCAPE

In order to map a close to exhaustive overview of the companies in the Swedish green fintech landscape, several sources were merged. The categorised companies are derived from the reports Climate FinTech beyond the hype (Fio, 2022), Deciphering the Nordic Impact Map (Implement Consulting Group, 2020), as well as fintech companies labelled as addressing SDG goals in Dealroom.co. Green fintech companies known to the Business Sweden network have also been added. A list of the Swedish green fintech companies, along with additional statistics, can be found [here](#).

This is one of many perspectives on the Swedish green fintech landscape, and it is important to note that this is not the complete picture. Please reach out to our team if you want to add additional companies to the list [here](#).

53

Green fintechs in Sweden (2022)

+127%

Growth in green fintech valuation (2018-2022)

€1.1B

Combined enterprise value (2022)

+€60M

Total green fintech funding (2022)

Source: Dealroom (2022)

THE SWEDISH GREEN FINTECH LANDSCAPE

	1	2	3	4	5	6	7	8
	GREEN DIGITAL PAYMENT AND ACCOUNT SOLUTIONS	GREEN DIGITAL INVESTMENT SOLUTIONS	DIGITAL ESG DATA AND ANALYTICS SOLUTIONS	GREEN DIGITAL CROWDFUNDING AND SYNDICATION PLATFORM	GREEN DIGITAL RISK ANALYSIS AND INSURE-TECH	GREEN DIGITAL DEPOSIT AND LENDING SOLUTIONS	GREEN DIGITAL ASSET SOLUTIONS	GREEN REGTECH SOLUTIONS
Climate fintech	Bower, CarbonCloud, Deetster, GoClimate, Svalna, Satocci, Doconomy	Finna, Earthbanc, Investure	Datia, Normative, Worldfavor, Fundrella, Innorbis, ESG AI, ClimateView, Position Green, SustainLab	Bright Sunday, Trine	Omocom	Hemma, Rison	Green Assets Wallet	
	Mitigram, Enigio, Okapi Finance, Centiglobe, PlingPay, Transfer Galaxy, Treyd	ALDC Partnership	Aidhedge	Maiyak, Target Aid	Bima	Dreams, Sparly	Chromaway, FileChain, SealFx	Acuminor, Covr, Prove, Norbloc, Pliace, Freja eID, Defentry, Trapets

Source: Green FinTech Classification Green Digital Finance Alliance 2022

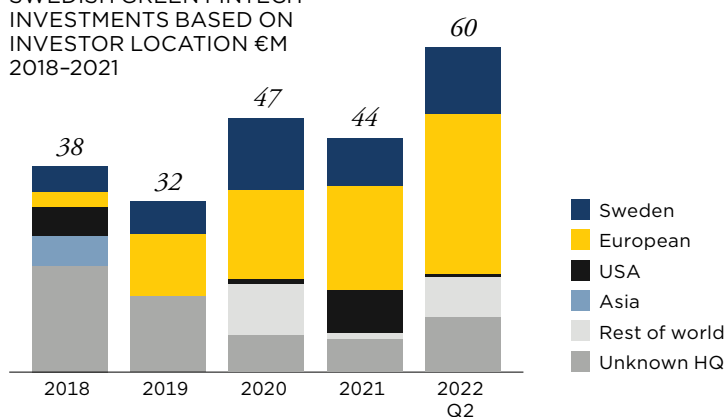
GROWING INVESTOR ATTENTION

Investments in Swedish green fintech reached new levels in the first half of 2022. Despite turbulence in the world-economy, green fintech has managed to carve out a strong position, primarily because of the recognition that it is a critical tool for combating climate challenges. The Swedish ecosystem is attracting international investors, with the majority from Europe. However, the market is maturing, with the average size of funding rounds going up, from EUR 1.9 million in 2019, to EUR 4.8 million in 2021.

EXPECTED SUSTAINED INTEREST FROM INVESTORS

Although the global macro economy is facing a successively escalated recession, green fintech is still expected to continue to be attractive for investors. Environmental action is not a temporary trend for a booming economy, but a necessary action that all industries need to engage with. Considering green fintechs are a capital-efficient enabling software, and as the financial industry benefits from rising interest rates, green fintech can be expected to sustain the interest of investors for years to come.

SWEDISH GREEN FINTECH INVESTMENTS BASED ON INVESTOR LOCATION €M 2018-2021



TOP SWEDISH GREEN FINTECH FUNDING ROUNDS, CAPITAL RAISED

BIMA	USD 38.4 m	Series C	Kinnevik, Millicom international cellular, LeapFrog investment, Digicel	July 2015
Normative.io	EUR 31 m	Series B	Horizon Ventures, ETF Partners, Blume Equity, Future Five	July 2022
Doconomy	USD 17m	Early VC	MasterCard, CommerzVentures, Ålandsbanken	September 2021

Source: Dealroom.co (2022)

MEET THE LEADERS IN SWEDEN'S GREEN REVOLUTION

DOCONOMY

In 2021, climate impact start-up Doconomy announced a USD 17 million round, making it Europe's largest ever climate fintech financing round. Founded in Sweden in 2018, the startup's services include measuring CO2 and H2O impact for businesses and consumers. Doconomy's user base today is around 360 million users in 19 countries through established partnerships with Klarna, Mastercard, and global banks like Standard Chartered.

"Since innovation has, to some extent, caused the acceleration of climate change, innovation will be crucial in finding the solution. At Doconomy we're undeniable optimists and believe that with the right tools we can achieve a fast and effective shift towards a more sustainable future together."

Johan Phil, Doconomy

DATIA

A lot of companies are skating on thin, and melting, ice when it comes to climate change regulation. But often they have the data to help — they just don't use it. Enter Datia, a Stockholm-based data platform for sustainable finance. Founded in 2019, the start-up works with investors and companies to automate their sustainability data and crunch the numbers into something tangible they can turn into goals.

"We help investors to both comply with regulations and increase their positive impact."

Datia spokesperson

TRINE

In today's world there are investments, and then there are sustainable investments. Swedish start-up Trine makes it easy for individuals and companies to invest in solar energy in emerging markets such as South Africa, Kenya, Ghana, and Rwanda. Trine says it has invested almost EUR 60 million in clean energy so far, including projects like its 2016 Christmas present campaign, where people could purchase solar power vouchers as gifts.

"In a time where big banks are still funding fossil fuel projects and action firmly needs to be taken to limit global warming, the financial system needs to work as a catalyst for change and move capital to sustainable operations only."

Sam Manaberi, CEO, Trine

NORMATIVE

Keeping the Earth's temperature down over the next few decades depends on measuring and limiting our emissions. To keep track of them, Swedish start-up Normative says it's 'the world's first carbon accounting engine', helping businesses calculate their carbon emissions including indirect emissions from supply chains and initiative actions to compensate for them. In September 2021, the start-up announced investments of EUR 10 million from some of Europe's largest climate funds.

"Normative makes it easier for businesses to get to net zero. Our carbon accounting engine puts you in control of your CO2 emissions, highlights your emission hotspots, and suggests initiatives to eliminate them."

Kristian Rönn, CEO and cofounder, Normative

THE FINTECH FACTORY OF STOCKHOLM

Stockholm is home to some of Europe's fastest growing start-ups and highest valued companies in tech, fintech, and gaming. The city is second only to Silicon Valley in producing billion-dollar companies per capita and has a culture of sharing, where the first generation of successful entrepreneurs become mentors and inspires the next generation. The culture of sharing competence and capital across the ecosystem funnels the success of others into new ventures.

Industry organisations for both the public and private sectors accelerate the implementation of fintech technologies across society.



FINDEC's mission is to boost the Swedish fintech ecosystem by supporting its 150 strong member organisation with networks, knowledge sharing, and collaboration opportunity. Their 'quick-entry package' can advise international companies how to enter the Swedish fintech market.



Research centre delivering scientific insights on how to transform financial markets to enhance sustainable development of society.



Lighthouse is Mastercard's social impact partnership programme in the Nordics. The programme aims to scale impactful solutions by connecting startups with a focus on the SDG goals, with large financial institutions.



Stockholm Sustainable Finance Center
The Centre is a collaboration between the Stockholm Environment Institute and the Stockholm School of Economics and aims to support initiatives that have a transformative impact on sustainable finance.



SISD is a partnership of the 21 largest financial actors, pension funds, asset managers, and investment companies. Split into six working groups, the actors focus on how investors can contribute to the SDG goals.



Misum is an interdisciplinary and multi-stakeholder research environment at the Stockholm School of Economics (SSE), researching sustainable markets and responsible investments.

"We see a clear leadership in Sweden both from businesses, individuals and government and we think Sweden can show the world where to go in this transition."

Malin Berge, Head of Global Sustainability Innovation lab

MASTERCARD'S SUSTAINABILITY INNOVATION LAB MAKES STOCKHOLM HOME

'Doing well by doing good' has been Mastercard's philosophy since the launch of their Mastercard foundation. One initiative from the global credit card giant has been to promote and support financial inclusion in the sub-Saharan region. Through their partnership with the World Resources Institute and Conservation International, 'Priceless Planet Coalition' has been developing carbon transparency solutions together with a network of fintech companies.

In 2021 Mastercard announced the launch of its first ever Global Sustainability Innovation Lab, in Stockholm. Mastercard have previously set up financial inclusion labs in developing countries, but when deciding on setting up a lab for promoting sustainable consumption and investment, Stockholm had the competitive edge.

The lab will partner with fintechs and research centres in Stockholm to innovate new solutions for promoting responsible consumption, circular business models, and transparent supply chains. The Lab has its own R&D centre employing developers and innovation managers. They also offer 'labs as a service', supporting implementation for Mastercard partners. There will also be an experience centre for the public to explore the solutions of the future.

"Based in Stockholm, Sweden, the Lab will serve as a global research and development centre for climate conscious digital products and solutions, and support impact-driven start-ups and customers."

Malin Berge, Head of Global Sustainability Innovation Lab, Mastercard

Why did Mastercard choose Sweden and Stockholm for their establishment?

AMBITIOUS GREEN AGENDA

Sweden is at the forefront of sustainable innovation, with strong consumer, political, and business commitment to the transition to a green economy. The government has pledged to become the first fossil fuel-free nation by 2045.

CONSUMER PRIORITY FOR SUSTAINABILITY

Consumers' willingness to make lifestyle changes for climate action, which has driven change from retail as well as the financial sector.

ACCESS TO ADVANCED DIGITAL INFRASTRUCTURE

Access to an advanced digital financial infrastructure and a mature market in sustainability reporting, makes the country a good test market for piloting new innovative green fintech solutions.



THE FUTURE LOOKS BRIGHT

Green fintech has a bright future and is going mainstream. Over the next year, as technologies are integrated into major banks' user experiences, millions of people will learn for the first time what the footprint of their transactions are. Millions of tons of carbon offsets will be securitised and sold as credits to thousands of corporations seeking to chase net-zero dreams. By developing sustainability focused technologies, innovative green fintechs will help companies and consumers evaluate and reduce their environmental impact, and investors to channel their operations towards more sustainable assets.

Sweden is in a good position to take the global lead in building a strong ecosystem to foster new innovative green fintech solutions. Combining a successful fintech community, an ambitious climate agenda, and mature digital infrastructure, Sweden is the ideal place to build new innovative green fintech solutions, apps, and technology.

Today there is already proven success; several Swedish green fintechs have successfully expanded globally, large multinational companies are establishing their sustainability labs in Stockholm, and there is a high density of impact investors and policy making that is setting high standards for sustainability across industry and business boundaries.



BUSINESS SWEDEN

Business Sweden helps international companies invest and expand in Sweden. We ensure that international companies access our knowledge, experience, and extensive network to identify new business opportunities and accelerate return on investment with neutral and trustworthy backing for a successful long-term presence in Sweden.

Our market insights and networks cover the entire fintech ecosystem, including industry, academia, start-ups. We provide unique access and information to global companies looking to move into the booming Swedish and Nordic markets. Business Sweden is owned by the Swedish government and industry, a partnership that offers access to contacts and networks at all levels and sectors.

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*We help Swedish companies grow global sales and
international companies invest and expand in Sweden.*

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