



Harnessing the Power of Digital Finance for Sustainable Financial Markets

Green fintech action plan: 16 proposals for the
Swiss financial centre



Contents

Foreword	3
Green fintech network members	4
Executive summary	5
Vision 2030 for Swiss green digital finance	7
Potential of green digital finance	10
Actions to improve framework conditions	
Foster access to data	13
Cultivate new start-ups	20
Promote access to clients	27
Ease access to capital	33
Boost ecosystem and innovation	38
Closing remarks	45

Foreword

The combination of digital technology and sustainable finance leads to global opportunities for Switzerland. As a leader in innovation and financial services, it is ideally positioned to seize these opportunities. In its recent financial market policy, the Swiss Federal Council reiterated its commitment to position the Swiss financial centre as a global leader in exploiting the potential of digital technology in the area of sustainable finance.¹

The Green Fintech Network, an informal group of experts from the green digital finance ecosystem, contributes to this ambition. Its goal is to identify areas to improve the framework conditions for green digital finance in Switzerland, to suggest concrete actions and to assist in implementing selected actions.

For the purpose of this action plan, green fintechs are defined as businesses that leverage digital technologies to solve environment related problems in finance. They can be early stage, in the process of scaling-up, or established players, including part of incumbent financial institutions. Green digital finance describes the technological solutions offered by such green fintechs. Using the term 'green fintech' as opposed to the broader term 'sustainable fintech' allowed for more focused discussions and reflects the global urgency of climate change and the loss of biodiversity. However, many of the potential actions would also benefit fintechs in other sustainability areas.

This proposed action plan and the potential actions described therein are the product of the Green Fintech Network and do not necessarily represent the opinion of individual member institutions, including the Swiss

State Secretariat for International Finance that provides the secretariat. The potential actions are meant as source of ideas, some for institutions that have an ambition to become leaders in green digital finance, others for the Swiss government, competent authorities and policy-makers to consider.

In drafting this action plan, a focus was placed on actions directly related to green digital finance. However, becoming a global hub for green digital finance also requires general framework conditions to be optimal, such as a tax system tailored to the particularities of start-up founders, investors and venture capital funds, as well as the availability of specialised talents.²

Over the period of the drafting, the Green Fintech Network was fortunate to validate its direction with various stakeholders. We are especially thankful for the valuable feedback and support received from Sabine Döbeli (Swiss Sustainable Finance), August Benz, Hans-Ruedi Mosberger, and Richard Hess (Swiss Banking Association), Lorenz Arnet (Asset Management Association Switzerland), Urs Arbter and Gunthard Niederbäumer (Swiss Insurance Association), Janine Hofer-Wittwer and Marcus Müntener (SIX Group), Marianne Haahr (Green Digital Finance Alliance), Simon Zadek (Finance for Biodiversity Initiative), as well as Peter Zolinger (Globalance).

¹ See '[Leading worldwide, rooted in Switzerland: Policy for a future-proof Swiss financial centre](#)', SIF, 2020.

² For example sustainability experts, back-end and front-end developers, data scientists, DevOps engineers, UX & UI designers, and product managers.

Green Fintech Network Members

Green Fintechs

Dr. Oliver Marchand
MSCI Carbon Delta

Mark Rüegg ,
Sebastian Glink
Celsius Pro

Antoine Mach
Covalence

Matthias Stettler
Greenmatch

Dr. Philipp Aeby,
Antonio Fuentes
Rep Risk

Dr. Christian Spindler
Sustainaccount

Dr. Tillmann Lang
Yova

Green Fintech Ecosystem

Fabio Sofia
Building Bridges Week

Dr. Alexander Barkawi
Council on Economic Policies

Stephan Geiger
EY

Gerrit Sindermann
F10 FinTech Incubator &
Accelerator

Dr. Martin Eckert
MME

Dr. Antonios Koumbarakis
PWC

Prof. Mariana Christen Jakob
SEIF Innovation, Tech for
Impact

Felix Wenger
Startup Academy

Fabian Ligibel,
Dr. Nadir França,
Andrea Weber
Foraus - Sustainable FinTech

Christian Schüpbach
Swisscom

Dr. Thomas Puschmann
Swiss FinTech Innovation Lab

Elena Walder
Übermorgen VC

Dr. Beat Affolter,
Dr. Jan-Alexander Posth
Zurich University of Applied
Sciences

Secretary

Christoph Baumann
State Secretariat for
International Finance

Green fintech action plan for the Swiss financial centre

Executive Summary

Foster access to data

1 - Establish an International Sustainability Data Platform

Such a platform combines today's dispersed environmental data points into a cohesive, complete, and unified view. It brings together data providers and users, facilitates access to data and allows to generate efficiently data-driven insights from a holistic viewpoint, leading to rapid innovation.

2 - Continually ensure access to global sustainability data sets

The Swiss government should work towards ensuring that Swiss actors have access to key sustainability data sets, such as data from Copernicus, the European Union's earth observation programme and the planned EU centralised ESG data register.

3 - Improve sustainability disclosures from companies

Sustainability disclosures from larger companies in all sectors of the economy increase their awareness of and capacity to address risks such as climate change. Regarding climate, the recommendations by the Taskforce on Climate-related Financial Disclosures (TCFD) provide an ideal basis for such disclosures.

Cultivate new start-ups

4 - Establish an annual Innovation Challenge for Green Fintechs

To be able to attract the most talented global entrepreneurs to launch their green fintech in Switzerland, it is crucial to identify innovative global ideas in early stages of their development.

5 - Establish dedicated Green Fintech Accelerator Tracks

Accelerators support early-stage innovative start-ups through education, mentorship, and financing. Current accelerator tracks focus either on "green" or on "fintech", both considering green fintechs as a niche. This risks not optimally addressing their specific needs.

6 - Leverage the Swiss bill on Distributed Ledger Technology

With the new Federal Law on Distributed Ledger Technologies, Switzerland has further strengthened its position as a global hub for Blockchain solutions. It opens up wide possibilities for innovative applications in the area of green digital finance.

Promote access to clients

7 - Lead the world in Green Open Finance

Open Finance is a significant innovation driver that profits the incumbent actors, clients as well as new start-ups. For green fintechs, Open Finance is of particular importance.

8 - Establish a Swiss Green Fintech Map

A prerequisite for a leading green digital finance hub is not only to produce excellent green digital finance solutions, but also to make them visible to a global audience of potential clients and investors.

9 - Convene a Coalition of the Willing

Swiss financial institutions that aim at driving the transition towards a sustainable financial centre could form a coalition of the willing, publically committing to promoting the Swiss green digital finance ecosystem.

Ease access to capital

10 - Increase Pension Fund Flexibility to invest in Green Fintechs

Pension funds have a fiduciary duty to create long-term returns for their members, whilst minimizing risks. They should have the regulatory flexibility to fully profit from opportunities created by climate change and the loss of biodiversity.

11 - Rapidly introduce Limited Qualified Investor Funds

A swift implementation of the Collective Investment Schemes Act that introduces a Limited Qualified Investor Fund would significantly reduce the hurdles for venture capital firms to base their funds in Switzerland.

12 - Establish a Fund of Funds dedicated to Green Fintechs

To foster the availability of capital for green fintechs, a fund of funds could be established that invests in venture capital funds that have a focus on Swiss green fintechs. It could be financed by the Swiss government, for example through the issuance of green tech bonds.

Boost ecosystem and innovation

13 - Optimize support by funding agencies, such as Innosuisse

In order to propagate the development of green digital finance, the establishment of distinct research funding opportunities as well as the integration into research networks and communities is vital.

14 - Green Digital Finance Gatherings

Regular gatherings between key stakeholders of the green digital finance ecosystem would facilitate exchange of knowledge, latest research, and enable match-making for joint projects. Such gatherings should engage with global green fintechs and other leading technology hubs.

15 - Establish dedicated Master Classes on Green Digital Finance

Switzerland should increasingly produce high class specialists and research in the field of green digital finance, and promote knowledge of sustainable finance among finance professionals.

16 - Institutionalize a Global Exchange on Green Digital Finance

The Swiss green digital finance ecosystem should establish a global reach, attracting clients, researchers, and green fintechs. It should share domestic experiences with other countries, thereby fostering the creation of other green digital finance ecosystems, as well as opportunities.



Vision for Swiss Green Digital Finance



Our Vision is for
the Swiss green
digital finance
ecosystem to
become a global
leader in enabling
positive environ-
mental and
economic impact
by 2030

Vision 2030

Contribute effectively to global sustainability

Climate change and, interlinked with it, the loss of biodiversity and resulting social challenges are defining crises of our times. Their scale requires the focus of all sectors of the global economy, notably financial markets. In leveraging the power of data and technology, Swiss green digital finance solutions accelerate global financial markets in their transition towards sustainability and thus significantly contribute to limiting global warming to 1.5 degrees Celsius, reversing the loss of biodiversity, and in addressing social challenges connected with them.

Enable race to the top

Addressing climate change and the loss of biodiversity leads to major opportunities for companies around the world. This is desirable, as it creates a race to the top, reinforcing the responses to these global crises. Swiss green digital finance solutions enable global companies to seize these opportunities, continuously improving their competitiveness and leading to overall increased economic growth. Global financial institutions and companies from the real economy team up with Swiss green fintechs as important partners for technological and financial solutions. A complete embrace of green digital finance and a close collaboration with Swiss green fintechs enables Swiss financial institutions to become global leaders in sustainable finance, leveraging their position as the most significant centre for cross-border wealth management with USD 2'400 billion in client assets.¹ Such an embrace allows them to fully address client demands that are fundamental-

ly shifting towards digitalization and sustainability as Millennials are anticipated to inherit USD 68 trillion from their Baby Boomer parents by the year 2030.²

Foster innovation

The Swiss green digital finance ecosystem has ideal framework conditions to found and scale green fintechs. Examples include convenient access to highest quality sustainability data, dedicated accelerators, access to experienced venture capital funds, world-class research, a regulatory environment fostering innovation and data-security, and a close collaboration between all stakeholders, especially incumbant financial institutions, working towards common sustainable finance ambitions. Switzerland is home to multiple green fintechs that succeed in scaling up to become global technology leaders, both with solutions for corporate clients as well as services directly addressing consumers. They also act as catalysts in driving innovation and digitalization across the entire Swiss financial sector.

Share experiences

The Swiss green digital finance ecosystem actively shares domestic experiences with other countries, thereby creating cross-border opportunities. It does so by leveraging its unique position as home to key international organisations and initiatives, such as the International Union for Conservation of Nature, WWF International, the Green Digital Finance Alliance, and the Finance for Biodiversity Initiative. This lever is amplified by establishing an explicit focus on biodiversity and its nexus with climate change.

¹ See '[Der Schweizer Bankensektor](#)', Swiss Banking Association, 2020.

² See '[A Look at Millennial Wealth](#)', WealthEngine, 2019

Potential of Green Digital Finance





Seizing the opportunity of digital finance to address climate change and biodiversity loss

Digital finance is transformative. Harnessing its extraordinary potential for the greening of financial markets is critical, urgent, and full of opportunities. Key reasons financing is not already better aligned with environmental objectives include the lack of low cost, trustworthy and timely data, as well as the integration of analytics to account for environmental risks and impacts in financial markets.¹

Digital finance is able to address these barriers ‘through its unprecedented power to make more data more cheaply, more quickly and more accurately to better inform financial decision-making; as well as its ability to promote inclusion and unlock innovation.’²

The opportunities are vast. Satellite data and remote sensors offer broad new arrays of environmental information to assess physical risks and impacts. Machine learning and artificial intelligence expand our capacity to turn information into environmental insights for financial decisions. They also facilitate the consideration of environmental risks and impacts as investors vote their shares and engage with the companies they own. Blockchain technology allows for significant improvements in auditability and the creation of digital environmental assets. It also enables the launch of new currencies designed to support green consumption decisions.

1 See ‘People’s Money – Harnessing Digitalization to Finance a Sustainable Future’, UN Taskforce on Digital Financing of the Sustainable Development Goals, 2020.

2 ‘Green Digital Finance – Mapping Current Practice and Potential in Switzerland and Beyond’, UNEP, 2018.

Peer-to-peer lending, big tech credit, and crowdfunding platforms establish new channels to fund environmental projects. In addition, parametric insurance products help in raising financial resilience against environmental stress and disasters.

The applications of green digital finance are numerous and seen as conducive for higher levels of innovation, transparency and long-termism in financial and economic activities.



Actions to improve
framework conditions:
**Foster Access to
Data**



Foster Access to Data:

Goal

Access to data is crucial for competition and innovation in a digital economy, by helping to boost productivity and creating new products, processes, organizational methods and markets.¹ For green digital finance, access to high quality sustainability data is one of the most potent innovation drivers. Initiatives should not only focus on public-sector data, but also facilitate data sharing within the private sector and increase data analytics capacities.

Switzerland should ensure that barriers to access and the use of global sustainability data are removed for Swiss green fintechs. This allows them to innovate rapidly and agile, and display such innovation to potential clients. Access to such data will further strengthen research by leading Swiss universities, which reinforces green digital finance innovation.

¹ See '[Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-use across Societies](#)', OECD, 2019.

Potential Action 1:

Establish an international Sustainability Data Platform

Addressed actors: IT infrastructure providers, ESG data providers, green fintechs, financial institutions, industry associations

Green fintechs rely on the ability to have simple access to and build upon a large set of sustainability data to innovate rapidly and agile. They currently face three key challenges to do so:

1. The immense number of sustainability data sets and data providers requires green fintechs to invest significant efforts to create an overview of available data sets, get in contact with data providers, identify whether the data sets fulfil their requirements, and if so, request a pricing (with a potential start-up rebate often only being granted following an individual due diligence).

2. Marketing solutions based on data sets leads to intellectual property questions that green fintechs currently have to address individually, with costly and time-consuming legal support. Not doing so properly opens them up to legal risks and blocks access to venture capital investors (as they often contractually demand legal certainty with regard to intellectual property questions). Such questions both arise from commercial, academic, as well as from open-source data sets. For example, various open-source data sets are licensed as 'share-alike' requiring adaptations of the work to be released under the

same or similar license as the original. In addition, various academic data sets have a potentially unnecessarily restrictive licensing.

3. Many sustainability data sets contain unstructured raw data that require significant efforts to standardise and enrich before a green fintech can utilise the data for their particular business case. These efforts are time consuming and distract the green fintech from rapid and agile development of solutions.

An international Sustainability Data Platform, established by market participants, could address these challenges and simultaneously provide a benefit to not just green fintechs, but also to data providers and financial institutions. Such a platform would cover data from ESG data providers, company sustainability disclosures, geospatial data, such as from satellites,¹ global life cycle assessment data, data sourced from Internet-of-Things (IOT) applications, and more. Where applicable, it should leverage and connect to other data platform initiatives, such as the 'life cycle initiative',² the 'OS-Climate platform',³ the Google Earth Engine,⁴ and others.⁵

1 For example, lack of asset geolocation data is a significant barrier for fintechs to leverage satellite and other openly available data sets to develop digital ESG products and services.

2 See www.lifecycleinitiative.org

3 The planned OS-Climate platform is built by the Linux Foundation and has the goal of empowering investors, banks, insurers, companies, governments, NGOs and academia with AI-enhanced open source analytics and open data to address climate risk and opportunity. See www.os-climate.org.

4 The Google Earth Engine (GEE) is a cloud-computing platform designed to store and process huge data sets (at petabyte-scale) for analysis and ultimate decision-making. Earth Engine stores, more than thirty years of historical imagery and scientific datasets, updated and expanded daily. See <https://earthengine.google.com>.

5 For a list on biodiversity data initiatives, see 'Fintech for Biodiversity: A Global Landscape', GDFA, 2020.

To data users, such as green fintechs, it should provide full transparency on pricing of commercial ESG data sets available on the platform. It should create awareness amongst data providers about the particular needs of start-ups, such as free access to a sandbox to validate data fit by building proof-of-concept applications on a restricted data set.⁶ A further example could be a tiered licensing to commercial data sets that allows start-ups to access commercial data at low costs whilst being in early stage of business development.⁷ In addition, the platform could strive to abolish the need to have individual contracts between data providers and users with the goal of lowering the time to access data to 'a few clicks'.⁸

An international Sustainability Data Platform should aim at establishing legal certainty to intellectual property questions related to the use of data sets available on the platform by providing comprehensive legal FAQs per data set. It could also give the data provider more control over the shared data, by using Privacy-Preserving technologies like Confidential Computing. Additional measures could aim at creating incentives for corporates and other data suppliers to share data on such a platform.

To address the issue of unstructured raw data, data providers should be encouraged to offer different manufacturing levels of data: a) raw data, b) standardized/normalized data and c) standardized/normalized and enriched data. Subject to flexibility given by the respective license, green fintechs and researchers could also be encouraged to enrich and promote data via the platform.

The platform should also facilitate the matching of green digital finance innovations, based on platform data, with potential clients, such as financial institutions, which are searching for particular solutions. To amplify this use-case, the platform could also connect to existing API sandboxes, as offered by F10.

To summarise, an international Sustainable Data Platform addresses the prevalent challenge of combining from today's dispersed sustainability data points a co-

hesive, complete, and unified view. It does so by bringing together data providers and data users, facilitating access to such data and allowing data users, especially green fintechs, to generate efficiently data-driven insights from a holistic viewpoint, which leads to rapid innovation.

Given the complexity of establishing such a platform, an initial action could involve convening interested market participants to jointly prepare a feasibility analysis including scoping the universe of data sets and examining features the platform would require to serve green fintechs and other users optimally. The feasibility study should include the identification of legal and economic barriers. Such a project could be supported by the Green Digital Finance Alliance and the Finance for Biodiversity Initiative, given their expertise at the nexus of sustainability with digital technologies, as well as the government acting as a facilitator.

Box 1: Confidential Computing

Confidential-Computing-Powered systems have technical guarantees embedded in them to protect against data misuse. In other words, the technology allows for automatically enforcing data sharing agreements. Because data does not need to be revealed, the original "data owners" retain full control over their data. This is particularly relevant for creating a scalable multilateral data-sharing infrastructure.⁹ Switzerland is at the forefront of bringing the Confidential Computing technology to real-world use cases. As one of the founding members of the global 'Confidential Computing Consortium',¹⁰ Swisscom is increasing awareness for the technology and standardising its usage. Innosuisse sponsored a project 'Privacy-preserving confidential computing with trusted execution environments',¹¹ to help educate about use cases that can benefit from Confidential Computing. With 'Confidential Insights' Swisscom and de-centriq are building a platform for cross-organizational data collaborations.¹²

6 For example, instead of receiving access to ESG ratings of 500'000 companies, the restricted data set would comprise of 1'000 company, sufficient to build a proof-of-concept, but not sufficient for commercial usage.

7 Such tiers could be linked to data volumes, the size of the start-up or their commercial success. Tiered licensing has become a market standard in software-as-a-service (SAAS) offerings worldwide. Examples include offerings from Salesforce, Slack, and Intercom.

8 Data users would have one contract with the platform, which maintains the contractual relationships with the various data providers.

9 See 'Confidential Computing: Hardware-Based Trusted Execution for Applications and Data', The Confidential Computing Consortium, 2020.

10 See <https://confidentialcomputing.io>

11 See 'Privacy-preserving confidential computing with trusted execution environments', ZHAW, 2020.

12 See <https://confidentialinsights.com>

Potential Action 2:

Continually ensure access to global sustainability data sets

Addressed actor: government

Given the importance of data for innovation, the Swiss government should continually work towards ensuring that Swiss actors have access to key sustainability data sets, which are expected to expand widely over the coming years. One such example is data from Copernicus, the European Union's earth observation programme. Copernicus provides not only global observation data about the past, but also access to climate projection data and seasonal forecasts, with most relevant climatological parameters being covered.

Despite being a non-EU member, Switzerland has nevertheless been benefiting significantly from the Copernicus programme. Firstly, by contributing to the development of satellite components, secondly, by participating in the joint development of Copernicus-based applications, and thirdly, by having full and free access to data delivered by Copernicus.

As of 2022, contracts for the development of satellite components, as well as the ability to participate in the joint development of Copernicus-based applications will be limited to Copernicus-members (i.e. EU members). In addition, non-members will have only restricted access to data delivered by Copernicus, especially to the valuable raw-data. Furthermore, instead of data being freely available, companies would need to negotiate data sets individually.¹ This will damage economic

output and innovation in many Swiss sectors, such as agriculture, insurance and finance industry, including green digital finance. These industries crucially depend on Copernicus data to get a better understanding about current and future risks and as important input parameter for innovative insurance and financial products mitigating those risks.² A further possible effect is the re-location of Swiss green fintechs into the EU area to ensure continued access to such data.

Box 2: Copernicus³

Copernicus is the European Union's Earth observation programme, looking at our planet and its environment to benefit all European citizens. It offers information services that draw from satellite Earth Observation and in-situ (non-space) data. Copernicus builds on a constellation of satellites that makes a huge number of daily observations - taking advantage of a global network of thousands of land, air, and marine-based sensors to create the most detailed pictures of Earth.

Swiss green fintechs are servicing clients worldwide and profit therefore also from access to worldwide ESG data. Furthermore, EU ESG regulations are relevant to many financial institutions in Switzerland and all institutions with clients in the EU or managing EU based products will have to comply. A centralized ESG data register by the EU, as called for by European fi-

1 See www.weltraum-schweiz.ch/copernicus

2 For example, climate and natural catastrophe risks are addressed with increasing efficiency by parametric insurance products, which use underlying data for product pricing and payout calculation. The increasing data availability of environmental data mainly measured by satellites with higher spatial and temporal granularity reduce the basis risk. This means that real losses have a high correlation with the underlying data. This concept enables fully digitalized insurance or risk transfer products with high transparency for all stakeholders.

3 See www.copernicus.eu. For an introduction, see this [video](#).

nancial industry associations would be a valuable repository for such data and Switzerland should ensure access for Swiss green fintechs and financial institutions.

In its stakeholder consultation on the renewed sustainable finance strategy, the European Commission also consulted on a publicly accessible environmental data space for companies' ESG information. 83% of respondents were supportive of such an endeavour and noted that it should be free of cost (or at reasonable cost) and accessible worldwide, verified, as well as structured to correspond to the requirements of the NFRD and future EU reporting standards. 'Among the data that should be made available, stakeholders referred to all material information, carbon score, human rights, social information and governance performance (also in terms of staffing or tax information), biodiversity, or be in compliance with the SDGs.'⁴

Box 3: EU centralised ESG data register⁵

On 10th June 2020, six European financial industry associations (EACB, EBF, EFAMA, ESG, IE, PE) called for the European Commission to establish a common ESG data register in the European Union to enhance the availability of relevant and reliable ESG data, facilitate disclosure and scale-up sustainable funding.

The data register should focus on ESG disclosure in line with Non-Financial Reporting Directive and EU taxonomy, starting with climate change adaptation and mitigation objectives, as well as ESG data necessary to financial market participants to comply with the Sustainable Finance Disclosure Regulation. The register should also include relevant ESG information already collected by European and national institutions such as governments, central banks, statistical bodies, etc. The EU should open up its databases that collect environmental reporting data and make those re-usable to users of non-financial information.

Such data should be gathered and made available digitally to users of non-financial information, not only investors but also lenders, academia, researchers, authorities and others.

4 See '[Summary Report of the Stakeholder Consultation on the Renewed Sustainable Finance Strategy](#)', EC, 2021

5 See '[A centralized register for ESD data in EU](#)', EACB, EBF, EFAMA, ESG, IE, PE, 2020.

Potential Action 3:

Improve sustainability disclosures from companies

Addressed actors: larger companies in all sectors of the economy, government

Sustainability disclosures from larger companies in all sectors of the economy increase their awareness of and capacity to address physical risks, such as climate change and the loss of biodiversity, as well as transition risks, which occur when economies are transitioning towards a state that mitigates physical risks. Green fintechs can be essential in enabling companies both to prepare their disclosures and to address their physical and transition risks.

When such disclosures are consistent and comparable across sectors and borders, as well as quantitative and forward-looking in nature, they allow financial institutions and their customers to incorporate sustainability into their decision-making, thus reducing systemic risks, greenwashing, and promoting the alignment of financial flows with international goals. Green digital finance can play a key role in enabling financial institutions to source and process large amounts of environmental data to produce decision-ready information and to facilitate sustainable investments.

The recommendations by the industry-led Taskforce on Climate-related Financial Disclosures (TCFD)¹ provide an ideal basis for such disclosures with regard to climate change. In December 2020, the Federal Council decided that authorities are to prepare the binding implementation of the TCFD recommendations by Swiss companies in all sectors of the economy and advised companies to apply the recommendations already now on a voluntary basis.

When implementing the TCFD recommendations, it is key to focus on quantitative data, such as scenario analysis, metrics, and targets, to include forward looking metrics, such as implied temperature, and to ensure consistency and comparability across sectors and jurisdictions. Switzerland should make the TCFD recommendations mandatory for Swiss companies in all sectors of the economy and actively support international developments towards consistent and comparable global adoption of the TCFD recommendations. To that end, it should support the creation of a Sustainability Standards Board by the IFRS Foundation to create accounting standards based on the TCFD recommendations.²

Given the urgency to address the loss of biodiversity and its nexus with climate change, Switzerland should actively support the development of similar disclosure recommendations in the field of biodiversity, to assess, manage and report on dependencies and impacts on nature, as are being developed by the Taskforce on Nature-related Financial Disclosures (TNFD).³

1 See www.fsb-tcfid.org

2 See 'IFRS Foundation Trustees consult on global approach to sustainability reporting', IFRS, 2020.

3 See <https://tnfd.info>



Actions to improve
framework conditions:

Cultivate new
start-ups



Cultivate new start-ups:

Goal

A constant stream of new start-ups is vital for a digital economy. Building from a green field, the agility and speed of start-ups produce innovation that both enable and challenge incumbents, and open new markets. Global entrepreneurs should look to Switzerland as an ideal location to launch their green fintech, positioning the Swiss green digital finance ecosystem at the forefront of embracing new technologies and new markets.

Newly created green fintechs are to be supported by all Swiss stakeholders on the way to early product validation and beyond. Through collaborations and spin-offs, Switzerland should experience a dynamic knowledge transfer between incumbent financial institutions, universities, and green fintechs. The Swiss regulatory framework should continue to be highly conducive to innovation and, by maintaining close communications with the green digital finance ecosystem, keep identifying and abolishing barriers.

Potential Action 4:

Establish an annual Innovation Challenge for Green Fintechs

Addressed actors: accelerators, consultancy firms, universities, financial institutions

To be able to attract the most talented global entrepreneurs to launch their green fintech in Switzerland, it is crucial, firstly, to identify global innovative ideas in early stages of their development, secondly, to communicate actively the unique qualities of the Swiss green digital finance ecosystem, and, thirdly, to integrate the most promising green fintechs into national acceleration programmes. For global entrepreneurs in early stages, it is important to get initial validation for their business ideas as fast as possible and then to build a Minimum-Viable-Product as a basis for further rapid iterations along actual customer feedback.

An innovation challenge dedicated to green fintechs is an ideal instrument to address above demands. By integrating innovation challenges into existing platforms, such as the Building Bridges Week, and by active communication from both government and private sector, a global audience of participants is ensured.

The impact of such an innovation challenge depends on two factors. Firstly, on a close cooperation with potential clients, especially financial institutions, to ensure innovative ideas identified in the challenge are marketable. This can be achieved by using a set of real-world problems, sourced directly from potential clients, such as financial institutions, in the global call for ideas. Singapore's Global FinTech Hackcelerator in 2020 followed this approach successfully.¹ Secondly, the impact depends on the benefits the winners receive. Instead of mere prize money, entry into a dedicated acceleration

programme as a prize can ensure ideal support by stakeholders for green fintechs to go to market and could offer sufficient incentives to do so from within Switzerland.

Besides a dedicated innovation challenge for green digital finance, it is important to have general fintech challenges integrate green considerations. This broadens the appeal of green digital finance amongst new actors and helps it escape from its current niche existence.

Box 4: F10 Hackathon

F10 has hosted a number of large-scale hackathons, with 300+ participants (hacking), to date solely focused on fintech. Building on this experience, and to instrumentalize it for generating large number of green fintech innovations from a global talent pool, the local ecosystem could receive a strong boost. For such next level evolution into a Swiss Global Green Fintech Hackathon, F10 would open its hackathon format and involve key Swiss ecosystem players. This platform would serve as a dynamic talent and concept funnel for local players, attracting the brightest talents from around the globe and build potential even beyond the already locally available innovation pools.

Some Swiss actors are already working towards innovation challenges focused on green digital finance. For example, the Global Center for Sustainable Digital Finance, co-initiated by the Swiss FinTech Innovation Lab and Stanford University, plans to include innovation

¹ See '[Global Fintech Hackcelerator 2020 - Industry Problem Statements](#)', KPMG, 2020.

challenges as part of the 2021 NZZ Impact Finance Conference and, with a focus on university-based start-ups, as part of the Global Sustainable Digital Finance Forum.

Box 5: Building Bridges Week

The inaugural edition of the Building Bridges Week took place in October 2019 in Geneva. It featured 31 events, organized and supported by 52 partners and attended by the finance industry, governments, business, the United Nations, international organizations, academia and civil society.

The Building Bridges Week fosters collaborations aimed at accelerating the finance industry's contribution to the achievement of the UN's 17 Sustainable Development Goals. It displays the unique power of the ecosystem present in Switzerland.

The next Building Bridges Week takes place in late autumn 2021.

Potential Action 5:

Establish dedicated Green Fintech Accelerator Tracks

Addressed actors: accelerators, consultancy firms, universities, financial institutions

Accelerators support early-stage innovative start-ups through education, mentorship, and financing. They include a process of intense, rapid, and immersive education aimed at accelerating the life cycle of such start-ups, compressing years' worth of experience into a few months.¹ With regard to green fintechs, current accelerator tracks have a general focus either on green technologies or on fintechs, both considering green fintechs as a niche. This risks not optimally addressing their specific needs.

A dedicated green fintech accelerator track per startup stage should integrate experienced intermediaries from existing start-up ecosystems in the areas of fintech and sustainability and have a structured collaboration with universities, financial institutions, and coaches. Seasoned entrepreneurs – from Switzerland and abroad - with a strong track-record in relevant fields should be available as mentors for the startups, and support selection of the most promising entrepreneurs. Senior representatives from key sectors and institutions would form advisory and review panels.² The goal of the accelerator program is to advance the startups' innovative products and services, connect the entrepreneurs with strong collaboration partners and customers, and present successful green fintech startups to potential investors to obtain funding.

The program would be designed with a strong focus on collaboration and partnership building to foster the Swiss green digital finance ecosystem. Ecosystem events (see Potential Action 14) and final product launches are utilised to gather key stakeholders with the goal to leverage network, facilitate exchange of knowledge, spark new cooperation, enable access to capital, and present work internationally.

To attract extraordinary international talents, a dedicated green fintech accelerator track should welcome both Swiss and international green fintechs in a global call. Such a call should put great emphasis on a professionally advertised, highly demanding and transparent selection process. Receiving good applications is the core of a successful accelerator and requires effort in the global network of different stakeholders and a convincing communication strategy.

For that reason, a strong exchange on global level should be launched, for example by means of congresses or suitable field trips, as well as by involving key industry experts of entrepreneurial and venture investor background. The international reach could further be strengthened by connecting the accelerator to worldwide initiatives.³ Additionally, the complementing of local expertise with globally sourced experts and mentors would help sourcing effectively.

¹ See 'What Startup Accelerators Really Do', Ian Hathaway, Harvard Business Review, 2016.

² Such as green fintechs, financial institutions, industry associations, impact investment firms, technology firms, NGOs, government.

³ For example, by linking it to the Founder Institute, world's largest pre-seed accelerator. See <https://fi.co>.

Some actors are already working towards dedicated green fintech accelerator tracks in Switzerland. For example, F10, with New Energy Nexus, is planning an international Climate Fintech accelerator program headquartered in Switzerland (pending application for EIT Climate-KIC grant) and is exploring a collaboration with SEIF. The University of Zurich's Swiss FinTech Innovation Lab is in the process of developing an accelerator program for Swiss green fintechs with the Extreme Tech Challenge program.⁴

⁴ The Extreme Tech Challenge (XTC) supports and showcases the innovators harnessing the power of technology to address the greatest challenges facing humanity and our planet. Through its global startup competition, XTC provides top contenders the potential for global visibility, the ability to raise capital, network with global entities (corporations, VCs, partners), and gain mentorship opportunities they need to pioneer technological breakthroughs and help power a sustainable future. See www.extremetechchallenge.org

Potential Action 6:

Leverage the Swiss bill on Distributed Ledger Technology

Addressed actors: green fintechs, IT infrastructure providers, consultancy firms, law firms, universities, financial institutions

‘More than half (55 percent) of the fintech for biodiversity solutions are Blockchain powered.’¹ Also in the field of climate mitigation and adaptation is the potential of Blockchain increasingly utilised, for example by the ‘Climate Chain Coalition (CCC)’, a global initiative to advance Blockchain to help mobilize climate finance and enhance MRV (measurement, reporting and verification).

With the recent introduction of the Swiss Federal Law to Developments in Distributed Ledger Technologies (DLT bill), Switzerland has further strengthened its position as a global hub for Blockchain solutions. It opens up wide possibilities for innovative applications in the area of green digital finance. Members of the green digital finance ecosystem could jointly assess their potential business cases. At the same time, potential negative effects, such as increased energy usage of DLT applications, should be critically analysed.

Examples of applications include green security token exchanges and digital green bond and loan issuances: Green real-asset investments (for example renewable energy power plants) are traditionally difficult to trade. Building on the DLT bill and its reputation as a stable and trustworthy financial centre, Switzerland is ideally placed to host green security token exchanges attracting global trading in green real-assets. Such exchan-

ges could be extended to enable trading in climate and natural catastrophes risks.² Other work could focus on establishing market standards for green bond and loan issuances based on Uncertificated Register Securities created by the DLT bill. This would give smaller projects access to a broader investor base, streamline the funding process and thereby facilitate the funding for green projects. With regard to green digital bonds, it could build upon recommendations from the Green Digital Finance Alliance.³ The potential of DLT applications in the verification of supply chains should also be analysed.

Box 6: Swiss DLT bill⁴

In September 2020, Parliament adopted the DLT bill. This will adapt various federal laws such that Switzerland can continue to develop as a leading location in the blockchain and DLT area. The core DLT activities benefiting from the DLT bill are:

1. Security Token Exchanges: new license for trading venues of digital assets (DLT Trading Facilities);
2. Custody Service Providers: lighter regulatory regime for digital asset custody providers (with the possibility to segregate digital assets);
3. Security Token Issuers: civil law concept for digital securities, eliminating legal uncertainty for transactions of digital uncertificated securities.

1 ‘Fintech for Biodiversity: A Global Landscape’, Green Digital Finance Alliance, 2020.

2 In general, this would mean that the technology is used in the insurance space by shifting the insurance value chain onto a DLT ecosystem and to use smart contracts to automatize the back-end processing of insurance products.

3 See ‘Blockchain - gateway for sustainability linked bonds’, GDFA, 2020.

4 See ‘Federal Council brings part of DLT bill into force’, The Federal Council, 2020.



Actions to improve
framework conditions:
Promote access to
clients



Promote access to clients:

Goal

Globally, financial institutions and companies from the real economy should look at the Swiss green digital finance ecosystem as an important source of technological solutions. Both the needs of potential clients as well as the available solutions in Switzerland ought to be highly transparent and accessible.

Clients of Swiss financial institutions should be able to seamlessly connect services from green fintechs with their accounts to address their sustainability related needs. This includes the sharing of account information, as well as the execution of sustainable investment strategies. To that end, financial institutions should consider green fintechs as important innovation and solution partners and foster innovative solutions in early stages.

Potential Action 7:

Lead the world in Green Open Finance

Addressed actors: financial institutions, IT infrastructure providers, industry associations, government

Open finance is emerging as a key development in the financial sector, driven by technological progress and changing client needs. Based on the principle of sharing financial data via standardised and secure interfaces, open finance represents above all a paradigm shift, as it gives control back to end clients, who can choose which data can be shared and who can access it. This is achieved through innovative and easy-to-use services.

Open standardised interfaces are significant innovation drivers that profit both the incumbent actors – since they allow their clients to expand and customise the offering to their particular needs and allow the incumbent actors to keep their focus on their core expertise, and new start-ups, since they give them access to a large existing client-base. While open standardized interfaces have just emerged in finance, the globally largest Software-as-a-Service companies embrace open standardised interfaces successfully.¹

For green fintechs, Open Finance is of particular importance. Recently, global ambitions to combat climate change and the loss of biodiversity have significantly picked up, leading to a gap between the demand for green digital finance solutions by end-clients and their accessibility at incumbent financial institutions. Finan-

cial institutions that embrace green digital finance solutions to enhance their offering will match the increased end-client demand faster and have a significant competitive advantage to become leaders in sustainable finance.

Open standardised interfaces should include, firstly, information on cash balances and transactions,² for example to measure footprints of consumption. Secondly, it should include information on securities balances and transactions, for example to measure investment portfolio alignment with sustainability goals, such as the aspired 1.5-degree scenario under the 2015 Paris Agreement. However, to address both use-cases, further data would be required, beyond what is traditionally available at financial institutions, for example life cycle assessment data on consumer goods to measure footprint. A solution would be a payment protocol that includes the content of the basket, which may lead to data privacy concerns.³ There is a need to incentivize partnerships between financial institutions and e-commerce and retail commerce or look into the potential opportunity of establishing an open e-commerce regime alongside the open e-banking regime.

¹ For example Intercom, Paypal, Salesforce, and Slack. This trend is mirrored in the global success of Apple's App Store and Google's Play Store.

² With a focus on credit card transactions, given the increasing usage of cards.

³ This is reflected by wallet provider like Apple, increasingly trying to mask the details behind the transaction. A comparative analysis of how other jurisdictions address such concerns could inform further work in Switzerland.

Ideally, such interfaces are not limited to sharing of information, but allow for executing orders via green fintechs, for example to compensate footprints of consumption or to align the investment portfolio with particular impacts.

Unlike in other countries, especially in the EU with regard to payments, there is currently no legal obligation in Switzerland for financial institutions to share client data with third-party providers via standardised interfaces. However, a number of Swiss actors⁴ are working towards strengthening Switzerland's open finance ecosystem. Swiss standards for open standardised interfaces have already been developed in areas such as accounts and payments, mortgages, and wealth with various level of initial adoption. Such work should take into account particular needs of green digital finance.⁵

Box 7: F10 API Sandbox

To enable startups participating in its accelerator programs, F10 is hosting an API Sandbox that includes a number of third party open banking, open insurance and other APIs. The provision of this aggregation of APIs available in the market makes it easier especially for innovative young companies to test new concepts and services without having to go through each API provider's individual full onboarding process. F10 aims to expand continuously the range of included APIs and is open to include APIs of any market participant seeking to enable innovative entrepreneurs.

⁴ Such as www.swissbanking.org, www.swissfintechinnovations.ch, the b.Link platform from www.six-group.com, www.openwealth.ch, www.openbankingproject.ch, www.swissfintech.org, as well as a large number of financial institutions and technology firms active in dedicated working groups.

⁵ See 'Open finance has a great potential', SIF, 2020.

Potential Action 8:

Establish a Swiss Green Fintech Map

Addressed actors: IT infrastructure providers, accelerators

A prerequisite for a leading green digital finance hub is not only to produce excellent green digital finance solutions, but also to make them visible to a global audience of potential clients and investors.

To address these two use cases, a Swiss Green Fintech Map should be established, ideally based on further development of the existing Swiss Fintech Map, to ensure access to a broader audience.¹

A Swiss Green Fintech map should include the main green digital finance applications² as filter options and allow green fintechs to add information about their particular offering. To increase international visibility of such a map, it could be promoted actively on social media, included in the new information platform for the Swiss financial centre: Finance.Swiss,³ and linked to international initiatives, such as the Green Digital Finance Alliance.⁴

Such a Green Fintech Map could build upon existing mappings, for example as developed by the State Secretariat for International Finance,⁵ the University of Zurich's Swiss FinTech Innovation Lab,⁶ and, most recently, Foraus – Sustainable FinTech.

1 See www.fintechmap.ch

2 Such as such as sustainable investing, ESG data, mitigation of physical risks, project financing.

3 See www.finance.swiss

4 See www.greendigitalfinancealliance.org

5 See 'SIF takes the pulse of the green fintech sector', SIF, 2020.

6 See 'Sustainable Digital Finance: Developing a Taxonomy for FinTech, InsurTech and Blockchain', University of Zurich, forthcoming.

Potential Action 9:

Convene a Coalition of the Willing

Addressed actors: financial institutions, industry associations, consultancy firms, accelerators

Financial institutions that aspire to become leading actors in sustainable finance profit from close collaboration with green fintechs. Therefore, financial institutions should consider green fintechs as important innovation and solution partners and foster innovative solutions in early stages. For green fintechs, financial institutions with their expertise and deep client relationships are key partners to facilitate growth.

Swiss financial institutions that aim at driving the transition towards a sustainable financial centre could form a coalition of the willing, publically committing to promoting the Swiss green digital finance ecosystem. This could involve financially supporting green digital finance accelerator tracks and conferences, fostering access to data, as well as access to paid proof-of-concept projects. Furthermore, it could include maintaining a public list of concrete green digital finance challenges these financial institutions are looking to address, together with structured access to relevant decision makers for Swiss green fintechs. In addition, such a coalition could establish internal programmes incentivising spin-offs of green fintechs and support other actions listed in this action plan.

Such cooperation could be facilitated by a trusted party acting as administrator, or alternatively, a dedicated body established with financial institutions as members.



Actions to improve
framework conditions:

Ease access to
capital



Ease access to capital:

Goal

For innovative green fintechs ready to scale, access to venture capital funds specialized in green digital finance is paramount. Venture capital funds tend to invest closely to their hubs, because they understand the market, its customers and the regulatory environment better and have close connection to relevant stakeholders. Start-ups outside the hubs of venture capital may have to overcome higher hurdles to get access to venture capital investors. Innovation goes to where there is money to finance it. Therefore, establishing the framework conditions for venture capital funds to foster in Switzerland has a direct effect on the growth opportunities of Swiss green fintechs.

Throughout all lifecycle stages of green fintechs, there should be appropriate capital available to compete for, in proportion to the Swiss ambition to be a leading sustainable finance hub. A healthy Swiss venture capital landscape focused on green digital finance should ensure that green fintechs can scale beyond Swiss borders and have global impact. The Swiss regulatory framework should allow the Swiss fund market to close the gap with globally leading fund markets, especially with regard to funds focusing on qualified investors, such as venture capital funds.

Potential Action 10:

Increase Pension Fund Flexibility to invest in Green Fintechs

Addressed actors: government

Pension funds have a fiduciary duty to create long-term returns for their members, whilst minimizing risks. Climate change and the loss of biodiversity create significant physical risks for investment portfolios, the significance of which increases with the investments' time-horizon. Furthermore, transition risks could materialise abruptly in financial markets already in the short and medium term, impacting asset valuation and rendering certain assets stranded. Therefore, addressing such risks should be a top-priority for pension funds. At the same time, these crises create substantial opportunities for new companies, such as green fintechs, to prosper. To create optimal long-term returns, pension funds must invest in such companies, most of which are still private equity. Currently, Swiss pension funds do not have the flexibility to do so effectively:

Swiss pension funds are obligated to follow a diversified investment approach, based on limits set by the government. Investments in non-listed green fintechs are allowed through a diversified venture capital fund. Such investments fall under the category alternative investments, together with, for example, hedge funds, insurance linked securities, and commodities. Alternative investments are capped at 15% of the pension fund's assets, but exceptions are possible, if explained to the regulator. However, such exceptions are rarely made use of by small and medium-sized pension funds, due to risk-aversion and lack of resources to go through the process of explaining.

Pension funds should have the regulatory flexibility to profit from opportunities created by climate change and the loss of biodiversity. This could be facilitated by adding a dedicated category for diversified private equity investments with a sustainable impact, such as venture capital funds and fund of funds focusing on green fintechs. A limit of 15% of pension fund's assets for such a category, a third of which could be invested abroad, would ensure an adequate overall risk diversification. When designing such a dedicated category, due care must be given to the particularities of private equity investments, such as low liquidity, to ensure that there are no practical barriers remaining.

In addition, pension funds should offer its members the flexibility to choose and switch between investment portfolios, both based on their risk appetite as well as their preferences with regard to sustainable finance.

Potential Action 11:

Rapidly introduce Limited Qualified Investor Funds

Addressed actors: government

A swift implementation of the amendment to the Collective Investment Schemes Act (CISA) that introduces a Limited Qualified Investor Fund (L-QIF) would significantly reduce the hurdles for venture capital firms to base their funds in Switzerland. This in turn would help increase the focus of venture capital firms on Swiss start-ups, such as green fintechs. Until implemented, the Swiss supervisory authority (FINMA) could already identify ways to lower the time and cost pressure (which are internationally disproportionately high) associated with approval processes for such funds.

Box 8: The Swiss Limited Qualified Investor Fund

Although Switzerland is one of the world's leading financial centres, it is still a long way from realizing its potential in the area of collective investment schemes. The funds distributed and managed in Switzerland are often foreign funds.

For this reason, the Federal Council took action and submitted a draft to amend the Collective Investment Schemes Act (CISA) to parliament on August 19, 2020. The draft bill aims at enabling the creation of a new type of fund, the limited qualified investor fund (L-QIF) that does not require approval by the supervisory authority (FINMA) and is reserved exclusively for qualified investors.

The L-QIF, as envisaged in the draft, already exists in various forms in European countries. Its aim is to offer qualified investors an innovative alternative to foreign solutions and thus to close the gap between the Swiss fund market and its competitors. The Asset Management Association Switzerland has recognized the Federal Council's proposal as an 'innovation and an important step'.¹

¹ See '[L-QIF - an innovation for the Swiss fund market](#)', AMAS, 2020.

Potential Action 12:

Establish a Fund of Funds dedicated to Green Fintechs

Addressed actors: government, venture capital firms, financial institutions

To foster the availability of venture capital for green fintechs, a fund of funds could be established that invests exclusively in Swiss venture capital funds that have a focus on Swiss green digital finance. The fund of funds would have a geographic investment requirement in its investment policy, which prescribes that start-ups would be considered if they are based either in Switzerland or build up a significant presence in Switzerland. To reduce issues relating to investment selection, the fund of funds would only invest when private sector investments are already committed, matching such investments 1:1 or 2:1.

This fund of funds could be financed by the Swiss government, for example through the issuance of green technology bonds, making Switzerland the first country to issue green bonds with a singular focus on technology. This innovative approach could be expanded by having green technology bonds be issued on a Blockchain, based on frameworks introduced in the new DLT bill. Other financing could come from institutional investors, such as pension funds.

Such initiative would be following the examples of initiatives in neighbouring countries, such as in Germany, which plans to invest EUR 10bn on top of anticipated EUR 20bn in private investments through a “Future Fund” to help start-ups expand their businesses.¹ Early

2021, the European Innovation Council Fund also expanded from offering grants to direct equity investments, ranging from EUR 500 thousand to EUR 15 million to enable innovative start-up to scale up faster.² More generally, the European Investment Fund (EIF) acts as a specialist provider of risk finance via venture capital and private equity funds to benefit small and medium-sized enterprises (SME) across Europe. To date more than 1 million SMEs have benefited from enhanced access to finance through financial instruments managed by EIF.³

Box 9: F10 Investment AG

In 2020, F10 launched an investment entity solely dedicated to startups participating in its incubation programs with funding provided by corporate partners. In this set-up, investment decisions can leverage the deep insights from 6 months “collaborative due diligence” - close support and coaching of each startup during the programs. This way, investments can be de-risked, compared to a regular venture fund structure, where investments can usually only be assessed based on a transactional relationship. The F10 Investment AG could act as a template to maximize the impact generated from green fintech-dedicated public and private funding schemes.

1 See 'Zukunftsfonds startet mit 10 Mrd. Euro: Setzen damit den Benchmark in Europa', BMWI, 2020.

2 See 'European Innovation Council Fund: first equity investments of €178 million in breakthrough innovations', EC, 2021.

3 See www.eif.org



Actions to improve
framework conditions:
Boost ecosystem
and innovation



Boost ecosystem and innovation: Goal

The Swiss green digital finance ecosystem should continue to reinforce itself by constant interaction and collaboration. Switzerland should increasingly produce highly educated specialists and research in the field of green fintechs, and promote knowledge of sustainable finance among finance professionals. Research and innovation are both key for the development and propagation of green digital finance. Whereas system-oriented research focuses more on a top-down understanding of green digital finance and its effects, bottom-up-oriented innovation generation is crucial to create new solutions. These, in turn result into disruptive products and services, enabling and promoting the dynamic growth of green fintechs.

Therefore, a thorough understanding of how green digital finance can unfold its full potential and have the optimal impact on an economic and societal level is crucial. Promoting and fostering academic research in this area will help to build and deepen this understanding. Hence, universities and universities of applied sciences should strengthen their already existing research focus on green digital finance. In order to encourage and propagate this development, the establishment of distinct research funding opportunities as well as the integration into research networks and communities is vital.

The Swiss green digital finance ecosystem should continue to reinforce itself by constant interaction and collaboration. Switzerland should increasingly produce highly educated specialists and research in the field of green digital finance, and promote knowledge of sustainable finance among finance professionals.

The ecosystem should establish a global reach, attracting clients, specialists, researchers, and green fintechs. It should share domestic experiences with other countries, thereby fostering the creation of other green digital finance ecosystems that contribute towards environmental goals, as well as creating cross-border opportunities.

Potential Action 13:

Optimize support by funding agencies, such as Innosuisse

Addressed actors: government, universities, green fintechs, accelerators

Innosuisse is the Swiss innovation agency. They fund science-based innovation in the interests of industry and society with the aim of increasing the competitiveness of small and medium-sized enterprises (SMEs) in Switzerland. Innosuisse especially promotes the partnership between academia and the industry with innovation projects, networking, training and coaching, laying the groundwork for successful Swiss start-ups, products and services.

Innosuisse is already active in various areas benefiting green digital finance. Firstly, it launched two so-called NTN Innovation Boosters,¹ running from 2021 to 2024, 'Blockchain Nation Switzerland' and 'Databooster'.² In addition, it is financing three multiyear TFV network series: 'Accelerating Growth in Sustainable Finance via Alternative Data, Analytical Methods and Improved Transparency', the 'Swiss Fintech Fair', as well as the 'Global Sustainable Digital Finance Forum'.³

This year, Innosuisse is introducing a key instrument, the flagship initiative. The purpose of the flagship initiative is to stimulate innovation in areas relevant to a large part of the economy or society and to promote transdisciplinary project collaboration.⁴ One of the two first

flagship topics is 'Improving resilience and sustainability and reducing vulnerability of society, infrastructure and processes' with a focus area being 'decarbonisation'.⁵ One flagship should focus on the contributions of digital finance to decarbonisation, thereby stimulating the entire green digital finance ecosystem. In future years, an entire flagship topic could be established on digitalization of the financial sector, including focus areas relating to green digital finance.

In addition to that, a dedicated NTN Innovation Booster on green digital finance, running from 2022 to 2025 would further strengthen the green digital finance ecosystem. The application for such an instrument is currently being developed by members from the Green Fintech Network as well as other stakeholders from the green digital finance ecosystem.

Furthermore, establishing a focus on green fintechs by Innosuisse's 'Entreprise Europe Network'⁶ could directly support Swiss green fintechs in entering European markets. Lastly, Innosuisse could add a focus on green fintechs in their mentorship programmes.⁷ A general barrier for green fintechs to receive access to mentorships seems to be the fact that green fintech innovation is not

1 An NTN Innovation Booster brings together Swiss actors from research, business and society around an innovation theme and stimulates the development and testing of concrete, radically new ideas. New scientific findings provide important impetus.

2 See '[How to find the appropriate NTN Innovation Booster and further information](#)', Innosuisse, 2021.

3 See '[TFV - Networking Event Series](#)', Innosuisse, 2020.

4 See '[Flagship Initiative – Strive for systemic innovation](#)', Innosuisse, 2021.

5 See '[Flagship topics of the first call](#)', Innosuisse, 2021.

6 See www.swisseen.ch

7 See '[Get support for your innovation project](#)', Innosuisse, 2021.

always considered strictly research-based, especially when it focuses on practical financial applications. It would be welcomed if Innosuisse broadened their criteria to be able to consider green fintechs in proportion to their potential to the Swiss economy. This may require Innosuisse and their mentors to build up knowledge of the particularities of green fintechs to facilitate consultation and effectively better support firms.

Supplementary to Innosuisse, other promotional programs should be investigated or proactively called into being by governmental institutions.

Potential Action 14:

Green Digital Finance Gatherings

Addressed actors: industry associations, green fintechs, universities, venture capital firms, accelerators, government, financial institutions, consultancy firms, IT infrastructure providers

Regular gatherings between key stakeholders of the green digital finance ecosystem would facilitate exchange of knowledge, latest research, and enable match-making for joint projects and cooperation. Such gatherings should not be limited to Swiss stakeholders, but engage with global green fintechs, such as Ant Forest or Stripe Climate and other leading technology hubs, such as Silicon Valley and Singapore.

To maximise national and international reach, existing platforms should be leveraged, such as the Building Bridges Week, which includes a focus area on sustainable technology. With regard to academic research, a 'Global Sustainable Digital Finance Forum' is being established by the Global Center for Sustainable Digital Finance.

Gatherings should also include an institutionalized dialogue between green fintechs and regulators. Regular touchpoints with regulators help identify and address issues arising from, for example, inflexible regulation. Such a dialogue is particularly important during the launch phase of a green fintech.

Potential Action 15:

Establish dedicated Master Classes on Green Digital Finance

Addressed actors: universities

Through its system of excellent universities, Switzerland is well positioned to become a leading research hub for green digital finance.¹

Establishing dedicated master classes on green digital finance, for example, would have multiple benefits: firstly, it would lead to practical use-cases, which result in green fintech spin-offs. Secondly, it would result in improved data that can be utilised by green fintechs. Thirdly, it would raise green digital finance related expertise and awareness at incumbent financial institutions, leading to more partnerships with green fintechs.² Lastly, such master classes include the potential for research collaborations with green fintechs. By including green fintech experts in practical sessions of such Master classes, the programme could further increase in attractiveness to new students. Such Master classes could ultimately lead to the establishment of a Green Fintech Centre of Excellence.

¹ See for example the establishment of the Global Center for Sustainable Digital Finance by the University of Zurich's Swiss FinTech Innovation Lab and the University of Stanford in 2020.

² See for example the research collaboration between Green Digital Finance Alliance (co-founded by Ant Financials) and the University of Zurich's Swiss FinTech Innovation Lab launched in 2019.

Potential Action 16:

Institutionalize a Global Exchange on Green Digital Finance

Addressed actors: government, industry associations, green fintechs, financial institutions, venture capital firms, technology companies, universities

The UN Task Force on Digital Financing of the Sustainable Development Goals calls upon governments in the area of green digital finance to ‘Cooperate to share experience, coordinate and advance ambition and develop common principles and approaches, while building capacity, infrastructure, regulations and industry support at home.’¹ Switzerland is in an ideal position to initiate and be at the forefront of such a global exchange on green digital finance, bringing together other leading green finance & technology hubs, as well as developing markets.

For developing markets, such a structured exchange could foster their digital economy while contributing to sustainability goals. The Swiss green digital finance ecosystem would profit from the collaboration with other green finance & technology hubs: such collaboration acts as a bi-directional catalyst for knowhow, talent, capital, and clients. Furthermore, the engagement with developing markets could lead to further innovation, new business opportunities for Swiss green fintechs, as well as allow Swiss companies to identify new greenhouse gas offset opportunities, supporting the Swiss government’s endeavour to establish bilateral agreements with interested host countries to manage the transfer of emissions reductions in accordance with the Paris Agreement.² In

short, such an initiative could manifest Switzerland as a leading green digital finance hub, while making a global contribution towards sustainability goals.

When establishing such an initiative, Switzerland should leverage its unique position as home to key international organisations and initiatives, such as the International Union for Conservation of Nature, WWF International, the Green Digital Finance Alliance, and the Finance for Biodiversity Initiative. This lever could be amplified by establishing an explicit focus on biodiversity and its nexus with climate change.

Furthermore, Switzerland should make use of one of its key strengths: its close collaboration with the private sector, by establishing such an exchange in a hybrid format, integrating key private-sector stakeholders, especially green fintechs, financial institutions, industry associations, universities, and technology companies. Given its digital and green focus, digital technologies should be used to minimize travel-related greenhouse gas emissions and the costs associated with organizing such an initiative.

¹ See www.un.org/en/digital-financing-taskforce

² The first agreement of its kind in the world was concluded between Switzerland and Peru on 20 October 2020. It governs the prevention of double counting and the transfer of reductions achieved. It also includes criteria to ensure that the projects do not harm the environment, and that they encourage sustainable development and respect human rights. Switzerland signed another agreement with Ghana on 23 November 2020 allowing Switzerland to offset emissions through projects abroad. See <https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/compensation/abroad/host-countries.html>



Closing
remarks



Towards implementing the actions

The preceding list of actions addresses a vast number of stakeholders, in line with the potential of green digital finance as an enabler for the entire financial market. The potential actions are meant as a source of ideas, some for the Swiss government to consider, others for institutions with an ambition to become leaders in green digital finance in their field.

Some actions appear straightforward to implement and may be taken up by institutions from within the Green Fintech Network or beyond. Others may require further analysis prior to implementation, due to their complexity. Especially the International Sustainable Data Platform would profit from a feasibility analysis. Such a project could be supported by the Green Digital Finance Alliance and the Finance for Biodiversity Initiative, given their expertise at the nexus of sustainability with digital technologies.

In line with its mandate, the Green Fintech Network could assist stakeholders with implementing selected actions, periodically take stock of progress made, and, if needed, identify further actions that help Switzerland become a leader in green digital finance.

