

RED



The Magazine from SIX — 1/2021

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SIX



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With frictionless payment and experiences that stir emotions, stores will retain their reason for existing.



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The infrastructure of SIX ensures access to the capital market and the flow of information and money worldwide. As the operator of the Swiss Stock Exchange and the Spanish stock exchanges, we combine listing, trading, settlement, and custody of securities in one place. And with the SIX Digital Exchange SDX, we are defining the Securities Value Chain of the future. As a competence center for Swiss payment transactions, SIX supports banks with innovative services in an increasingly digitalized world. Moreover, we provide the entire world with reference, pricing, and corporate action data, regulatory services, and indices.

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To "Score" Like Johan Cruyff

He Has the Future in Store

Text: Simon Brunner

David Böhler heads the BRIDGE project, "the most exciting retailing spot in Switzerland."



Digitalization is changing our shopping habits, and not just since the outbreak of COVID-19. Online shopping is the dictate of the moment. Brick-and-mortar commerce must further evolve in order to have a future. What that evolution might look like can already be seen in Düsseldorf and soon also in Zurich.

Everything in Zurich is close by, including the path to the future. Just a few hundred meters away from Zurich's main train station, the shopping experience of tomorrow – BRIDGE – is coming to life. BRIDGE is the latest shopping and dining project by Migros, Switzerland's number one retailer.

The "most exciting retailing spot in Switzerland," as the Swiss business newspaper *Handelszeitung* dubbed it, will open at the start of April 2021 right next door to Google, the very epitome of a futuristic enterprise. On a floor space of 2,000 square meters, many answers to the question of how brick-and-mortar commerce will evolve in the years ahead will be discovered.

SIX, too, examined this question and wrote up its findings in a white paper titled *Future of Brick-and-Mortar Commerce* (see box on page 6). "On the basis of relevant studies, we project that retailers around the world will generate 40% of their sales revenue online in 2030, compared to just 16% in 2019," says Alexander Verbeck, Head Cash Ecosystem in the Banking Services business unit of SIX. "At the same time, though, brick-and-mortar commerce will retain its reason for being because sometimes nothing beats live experiences in the real world," he adds. Physical stores could survive, he says, particularly if they offer

"We project that retailers around the world will generate 40% of their sales revenue online in 2030, compared to just 16% in 2019."

Alexander Verbeck, SIX

"experiences that can only be immersively enjoyed in full with all five senses in person on-site."

BRIDGE will deliver exactly this kind of experience. If you want to, you can order the steak purchased at the meat counter to be grilled right away in-store. The third-party app TableSnappr routes it directly to your seat. Would you like even more individualism? The FoodLab offers four modular kitchens that can be rented for a cook-off between friends, for example.

Those Declared Dead Live Longer

The debate about the future of physical retailing is divisive. "Brick-and-Mortar Is Dead. Let's Open a Store," ran a recent headline in the *New York Times* with logical consistency. On the one hand, it has long been observable that one store after another has closed in inner cities in a so-called extinction of physical retailing. A study by Credit Suisse states that there were almost 53,000 stores in Switzerland in 2013, but only around 50,000 at the end of 2018. On the other hand, more and more retailers are opening stores in prime locations, and that especially goes for online retailers. Digital pioneer Steve Jobs launched the first Apple Store in 2001 – today there are 510 of them. >

Amazon, Google, Facebook, and many others are also experimenting with novel retailing formats. Lego believes that stores are the key to conquering the Chinese market. The Danish toymaker Lego wants to open a hundred more stores in China over a span of two years.

Cooperation Is Key

Back to BRIDGE: Besides experiences, what other factors are needed to succeed against online retailing? "Retailing of the future requires more cooperation," says David Böhler, who heads the BRIDGE project at Migros. "Our name expresses that. We're building a bridge between shopping and dining, between Migros and external suppliers. We want to curate an entirely unique culinary world of adventure."

The white paper from SIX contends that pop-up shops are a great way to provide customers with "the unexpected, novel, exclusive, Instagrammable in-person shopping experiences that they crave." The first patrons of BRIDGE will even be able to savor a variety of delicacies from Peru thanks to two pop-ups. Furthermore, pop-ups will help real estate owners to monetize unutilized



BRIDGE wants to curate an entirely unique culinary world of adventure.

space, Alexander Verbeck says, citing as an example a bookstore that turns into a yoga studio after sundown.

David Böhler exudes delight about the retailing world of tomorrow in every sentence he speaks: The vista of the railway tracks is a "top view," meals are "shared," projects have to be "agile," further development means "forever prototyping," and "storytelling" is central to selling cheese, and BRIDGE aims to be your "third place" – your favorite place

White Paper: Future of Brick-and-Mortar Commerce

The *Future of Brick-and-Mortar Commerce* white paper from SIX presents the future of physical retailing for the years 2027 through 2030. In the more probable of two scenarios, SIX projects that stores will retain their reason for existing, albeit in an altered form. Almost all stores will need a digital storefront and will have to gear their offerings even more toward convenience, speed, and personalization. Moreover, emotional experiences in which consumers can immerse themselves with all five senses in person will immensely increase a store's chances of survival. Consumers will expect a frictionless, hardly noticeable payment process with a wide choice of mediums of payment. Cash will continue to play a role in this context through the integration of retailers and a network composed of other consumers as decentralized cash dispensers.

The white paper can be downloaded for free at:

📄 six-group.com/brick-and-mortar-red



“Retailing of the future requires more cooperation. We’re building a bridge between shopping and dining, between Migros and external suppliers.”

David Böhler, BRIDGE, Migros

next to your home and your office. Those may sound like a bunch of buzzwords, but BRIDGE’s concept has a thoroughly authentic feel. That also has to do with the issue of sustainability, an essential aspect addressed in the white paper from SIX, and one that is equally as important to Böhler: “We are going organic, locally sourced, and vegetarian as much as possible” on the product side, he says. And BRIDGE’s decor is made up of recycled materials from Offcut, a Swiss network that collects used and remnant materials and transforms them into new resources.

Sustainable and Premium

The sustainability aspiration runs all the way to the traditional grocery shelves that BRIDGE will also feature. BRIDGE will stock a premium selection of products, the Migros budget brand line won’t be carried, and 30% of the grocery range, primarily from small-scale producers, won’t be available in other Migros stores. But what’s surprising at first glance is the size and location of the grocery department: It’s on the third floor and is barely bigger than a convenience store in a gas station. >



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“The days of wheeling a shopping cart through canyons of shelves are definitively over.”

Maximilian Grönmeyer, TYPY

“That’s purely intentional,” Böhler explains. “Emotionless shopping solely for the purpose of quickly filling your refrigerator will increasingly be automated, at least in densely populated areas. We’re not needed for that kind of shopping.” One day, Böhler says, you will sit down to a cup of coffee and select grocery items on your smartphone and hit “pay” and then pick up your filled shopping bag on your way out of the store. “But that’s a long way off in the future.” Is it really, though?

In Düsseldorf in the west of Germany, you don’t need binoculars to see this vision of the future. The first TYPY store





In Düsseldorf, a robot delivers groceries to a pick-up terminal.

opened here in late 2020, though “store” is actually a misnomer because the 40-square-meter shop is nothing more than an upscale pick-up station with seating, coffee vending machines, and big display screens.

A Robot Fetches the Organic Milk

TYPY stocks a basic supply of food items, ready-to-eat meals, wine, and coffee. TYPY makes shopping about as efficient as it gets. Customers select the items they want and pay for them on their smartphones. A robot then fetches the organic milk, the quinoa wrap, and a bottle of Côtes du Rhône from the shelf rack and takes it to a pick-up terminal. The shopping transaction is completely contactless, transpires without human intervention, and takes less than two minutes – just enough time to order a premium cup of coffee, directly on the app of course.

The white paper from SIX calls this way of paying “frictionless.” The check-out proceeds as smoothly and easily as it does after an Uber ride. The main focus is on convenience. “The days of wheeling a shopping cart through canyons of shelves are definitively over,” TYPY co-founder Maximilian Gröne-meyer says. “Shopping today has to be fast and convenient.” TYPY wants to cooperate with courier service companies in the future to also provide home delivery.

The startup from Düsseldorf thus fulfills four key attributes that the SIX white paper asserts to be crucial to staying successful in brick-and-mortar commerce: digitalization, convenience, speed, and personalization. At the same time, the payment process will become a catalyst for additional services such as personalized product suggestions based on digital purchase receipts, booking >

The Future of Retailing Brings New Business Opportunities for Banks

#1 — Pop-Up Marketplace

Banks could bring retailers and pop-up suppliers together on a platform. They could provide ratings, handle contracts and insurance, and orchestrate co-financing.

#2 — Purchase Advice

Banks could link account information with shopping interests. They could assist consumers with their budget planning, point out financing possibilities, and buttress sustainability considerations with financial consulting data.

#3 — Data Safe

Banks could serve as a secure location for consumer data. They could store and retrieve user preferences (e.g., social media posts, likes, and product ratings), and even biometric data.

#4 — Mediums of Payment

Banks could make it possible to pay with a variety of different “currencies.” They could integrate not just cryptocurrencies, but also virtual in-game money or data (e.g., social media posts) into the payment process.

#5 — Authentication

Banks could exploit their expertise in verifying identities. They could provide a two-factor authentication app to simplify the checkout process in any store.

#6 — Cash Delivery

Banks could make physical cash available on demand. They could reserve the desired amount at the orderer’s ATM or retailer of choice, or deliver it to the orderer’s home.

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SCHON MIT DER APP BESTELLT? DANN SCANNE DEINEN QR CODE HIER EIN!

TYPY: a checkout process
as frictionless as after
an Uber ride.



of restaurant table reservations, and mobile customer authentication (see Top 6 on page 9).

TYPY has symbolic value – its grand opening was attended by the mayor of Düsseldorf and Germany's minister of state for digitalization. This is just the beginning for the founders of TYPY. "It's a fully functioning prototype on which we are performing open-heart testing," Grönemeyer says. He and his business partner Carlo Caldi want to open 200 more sales outlets over the next three years, including miniature formats such as compact container stores on university and corporate campuses. Asked

about role models, Grönemeyer replies self-confidently, that "our concept is unique in the world."

The future of retailing has already arrived in Zurich and Düsseldorf. In that future, physical stores have earned their place beside online retailers and prevent our inner cities from turning into office wastelands. ✕

Staple

staple.io

Headquarters: Singapore

Founded: 2018

Employee headcount: 11

Sector: artificial intelligence/
automation

Staple is one of the ten startup companies in F10 Singapore's inaugural incubation program.

SIX is the founder and a corporate member and main sponsor of the F10 FinTech Incubator & Accelerator.

f10.global

Companies – financial institutions in particular – devote considerable personnel resources to the task of reading, interpreting, and managing documents. We believe that workers should employ their talents more effectively and efficiently toward more strategic activities. The artificial intelligence from Staple automates data inputting, data acquisition, and document processing for financial institutions, accounting firms, the healthcare industry, and all kinds of companies that handle a large volume of documents. It reads, interprets, extracts, and processes data from simple documents such as invoices, application forms, and tax records, but also from complex technical drawings, regardless of the layout or language. Staple supports over 90 different languages and can even process Asian characters and scripts.

Ben Stein

Founder and CEO of Staple



Jonas Thürig

Head F10 Singapore

WHY WE FIND THIS SUBJECT RELEVANT

Staple automates and accelerates processes, reduces manual errors, and liberates employees from mundane, repetitive workflows. Staple's technology has the potential to enable new products or services for clients of SIX.

HOW HIGH WE ESTIMATE THE MARKET POTENTIAL

The worldwide market for data extraction services was valued at 2.14 billion US dollars in 2019 and is projected to reach 4.9 billion US dollars by 2027. The COVID-19 pandemic is giving this trend another big boost. Artificial intelligence and machine learning are the driving technologies behind data extraction, and they will improve further in the years ahead.

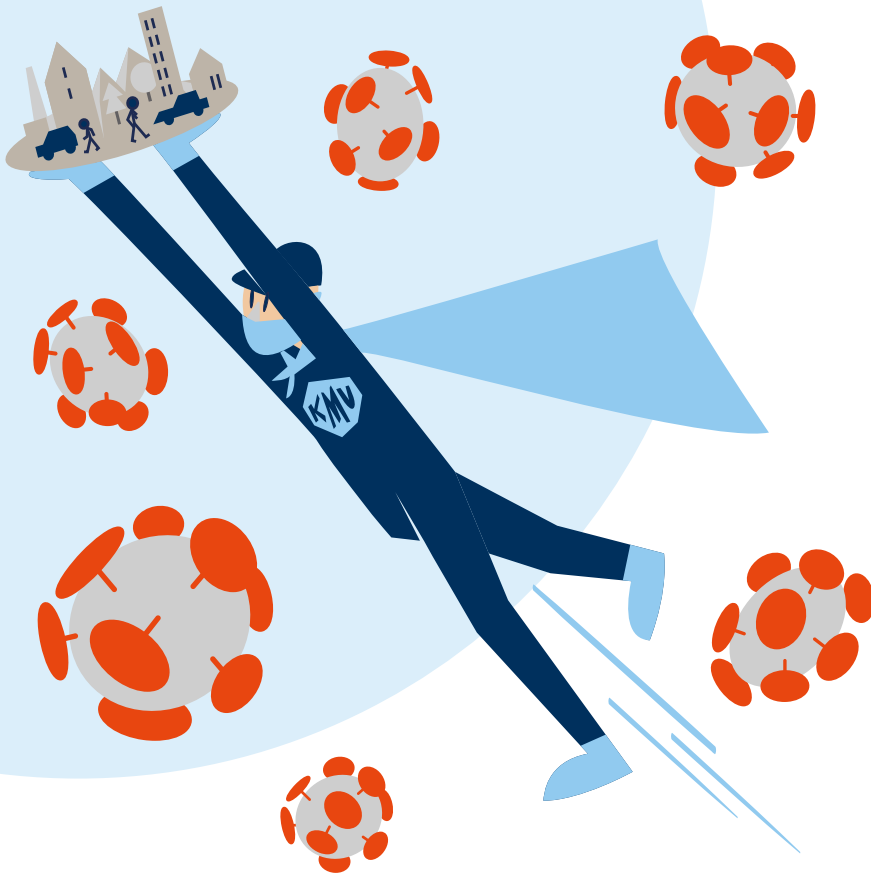
WHY WE BELIEVE IN THIS STARTUP

The startup has a very strong core team in the persons of its co-founders Ben Stein, a former CFO, and Joshua K. Kettlewell, who holds a doctorate in quantum information science and quantum theory. Staple brought a very well-developed solution with predefined modules enabling rapid implementation to market. Various client orders in recent months prove that the market is taking up the product.

The experts at the F10 evaluate startups that have ideas and solutions for innovative services, that make processes more efficient, or that want to address new groups of customers.

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Small, Medium, and Extraordinary

SMEs employ over two-thirds of the labor force in Switzerland and the rest of Europe, and half of all workers in the USA. SMEs form the backbone of our economy, but they're particularly the ones that are suffering severely as a result of the COVID-19 crisis. A study conducted by McKinsey & Company revealed that more than half of the roughly 2,200 European SMEs surveyed are questioning whether they can survive until summer 2021.

Three different perspectives show that it pays to support SMEs today and even once the crisis is over.



Activetours.ch has been offering snowshoe, trekking, and hiking adventures for four years now. Company founder Jörg Hehlen is a participant on 4switzerland.ch. This donation platform for the benefit of Swiss SMEs was co-launched during the COVID-19 crisis by several employees of SIX on their own private initiative.
 ⓘ 4switzerland.ch

The Hiking Guide

“As is common in the outdoor recreation sector, I hold multiple jobs, so I’m not entirely dependent on the revenue from activetours.ch. Moreover, my fixed costs are low. I don’t need a fleet of tools or vehicles to do my work, and my office is the mountains. Other colleagues in the tourism industry and the restaurant business have been hit harder by the COVID-19 crisis than I have. The 4Switzerland platform is a welcome gesture that’s almost more valuable to me psychologically than financially. My financial situation, by the way, was better during the hard lockdown than it is at the moment. During the hard lockdown, tours weren’t allowed at all, and compensation was thus paid out by the social insurance office or through partial unemployment benefits. That compensation has now been discontinued even though the small trekking group sizes due to the strict COVID-19 restrictions reduce my revenue. Ironically, demand would actually be there because the Swiss are vacationing in Switzerland these days, and the great outdoors presents a welcome change from being cooped up working from home. That, at least, lets me look to the future with confidence.”

The Stage Manager

“Any company, large or small, that goes public on a stock exchange generally does so to gain access to capital. In order for that to function efficiently, companies need a modicum of trading liquidity. Shares of SMEs are often less liquid for a variety of reasons, for instance, because they may be inadequately visible to investors due to a lack of research reports by equity analysts. The Stage program from SIX helps SMEs listed on the Swiss Stock Exchange to reach more capital market participants. The Stage program includes a regularly updated company overview fact sheet and independent research reports prepared by our experienced partners. More visibility arouses greater interest in a stock and enhances SMEs’ presence on the capital market.”
 ⓘ six-group.com/six-stage-program-red



Andrea von Bartenwerffer has been working for SIX since December 2007. As the head of issuer relations, she’s in charge of assisting and supporting the roughly 230 companies listed on the Swiss Stock Exchange, many of which are SMEs.



Andreas Kästner and 11 fellow students in the master's program in business innovation at the University of St. Gallen received an assignment from SIX in September 2020. Over the course of a three-month project, they gave thought to the future of capital markets.

The Innovator

“Our reflections go far beyond the economic concept of capital. We consider environmental, social, and symbolic aspects, for instance, equally as important for the future. Those aspects have found their way into the world of finance in the form of impact investing and ESG criteria used to rate companies’ environmental, social, and corporate governance practices. However, ESG ratings don’t always live up to their promises regarding their effectiveness and transparency. Moreover, SMEs, which are vital to our economic system, and startup companies as well most commonly cannot afford the expense of publishing ESG reports. Our project thus culminated in the elaboration of a business model for an “impulse marketplace” that connects sustainable, innovative SMEs and startups with investors who want to put an end to greenwashing. The impulse marketplace collaboratively combines cooperation with non-governmental organizations and forms of artificial intelligence to verify the soundness of the participating companies.”

Taxes, Oh Deer!

Text: Simon Brunner

In several US states, a slain deer can be deducted from taxes if it is donated to the poor.

Swiss citizens must file their annual tax returns by the end of March each year. A light-hearted look at the past and around the world just might make this compulsory annual task a bit more bearable.

Nobel laureate physicist Albert Einstein knew that “the hardest thing in the world to understand is income taxes.” Grasping the theory of relativity is child’s play in comparison. There’s hardly a Swiss citizen who wouldn’t agree with him on that at the moment because it’s March again, and the deadline for filing tax returns at the end of the month is inexorably approaching.

But all the moaning is evidently exaggerated. Switzerland’s tax system ranks 20th out of 100 for simplicity according to the Tax Complexity Index developed by Paderborn University and Ludwig-Maximilians University Munich, in Germany. The quality of support from tax authorities in Switzerland is practically unparalleled, and the process of filling out and submitting tax forms and paying taxes owed is rated as very good. The English Channel island of Jersey ranks number 1, by the way, and Brazil ranks number 100.

Estonians Have It Easy

It’s not surprising that the British island tops the rankings because it is one of the very few countries in the world that has a flat tax under which every taxpayer pays the same rate. At the extreme, a flat tax enables no-fuss withholding taxation at source without any tax declaration forms. Taxpayers on the island of Jersey pay a uniform tax rate of just 20% on their income regardless of their socio-economic status, but are not dispensed from filling out tax forms. They and the Swiss can gaze with envy at another flat tax country, Estonia, which occupies fourth place in the rankings.

“The hardest thing in the world to understand is income taxes.”

Albert Einstein

Employers in Estonia deduct taxes monthly from their employees’ gross salaries. “Around 95% of the population just has to check over the digital tax form and hit ‘send,’ ” explains Robert Krimmer, a professor of e-governance at the Tallinn University of Technology, in the magazine *brand eins*, adding that “there are no tax consultants in Estonia because the system is so simple.” What could be easier?

Taxes have been around since early antiquity. Called “tribute,” “toll,” or “tithe” back then, they served more or less the same purpose as they do today: to finance a government’s budget. For centuries, however, taxes were pretty arbitrary. The Roman emperor Vespasian, for example, taxed the use of public toilets. His dictum “pecunia non olet,” meaning money doesn’t stink, echoes to this day.

It wasn’t until the 18th century that the Scottish philosopher Adam Smith put forth the concept that taxes should be equitable. In 1799, England was the first country to introduce an income tax as we know it today, and then immediately abolished it. In Switzerland, Basel-Stadt was the first >

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TAX LAWS IN 17 COUNTRIES AND IN THE EU

canton to switch from a wealth tax to an income tax as its main source of revenue in 1840. The bulk of the other cantons followed suit during World War I to fill empty public coffers. From antiquity to today, wars were often the reason for introducing new taxes. But there's also a prominent inverse example of taxes leading to war. When England imposed a new tax on tea for its colonies in 1773, colonists in America waged a war of independence, giving birth to the USA as a byproduct.

A Serious Matter, Isn't It?

Taxes are a serious matter indeed. Even Al Capone, arguably the greatest gangster kingpin of all time, found that out firsthand. He ended up in prison in 1931 not for murder or bribery, but for tax evasion. So, beware when filling out your tax return.

Which brings us back where we started. Perhaps filling out your tax return would be less aggravating if you were aware of the absurdities that people in other countries have to grapple with. In several US states, a slain deer can be deducted from taxes if it is donated to the poor. In Sweden, names of babies must be approved by the Swedish Tax Agency – Lego and Google are okay, Allah and Ikea aren't. And Japan's notorious "metabo" law, also known as the "fat tax," requires 40- to 75-year-olds to get their waists measured every year. Women and men with waistlines exceeding 90 and 85 centimeters, respectively, may face a tax surcharge. Knowing that might make doing your tax return seem a little more fun. ✕

The adjacent article shows that filling out a tax return isn't uniformly toilsome in every country and that tax collectors occasionally get creative. The humorous anecdotes have a mission-critical background: Tax laws vary considerably from one country to the next and change constantly. This confronts financial institutions with big challenges in monitoring tax compliance, appraising the tax implications of financial returns, applying withholding taxes, and preparing reporting in connection with financial instruments, issuers, and individuals.

SIX ensures that financial institutions comply with all country-specific and cross-border tax regulations at all times by continually broadening its tax information offerings to include additional countries and by constantly updating them to include new rules. SIX currently offers specialized data services for 47 tax laws in 17 countries and in the EU, including section 871(m) of the US Internal Revenue Code, the US Foreign Account Tax Compliance Act (FATCA), and EU financial transaction taxes.

🌐 [six-group.com/
tax-and-compliance-red](https://six-group.com/tax-and-compliance-red)



Forbes.com, 17 December 2020

The transformation of the financial industry is making headlines. Our employees explain how SIX is contributing to the future of finance.



Andreas Henke
Senior Product Manager
Financial Information, SIX

In a guest opinion article on Forbes.com, Ross Gerber criticizes the composition of certain ESG funds. ESG stands for Environmental, Social, and Governance issues. The CEO and chairman of Gerber Kawasaki Wealth and Investment Management holds the view that many ESG funds consistently also include companies that hardly, or only partially, distinguish themselves favorably through their environmental and social actions or corporate governance practices.

Far be it from me to judge whether a company that, for example, creates lots of jobs and promotes a culture of diversity should be included in an ESG fund if it thereby offsets a large environmental footprint. And I will leave it up to others to decide whether some ESG funds are really duping investors, as Ross Gerber somewhat stridently puts it. The headline of his article, though, clearly shows that there are different points of view on ESG.

A Need for Guidelines

Last year alone, according to the Zug Institute of Financial Services, the number of sustainable mutual funds approved for distribution in Switzerland jumped from 595 to 777 and their combined assets under management increased from CHF 198 billion to CHF 316 billion. There is accordingly a great need for universal guidelines regarding ESG criteria. With the new ESG indices from SIX,

we aim to establish solid, independent benchmarks for the Swiss bond and equity market.

We use data from Inrate, an independent Swiss sustainability rating agency, to calculate the indices. Inrate's ESG impact ratings measure the positive and negative effects that individual issuers of debt and equity securities – companies, governments, institutions, and public entities – have on our environment and society.

Issuers with an ESG impact rating of C or lower and issuers that derive 5% or more of their revenue from adult entertainment, alcohol, defense, gambling, genetic engineering, nuclear energy, thermal coal, or tobacco are excluded from our ESG indices. The indices likewise rule out issuers that generate revenue from oil sands extraction or which appear on the exclusion list published by the Swiss Association for Responsible Investments.

The new bond and equity indices from SIX enable investors to focus on issuers that act and operate sustainably according to Inrate. The Swiss Bond Index (SBI) gets a sustainable counterpart with the SBI ESG. The Swiss Performance Index (SPI) forms the basis for the SPI ESG and SPI ESG Weighted, which close the sustainability gap in the Swiss equity market.

🌐 six-group.com/esg-indices-red

“A Bridge between Existing Infrastructure and a New World”

Interview: Matthias Bill

Dr. Andréa M. Maechler

Andréa M. Maechler was appointed to the governing board of the Swiss National Bank (SNB) by Switzerland's Federal Council effective 1 July 2015, taking office as the first woman to occupy an SNB board position. She heads Department III of the SNB (financial markets, banking operations, asset management, and information technology). Her early career included positions with the Organization for Economic Cooperation and Development (OECD), the United Nations Conference on Trade and Development (UNCTAD), and the World Trade Organization (WTO). From 1999 to 2001, she worked as an economist in Department I of the SNB. She then transferred to the International Monetary Fund (IMF), where she occupied a number of senior positions. She worked for the European Systemic Risk Board in Frankfurt from 2012 to 2014 and afterwards rejoined the IMF as the deputy head of global markets analysis. Maechler holds a master's degree in international economics from the Graduate Institute of International Studies in Geneva and a PhD in economics from the University of California, Santa Cruz.



Swiss National Bank Governing Board Member Andréa M. Maechler is working intensively on shaping the future of Switzerland's financial market infrastructure. This includes assessing the implications of new technologies. Project Helvetia, for example, is examining the use of central-bank money in transactions involving tokenized assets.

Digital exchanges like the SDX by SIX want to enable trading of tokenized assets on the basis of distributed ledger technology (DLT). What implications would this have for the Swiss National Bank (SNB)?

Financial market infrastructure is the heart of our financial system in a sense. It's where payments and securities transactions in Switzerland's financial sector get settled. And the SNB conducts its monetary policy operations via this infrastructure. It's therefore absolutely essential for us to ensure that the financial market infrastructure is secure, efficient, and fit for the future.

New DLT-based systems could fundamentally alter large parts of today's financial market infrastructure. Of course, it remains to be seen to what extent this technology will actually lead to the efficiency gains hoped for by the financial industry. But it's important for us at the central bank to already have a commanding understanding of the implications of this technological transformation.

To examine the implications, the SNB joined forces with the Bank for International Settlements' (BIS) Innovation Hub and SIX. What makes Project Helvetia special (see page 21)?

Project Helvetia is part of the BIS Innovation Hub Swiss Center, which is run jointly by the BIS and the SNB. Under

this project, we are grappling with the fundamental question of how money – particularly central-bank money – can be integrated into a DLT infrastructure. This, first and foremost, is about building a bridge between existing infrastructure and a new world in which transactions can be settled in real time around the clock.

We are addressing this challenge by conducting a series of experiments. Project Helvetia has a big advantage in that we are able to carry out these experiments on infrastructures that are already well developed. For instance, we are using the test environments of the Swiss Interbank Clearing (SIC) system and the SDX platform. Our experiments are thus technologically much closer to reality than previous ones were.

The BIS Innovation Hub enables a new form of cooperation. It allows us to work more in depth on select projects. Technology specialists, lawyers, economists, and experts on financial market infrastructure are working closely with each other on Project Helvetia. The collaboration across many different academic disciplines is a key factor to success for Project Helvetia, in my view. >



“Our experiments are technologically much closer to reality than previous ones were.”

The first stage of Project Helvetia studied two different ways in which central-bank money could be used to settle transactions involving tokenized assets. How do the two ways differ from each other?

On one hand, we investigated issuing a central-bank digital currency on the DLT-based infrastructure of the SDX. This type of money is called a wholesale central-bank digital currency, wholesale CBDC for short, because it is restricted to specific designated financial market actors. On the other hand, we also examined the possibility of simply linking the SDX to the Swiss Interbank Clearing (SIC) system without issuing a central-bank digital currency.

Our experiments revealed that the cash-side settlement of transactions involving digital assets can successfully be executed both ways in principle. The first approach, via the issuance of wholesale CBDC, is more innovative and encompassing because it facilitates the execution of smart contracts, for example. But this approach also harbors many operational and strategic challenges. The second approach, via system linkage, is closer to the status quo and would thus be easier to implement, but it might mean having to forgo prime advantages of the new technology. The important thing in any case is the proof that DLT-based transactions can be settled securely with central-bank money.

What's next for Project Helvetia?

In the second stage of Project Helvetia, we want to investigate how DLT infrastructures that operate around the clock and settle transactions in real time can be linked with the core banking systems of the SNB and commercial banks. Doing that will enable us to analyze the present

world and the new world of DLT from an end-to-end perspective. The second stage of the project is also aimed at gathering knowledge about what options central banks have for integrating the cash side into a DLT-based financial market infrastructure. Here, too, the advantages and drawbacks of a central-bank digital currency versus the aforementioned linkage to the SIC system will be examined.

The SNB, in collaboration with six other central banks and the BIS, also spoke out about retail CBDCs in a report published in October 2020. Is this topic regaining momentum?

The report that you brought up describes core attributes of a central-bank digital currency for the general public, or a retail CBDC for short. In contrast to a wholesale CBDC accessible only to designated financial market actors, a retail CBDC would also give households and businesses access to a central-bank digital >

Glossary: On Distributed Ledgers, Tokens, and Digital Currencies



Securities trading has long been running electronically. Back in 1996, the Swiss Stock Exchange was the world's first securities exchange to switch from open-outcry floor trading to an electronic trading system with fully integrated transaction clearing and settlement. But the process behind the purchase or sale of a stock has remained the same. Trading, clearing, and settlement proceed in sequential steps. **Distributed ledger technology (DLT)** – also known as blockchain technology – now enables digital exchanges to simultaneously clear and settle transactions in real time. This frees up funds that today still have to be deposited as collateral with a central counterparty. The decentralized DLT architecture has the potential to replace the function of a central counterparty because it gives everyone involved in a transaction a “single view of the truth” and transactions can be executed automatically (through **smart contracts**). On a digital exchange, assets exist in a tokenized form, i.e., in a uniform format that can be fractionalized infinitely in principle. **Tokenization** also makes non-bankable assets such as real estate tradable.

Under **Project Helvetia**, the Bank for International Settlements' Innovation Hub, together with the Swiss National Bank (SNB) and SIX, is exploring ways to carry out cash-side settlement of transactions involving tokenized assets. Two different experiments have been conducted thus far (see adjacent interview). In the first experiment, the SIX Digital Exchange (SDX) used a **central-bank digital currency (CBDC)** to settle transactions directly on its DLT infrastructure. Since this currency is conceived solely for use by designated financial market actors, it is called a **wholesale CBDC**. A **retail CBDC** in contrast, would also be accessible to private individuals. In the second experiment, a CBDC was not used. Instead, the DLT infrastructure of the SDX was linked with the existing **Swiss Interbank Clearing (SIC) system** to settle transactions. The SIC system is operated by SIX on behalf of and under the supervision of the SNB. Both experiments were successful.



currency. Central-bank money today is available to the general public only in the form of cash.

A widely available central-bank digital currency could have far-reaching consequences for the entire financial system. If bank customers, for example, were to convert their deposits into a retail CBDC on a large scale, this would completely change the traditional banking business model. So, the SNB needs to keep a close eye on international developments and to discuss them with other central banks. But one shouldn't equate our active involvement with a declaration of intent to introduce a retail CBDC.

What other issues regarding financial market infrastructure are keeping you busy at the moment?

The SNB is working intensively on constantly further developing the cashless payment transactions system. It is already eminently reliable, secure, and efficient in Switzerland, but the world is going through radical change. The rapid pace of change is also exerting an impact on financial market infrastructure: New technologies, new competitors, and new customer needs have pushed payment transactions into the spotlight.

The SNB is thus engaged in a strategic dialogue with SIX and other players in the private sector over how to bring cashless payment transactions in Switzerland into sync with the "new normal."

Here, I would like to mention the SIC5 project, under which the SNB and SIX are jointly creating the requisite infrastructure for processing instant payments to enable payments in real time around the clock. I am convinced that instant payments will become an integral part of the "new normal."

You have built an international career, and you observe the action on financial markets around the world every day as a member of the SNB's governing board. Hand on your heart, is the Swiss financial industry moving fast enough in embracing new technologies?

Many companies and universities in Switzerland are making key contributions to researching and developing new technologies like DLT. The DLT-based SDX digital exchange is also a world premiere. Moreover, Switzerland is well on the way to establishing the necessary underlying legal and regulatory framework. But in my view, it's the concerted cooperation of the entire fintech ecosystem that above all makes Switzerland a dynamic and attractive business location, and not just from a DLT standpoint.

To maintain and further nurture this dynamism, it's essential to create sufficient space for innovation while contributing to ensuring the stability of our existing systems. Active dialogue and close, constructive cooperation between market participants, regulators, and the central bank are firmly ingrained in Switzerland. We should also build future systems on those pillars. The SNB is all-in, and looks forward to continuing to help shape this cooperation in the future. x



André Buck
Global Head Sales & Relationship Management,
Markets, SIX



Video: six-group.com/swiss-stock-exchange-benefits-red

Mutual Esteem

The market turbulence in 2020 brought the Swiss Stock Exchange a record-high trading transaction volume. Our stable, efficient infrastructure and our close cooperation with our clients were crucial to our ability to ensure orderly and fair trading conditions at all times. Comments from our trading participants prove that the appreciation is mutual. In a video, three of them talk about the benefits that a direct membership in the Swiss Stock Exchange brings. The quality of the order book, multilayered liquidity, innovative services, attractive costs, and the opportunity to have a say in shaping the future of trading are among the advantages they cite.



Report: six-group.com/spanish-market-report-red

Spanish Exchanges Buck the Pandemic

SIX and Spanish-based BME together form the third-largest exchange group in Europe since the takeover in June last year. Although 2020 will be remembered as the year of the global pandemic, the Spanish markets, clearing, settlement, and custody operations functioned normally. BME, as usual, saw to ensuring transparency, security, and liquidity. The key function of the stock exchange – supplying companies with capital – became its greatest strength: New investment flows from capital increases jumped 17.6% year-on-year. Total flows rose 10%. In our market report, you can also read about how BME Growth, our growth market for SMEs, and MARF, our market for fixed-income securities, gained traction as sources of funding.



Domingo García Coto
Head of Corporate Research, BME

SIX, as a thought leader, initiates dialogue with all players in the financial industry. Our employees share their knowledge in a wide variety of ways.

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Webinar: six-group.com/mobile-services-red

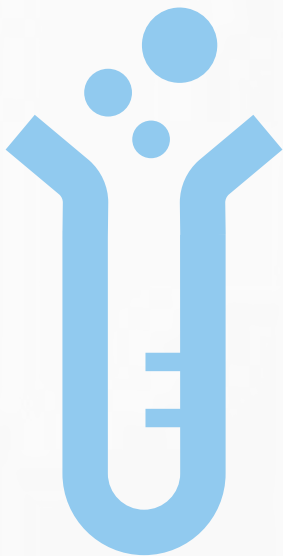
Mobile Services in Connection with the New Debit Cards



Deniz Maden
Senior Product Manager,
Banking Services, SIX

Mobile services from SIX provide a flexible, modular solution concept that is optimally compatible with the app strategies of banks. Banks can opt for our white-label debiX app or can incorporate the services as an integrated solution into their proprietary banking apps. In our webinar, we explain how digital devices are influencing customers' needs and visualize the mobile customer journeys made possible by the new generation of debit cards. The webinar is the latest episode of the ongoing, successful Learning Nugget series, with which we keep you informed with insights into pertinent topics in connection with the new debit cards.

Over
50
projects



ETH Zurich is currently
conducting over 50 projects
aimed at combating
viral diseases.



ETH Campus Hönggerberg, Zurich, Switzerland

The Swiss Federal Institute of Technology (ETH) in Zurich is conducting a longitudinal scientific study on COVID-19 through summer 2021. The study is investigating the immune responses of volunteer subjects over a period of more than a year, focusing on asymptomatic and mild COVID-19 progression. The results of the study should help to gain a better understanding of the long-term evolution of immune protection.

SIX is supporting the study through a grant to the ETH Foundation.



BULLISH

Traders Learning the Ropes

Interview: Sibylla Rotzler

SIX Senior Education Specialist Philippe Kayasseh is jointly responsible for educational and advanced training courses concerning the Swiss Stock Exchange and the financial markets. The course offerings are aimed at traders and reporting agents in and outside Switzerland and include accredited certification and recertification courses.

**Rodeo Time
Philippe Kayasseh:**

SIX itself doesn't employ any traders. I nonetheless would like you to tell me what it takes today to make me a successful stock exchange trader.

It takes strong nerves for certain [he laughs]. It's said that stock exchange traders often go by their gut instincts.

What else does it take?

Before traders at our participating banks are granted authorization to trade securities on the platform from SIX, our courses and exams first ensure that they possess the expertise needed for securities trading, have commanding knowledge of all functionalities and regulatory requirements, and have up-to-date expertise. In addition, all registered traders must complete a refresher course in the event of major system adjustments or regulatory changes, but at least every two years. The refresher course is equivalent to a compliance test and is mandatory.

110s



Can I, as an amateur, take the trader examination and then start trading?

No. The trader education program at SIX is not a “trader apprenticeship” for private individuals – it is aimed exclusively at Swiss Stock Exchange participants. Nor does it teach you the best way to trade tactically.

But could I practice in the trading simulation course?

Yes, the trading simulation course from Traderion offers aspiring traders and all others interested the opportunity to acquire knowledge and simulate trading in a realistic stock exchange setting. The course familiarizes participants with the specific order types on the Swiss Stock Exchange and how to use them in the system.

One thing I’ve always wanted to gain a better understanding of is how derivative products work.

A derivative, to put it simply, is a financial instrument whose price derives from the value of an underlying asset such as a stock or bond, for example. A derivative works like a contract between two parties which stipulates that a given underlying asset can or must be purchased on a specified date at a pre-agreed price. If you would like to gain deeper insight into the world of derivatives, why not

take the Derivatives Fundamentals Class?

This e-learning program, offered by SIX, will be online on our website starting in April. For more experienced market participants, there’s the Derivatives Master Class, a ten-week assisted e-learning program comprised of seven modules that they can work through systematically at their own pace. Participants in this course learn how derivatives are used in different markets and by various client groups and how the risks are modelled, managed, and calculated by banks and the business world.

Will e-learning programs soon be the only courses left?

E-learning programs combined with live in-person teaching will play an ever-growing role in the future, in my view. This combination conjoins the best of both worlds.

What fascinates you about your profession?

Collaboratively working every day on the infrastructure of the Swiss financial center of tomorrow and imparting complex knowledge about stock exchange and financial market matters in a way that’s easy to grasp are what most excites me. And it’s fascinating to watch firsthand how the stock exchange and the financial world are continually evolving – that motivates me and adds a lot of variety to my workday. ✕

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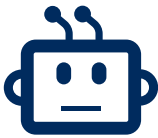
A Course with a Rich History: Derivatives Master Class

The roots of the Derivatives Master Class extend back to the birth of modern options trading in the 1980s. The Chicago-based financial firm O’Connor and Associates was one of the most successful traders of exchange-listed derivatives at that time. The derivatives market was still in its infancy in that era. Only those who truly understood the products, correctly assessed the risks, and knew how to hedge their positions could survive in this market. O’Connor and Associates began to train talents to develop them into highly qualified derivatives traders by combining practical trading experience with technical financial coursework. The course matter was considered proprietary know-how and thus a key corporate asset. After the takeover of O’Connor and Associates, its courses became the cornerstone of derivatives-trading training at UBS Investment Bank. The course incorporates 30 years of trader, risk manager, and client advisor experience from around the world.

The Derivatives Master Class offered by SIX is based on the O’Connor and Associates courses, which were long accessible only to a select circle of employees of large banks.

🌐 six-group.com/derivatives-master-class-red

BME has launched a roboadvisor in February 2021. Investment companies that offer financial advisory services benefit from artificial intelligence to custom-optimize an investor portfolio automatically, individually, and at any time. With each iteration, the algorithm gains a better understanding of the investor's preferences. The independent Spanish wealth manager Diaphanum is the first client to use the roboadvisor.



The roboadvisor was developed entirely by BME Inntech in its Artificial Intelligence Lab and is now part of its product range.

"It's a positive sign that Europe's two biggest financial centers are cooperating well together."

Mario Tuor, State Secretariat for International Finance (SIF)

The SIF spokesman cheered the agreement between Switzerland and the UK on stock exchange equivalence on Swiss television. Upon finalization of Brexit, the Swiss Financial Market Supervisory Authority FINMA reauthorized trading of Swiss equities on the London Stock Exchange.

75%



TWINT is far outdistancing the competition, according to an estimate by the Lucerne University of Applied Sciences and Arts reported by the Swiss weekly *SonntagsZeitung*. Two-thirds of the mobile payment transaction volume in Switzerland flows through the TWINT payment app. Apple Pay and PayPal follow in a distant second and third place. More than 40% of Swiss residents over the age of 15 have TWINT installed on their smartphones.

30 September 2022

A year and a half from now, PostFinance will withdraw Swiss payment slips from the market, discontinuing their use in parallel with their successor products, QR-bills and eBills, which have already been rolled out.



On the Future of the Financial Center

SIX, in collaboration with the Zurich-based think tank W.I.R.E., has done some thinking about the future underlying framework of the financial market in Switzerland. The reflections and ruminations resulted in a book titled *True Transformers*, which ventures a look ahead at the new role of financial services providers and the attendant requisite architecture of the Swiss banking system.

Order the book (available only in German):

📞 nzz-libro.ch



Johan Cruyff

Dutch Soccer Player and Coach

To a young soccer enthusiast growing up in the Netherlands in the 1970s, Johan Cruyff was a natural role model. I was immediately fascinated by the captain of our national team even though he played for Ajax Amsterdam, the archenemy of my favorite team, Feyenoord Rotterdam. He is without doubt the most inspiring soccer player ever brought forth by the Netherlands. But his importance to world soccer, first as a player and later as a coach, also can't be overstated.

Cruyff firmly believed that soccer is more than just about winning, but is also about enjoying the game and entertaining its spectators. A sneaky goal in the 90th minute of a grinding match definitely wasn't his style. Preventing goals is essential to winning soccer matches, but Johan Cruyff's game was all about scoring beautiful goals.

Elements of the way he played and coached are still visible today on many club and national soccer teams. Cruyff was a technically gifted player who did things with his feet that nobody else could. But what really set him apart was his understanding of teamwork and his leadership skills.

His abilities found expression in his conceptualization of "total football," a system under which any outfield player can adopt the role of any other player. Under the "total football" philosophy, defenders, for example, also take over as attackers. I internalized this type of culture in which collaboration is more important than individual talent and brought it with me to SIX.

Attacking from a Stable Defensive Base

SIX has always had talented "players" and, as an infrastructure provider for the financial industry, is the epitome of a stable "defense." This, in combination with the culture I spoke of before, puts us in a great position to go more on the offensive, to score more goals, and to win more matches. In other words, our aim is to grow.

In the wake of our acquisition of BME, huge potential lies in combining our trading and post-trading operations in Switzerland and Spain. The digitalization of payment transactions in Switzerland likewise opens up a lot of opportunities that needn't end at the country's borders. And then there's our financial information business, an area where we have what it takes to go up against the elite "teams" in the market.

This also means tolerating mistakes, for example in an innovation process. Once again, I'm with Johan Cruyff here: If you score just one more goal than you concede, you win the match.

Our employees are experts in their respective fields, and they never stop deepening their education and skills. In the course of their doing that, the best inputs sometimes come from an unexpected direction.

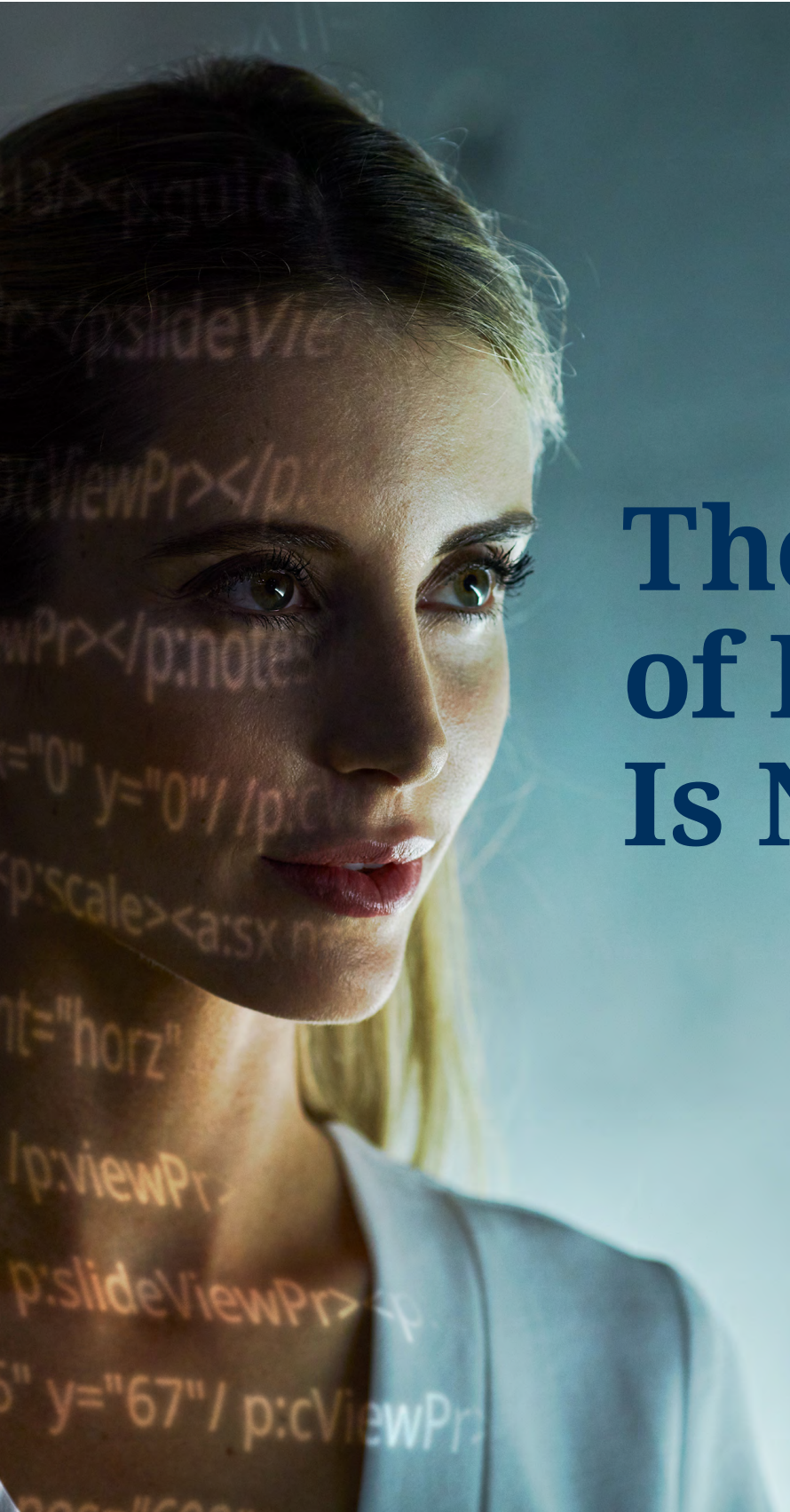


Jos Dijsselhof
CEO SIX



Learn more about how Johan Cruyff influenced Jos Dijsselhof as a leader in the new podcast from SIX.

six-group.com/podcast-cruyff-red



The Future of Finance Is Now.

The finance industry is at a critical juncture and financial institutions are navigating through unprecedented change. At this tipping point, it is clear that the future of finance is now. SIX has proven capabilities to deliver for our clients, ensuring continuous innovation, maintaining stability and providing fresh thinking.

Visit us at six-group.com/future-finance