

# REED

The Magazine  
from SIX

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Future Talk

## Can the Future of Innovation Be Found in the Past?

Steampunk Dan Aetherman's gadgets can be grasped both physically and intellectually. But soon this will not be the case for digitalized bank-customer interactions, says his interview partner, designer Gerhard Buurman.

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# SIX solutions - the success factor for your cashless payment transactions

Whether at the point of sale, in e-commerce or m-commerce: SIX Payment Services develops tailor-made solutions for cashless payment transactions. With our powerful infrastructure, we guarantee the highest level of availability and safe transactions at all times. In doing so, we increase your efficiency, and you can concentrate fully on your core competencies.

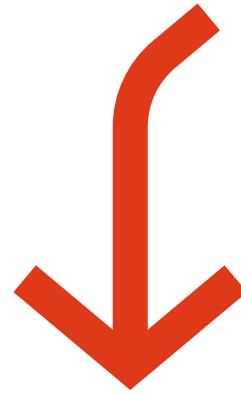
Put your trust in us as your reliable partner.  
[www.paymentforyou.com](http://www.paymentforyou.com)



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Digitalization is radically changing established financial institutions' business models from A, as in "advising investors," to Z, as in "zeroing out an account." Where is the journey headed?

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## Takeaway

The Magazine in 30 Seconds

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### 4 Ad Hoc Publicity

In connection with ad hoc publicity, listed companies are required by SIX Exchange Regulation guidelines to provide the public with factual, clear and complete information. These guidelines also apply to social media. Fake news can play a role in market manipulation.

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### 22 Omnichannel

Multichannel shopping by customers is both an opportunity and a challenge for merchants. These customers are more loyal, make more repeat purchases, and spend more. On the other hand, they expect the ability to go to a store to pick up or return products that were purchased online. SIX has the answer to integrating all the required payment processes.

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### 26 Customer Feedback

In its Early Access Program, SIX is taking the time to seek input from selected customers on the Flexible Data Selection project. In return, SIX gains insights directly from future users, feedback that can then be channeled into further development.



**Dr. Katharina Rüdlinger**

Attorney Katharina Rüdlinger heads the Corporate Disclosure unit at SIX Exchange Regulation. Her team enforces the regulations on ad hoc publicity as they apply to companies listed on the Swiss stock exchange. As an autonomous division within the SIX Group, SIX Exchange Regulation is responsible for the enforcement of the issuer and participant regulation in accordance with the applicable stock exchange laws. The views and opinions expressed in this article are those of Katharina Rüdlinger and do not necessarily reflect the official policy or position of SIX Exchange Regulation.

# Communicate. But Do It Right!

## Impulse Interview: Fake News and the Stock Markets

Katharina Rüdlinger and her team at SIX Exchange Regulation ensure that communications from companies listed on the Swiss stock exchange are clear, factual, and complete. The Head of Corporate Disclosure explains what ad hoc publicity means in the age of alternative facts and social media.

Interview **Matthias Bill**

*“Post-truth” is the Oxford Dictionaries Word of the Year 2016. Everyone is talking about alternative facts and fake news.*

**Katharina Rüdlinger** The phenomenon is not new. Since the invention of print media, there have also been newspaper hoaxes. But the viral character of social media gives fake news a faster spread and wider audience than ever before.

*Do stock market authorities need to address fake news at all?*

Yes, they do. In connection with ad hoc publicity, our regulations require listed companies – that is, the issuers – to provide the public with factual, clear, and complete information. Fake news can also play a role in market manipulation.

*Let’s talk first about ad hoc publicity. What does that mean, exactly?*

Issuers are basically obliged by law to publish potentially price-sensitive facts in a specific procedure as soon as they have knowledge of those facts. This applies to company-specific facts that, once published, could significantly affect the share price. The so-called ad hoc notice must be sent to all required recipients and appear on the

issuer’s website simultaneously. As a rule, this should take place 90 minutes before the start of trading or after the close of trading. If this is not the case, we determine whether trading in the securities must be suspended. The principles of transparency and equal treatment are at stake here.

*The words “potentially price-sensitive” and “significantly” imply some flexibility.*

It’s true that the issuer has some room for interpretation. But this shouldn’t be taken too far, and it is quite possible that our interpretation will differ. It’s not just black or white: There are many shades of gray. Each individual case must be examined very carefully. To some extent, the size of the company can also play a role. For a small pharmaceuticals firm, the new approval of a drug often qualifies as potentially price-sensitive. For a large pharmaceuticals company, one new approval may not have the same effect. This is why we also maintain an advisory capacity and are open to questions. On the other hand, we also have to enforce the applicable laws, which isn’t always appreciated. Companies must recognize that a stock market listing involves relinquishing some of their freedom in terms ➤

of communications, and rethinking some of their practices.

*What about fake news from third parties? Do issuers need to react in these cases?*

Some stock exchanges require issuers to correct fake news that distorts market expectations, even if the issuer did not originate the story. However, companies listed on the Swiss stock exchange are not required to publish a statement if the

**“For us, a rumor is by definition false and thus not relevant.”**

news is untrue. We do not expect issuers to correct market expectations as long as they themselves are not responsible for those expectations. They are always required to give us information in this respect.

*Could a “Vinci” case also occur on the Swiss stock exchange?*

This was a special case because a third party published a fake press release that appeared to originate from the French construction company itself. The hackers, if you want to use that term, falsified business results and personal data regarding the board of directors. This could happen to any company, even in Switzerland. Since this case involved potentially price-sensitive information that was made public during trading hours, we too would have reacted as soon as we became aware of it, regardless of whether the report was true or false. In a dialogue with the issuer, the hoax would have quickly come to light, and we could have suspended trading in the shares immediately. The issuer would then have had the opportunity to publish a correct ad hoc notice.

*At what point would you use the term “market manipulation”?*

When someone spreads fake news intentionally in order to influence the share price and gain an advantage, it can represent a case of market manipulation. The instigators

could be third parties, as with Vinci, but it could also be the issuers themselves. Only when important information is omitted from an ad hoc notice may it imply a case of market manipulation. In Switzerland, such cases are handled by the Swiss Financial Market Supervisory Authority FINMA and the Office of the Attorney General of Switzerland. This generally happens after my colleagues in market supervision have submitted a preliminary report to the authorities.

*What about facts that are not yet public?*

As we mentioned earlier, fake news can impede fair trade. Market players can suffer losses. In the case of undisclosed information, the danger relates to insider trading. This means that someone can use their special knowledge to derive illicit gains from stock market trades, such as futures transactions. However, there are also facts that an issuer need not disclose immediately, even though they are potentially price-sensitive. Under certain conditions, a postponement is allowed. Such a postponement of disclosure may apply during takeover negotiations, for example.

*It doesn’t always have to be fake news. What about rumors or estimates?*

In everyday language, a rumor can be true or false. In the language of ad hoc publicity, however, a rumor is deemed to be by definition false – as long as the issuer is not responsible for it. For us, information leaks would be relevant; that is, when we assume that the leak largely reflects the facts. This is why we keep an eye on the media and read analysts’ reports and such publications. When we discover a potentially price-sensitive fact, we approach the issuer on our own initiative. Then the rules of ad hoc publicity apply. Third-party estimates, on the other hand, are basically viewed as an element of freedom of expression. However, estimates can be problematic in the case of a CEO, say, giving a forecast on the course of business. Such a forecast should only be published under the guidelines of an ad hoc notice.

*Can you sanction a company for an information leak?*

From the viewpoint of SIX Exchange Regulation, the origin of a leak is immaterial. We would impose sanctions only if an issuer

did not respond appropriately with an ad hoc notice. In practice, it's often very difficult to identify the source of a leak, especially in cases where a large number of internal and external individuals have knowledge of the potentially price-sensitive information.

*Has market supervision become more complicated for you in recent years?*

The rise of social media has added some channels that didn't exist before. In that sense, our efforts have had to expand. But we're still able to do a good job. It's a challenge to stay at the cutting edge of economic developments, but at the same time that's what fascinates me about this work. The big news agencies, for example,

**“No special rules for social media are needed.”**

are excellent sources for us. Their reporting on international events is rapid and often unfiltered. One thing is clear: Hoaxers who want to reach a large number of market players in a short amount of time can find many new opportunities thanks to social media.

*Can a tweet from Donald Trump really influence share prices?*

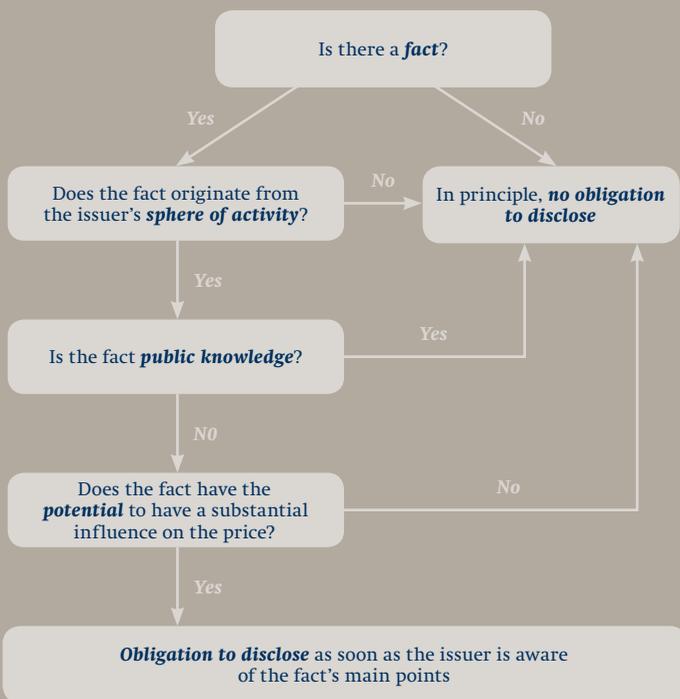
A tweet by a politician can indeed affect the stock market under certain conditions, just as other things do. An interest-rate decision by the US central bank can also have an impact on the stock market. However, effects like these are not an issue for my team. Partly because our legal relations only extend to issuers, participating banks and traders – our regulations are not generally applicable. In this case, technical safeguards on the stock exchange would kick in: When price fluctuations are too high, the system automatically suspends trading in the affected security for a certain amount of time. The Exchange Regulation division may also suspend trading at its own discretion if necessary to maintain fair and orderly trading.

*What about when a CEO tweets a profit warning?*

As long as his company had previously published a corresponding ad hoc notice in compliance with our guidelines, he can tweet about it as much as he wants. By the way, the same is true as regards interviews. In this sense, no special rules governing ad hoc publicity for social media are needed. In the USA, there has already been a case of the market supervisor giving approval to an announcement on social media because certain conditions were fulfilled. ■

## Glossary

**Ad hoc publicity** Ad hoc publicity concerns the responsibility of issuers to disclose potentially price-sensitive facts. Its purpose is to ensure that issuers provide the public with information on substantial events rapidly and according to the principle of equal treatment. To qualify as “substantial,” a fact must have a significant potential influence on stock market prices. This means it could trigger a price change that is considerably greater than the usual fluctuations.



## The Head/The Count

# 20

## Awards



### Tamsin Hobley

Head of Sales,  
SIX Financial  
Information

Over the last five years, SIX Financial Information has won a total of 20 awards for its services and products, including accolades for Best Overall Data/Service Provider and Most Innovative Regulatory Solution. It's no accident that these awards reflect the strategic thrusts of SIX. Awards contribute enormously to brand awareness, particularly in a market like the UK. Awards are thus priceless assets for sales head Tamsin Hobley. She has experienced firsthand the effect that an award can have on a potential client that is not yet familiar with SIX. The first-time win of the Best Corporate Actions Data Provider award helped Hobley and her team land a major contract in 2010. SIX has since won that customers' choice award eight years in a row.

## The Insight

## Distributed Ledger Technology

SIX, in collaboration with Digital Asset Holdings, has developed a prototype that employs distributed ledger (blockchain) technology to track the life cycle of a bond. SIX Securities Services Division CEO Thomas Zeeb says: "Distributed ledger technology, and its potential role in post-trading, is key to our business. We need to understand it and, more importantly, its applicability and future flexibility in order to keep ahead of the game." The prototype demonstrates the issuance of a bond, the subsequent auction including settlement, direct (OTC) trading of the security, and the implementation of corporate actions.

As for the question about the future, as a proof of concept, SIX also intends to productively test the distributed ledger technology on the XBTR bilateral trading platform for OTC products in parallel with the existing system. The aim is to accumulate additional experience, particularly with regard to costs and integration obstacles. Zeeb exudes confidence: "Though still some way off for market-wide adoption, we firmly believe that the potential is promising, for us and for the industry as a whole. I am convinced that what we have achieved could revolutionize several processes used by the Swiss financial services industry while sustainably securing our role in the provision of services throughout the Swiss value chain."

## The Quote

**“With the IBM Watson cognitive system, the SIX Security Operations Center sets new standards in data protection and cybersecurity for the Swiss financial market.”**

Robert Bornträger, Division CEO SIX Global IT

**The Question**

# What Do Analysts Have to Do with Liquidity?

“Companies need trading liquidity to efficiently make use of capital markets. Shares of small and midsize enterprises are often less liquid than shares of large companies for a variety of reasons – one of them being that investors receive too little information about small- and mid-cap companies. For instance, there is often an insufficiency of analyst research reports, on which investors partially base their investment decisions. Research reports raise a company’s visibility and boost investor interest in its stock, potentially increasing its trading liquidity over time.

**Andrea von Bartenwerffer**, Head Account Management Issuer Relations, SIX Swiss Exchange

Did you know that SIX Swiss Exchange offers a Stage Program designed to make companies more visible to investors and other relevant market participants? The Stage Program includes regularly updated fact sheets as well as research reports created by experienced banks.

→ More information: [six-swiss-exchange.com/stage](http://six-swiss-exchange.com/stage)

→ Send your question to us at: [RED@six-group.com](mailto:RED@six-group.com)

**The Date**

# Nov 28, 2017

## The next issue of RED appears

Don’t miss a single issue of RED. Your free subscription ensures that you automatically receive RED magazine. You can select a version in German or English. The next edition will be published at the end of November. In its pages you can find out what SIX is doing to promote cybersecurity, what puts the “e” in an e-invoice, and much more.

→ Subscribe to RED: [six-group.com/red](http://six-group.com/red)



**The Picture** Anwar (at right) from Syria runs a spice business in the UN’s Zaatari refugee camp in Jordan. The BizGees start-up aims to provide small entrepreneurs like him with services such as microfinancing. The undetermined legal status of the 80,000 refugees and 3,000 businesses in the camp means that the established financial institutions are absent from this market. Balqis Albsharat from the UNHCR is translating questions from Ondrej Dusilek (at left), cofounder of BizGees. Lars Diener watches the proceedings. He is a mentor with F10’s FinTech start-up Incubator & Accelerator, which is helping BizGees refine its products for the market.

Caught in the Act

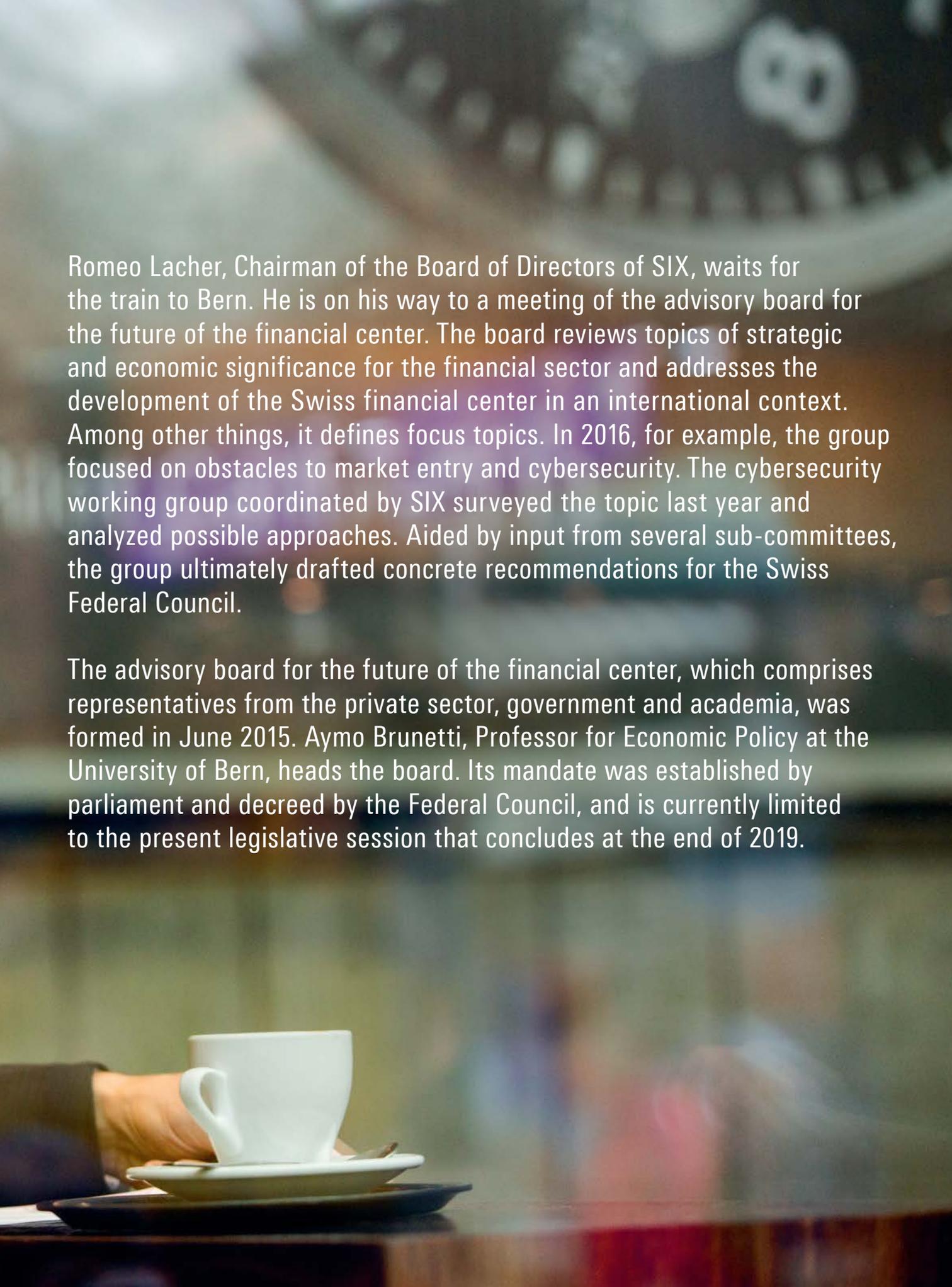
Main station  
Zurich, Switzerland

March 9, 2017  
12:15 pm

10°C  
humidity 78%  
rain showers

Dr. Romeo Lacher  
Chairman of the Board  
of Directors of SIX





Romeo Lacher, Chairman of the Board of Directors of SIX, waits for the train to Bern. He is on his way to a meeting of the advisory board for the future of the financial center. The board reviews topics of strategic and economic significance for the financial sector and addresses the development of the Swiss financial center in an international context. Among other things, it defines focus topics. In 2016, for example, the group focused on obstacles to market entry and cybersecurity. The cybersecurity working group coordinated by SIX surveyed the topic last year and analyzed possible approaches. Aided by input from several sub-committees, the group ultimately drafted concrete recommendations for the Swiss Federal Council.

The advisory board for the future of the financial center, which comprises representatives from the private sector, government and academia, was formed in June 2015. Aymo Brunetti, Professor for Economic Policy at the University of Bern, heads the board. Its mandate was established by parliament and decreed by the Federal Council, and is currently limited to the present legislative session that concludes at the end of 2019.



Focus: The Bank of Tomorrow

# *A Dive into the Digital Future*

Switzerland's financial industry is undergoing radical changes. Digitalization has the sector firmly in its grip amid a prevailing atmosphere of embarking on new beginnings. Where is the voyage headed? And what role can SIX play?

Text: Iris Kuhn-Spogat, Matthias Bill

**M**icrosoft founder Bill Gates said it back in the year 1994: "Banking is necessary, but banks are not." What raised eyebrows back then is causing worry lines to crease foreheads today. Tougher regulations, demographic change, global interlopers from outside the banking industry, and omnipresent cost-cutting pressure: There's not one bank today that doesn't currently deal with such fundamental issues. The authors of a recent study published by Germany's Fraunhofer Institute for Industrial Engineering put it this way: "Following years of optimism, it has become clear to decision makers that 'more of the same' won't hold for much longer."

The fact is that digitalization is radically changing established financial institutions' business models from A, as in "advising investors," to Z, as in "zeroing out an account." New competitors like Apple, Google, and Facebook are crowding into the market. Start-ups are sprouting from the ground like mushrooms. There are 190 fintech companies in Switzerland alone, according to the 2017 FinTech Study published by the Institute of Financial Services Zug IFZ. Banks are facing new competition in the area of payment transactions, just as they are in the lending business. So, what's a bank to do if "more of the same" isn't the answer? RED set out to investigate this question in collaboration with a business and economics journalist. Without any claim to exhaustiveness, four theses emerged. Even though it is hard to predict the future, SIX thinks about the needs of tomorrow and already provides some services to meet them.



# The Bank of Tomorrow Has Fans and Followers

1

Most customers today already conduct routine banking business, such as making payments and account queries, online. But when it comes to complex products, the majority of them across all age groups still expect to receive personal advice. Surveys on this topic all come to this same conclusion. Trust, person-to-person discourse, experience, know-how – the trump cards in the hands of established banks – continue to take the trick, though they do not guarantee success. In the retail banking study published last year by the Institute of Financial Services Zug IFZ, the Raiffeisen, cantonal, regional and thrift banks expressed fear that customer loyalty would wane in the future. Emotions can counter that, asserts Andrew Richards. The head of regional retail banking at UK-based Metro Bank was the invited speaker at the study's presentation. Metro Bank, founded in 2010, has opened more than 40 branches to date – all of them equipped with play zones for children and free doggy biscuits, and staffed with employees who aren't exhorted to open as many accounts as possible. "We only ask them to provide outstanding service," Richards says. He calls his bank an emotional brand and refers to its customers as fans.

Swiss banks as well are rethinking and reconceptualizing branch offices. Meanwhile, international financial services providers without any physical presence are also springing into existence, such as Germany-based solarisBank ("We are a

tech company with a banking license.") and UK-based Atom Bank ("The UK's first bank built exclusively for mobile."). Those newcomers are not only 100% online, they also tick differently: Atom Bank has appointed rapper will.i.am of the Black Eyed Peas to the position of strategic board advisor. What surprises at first glance makes sense on closer inspection: The rapper has more than 13 million followers on Twitter alone.

In the future, relevance to customers and, consequently, business success will be determined by the right combination of branch, online and mobile. Defining that mix is becoming a core strategic issue for the banking industry. Social media have a special role to play here. It's not just about gaining millions of followers, it's also about being able to serve the needs of the community – the customers – round the clock. ■

13  million  
follow him on Twitter.

*will.i.am, Black Eyed Peas rapper  
and strategic advisor to Atom Bank*

# “Retail banks must increasingly concentrate on their core competencies.”

*Retail Banking 2020, Ernst & Young*

Cost pressures plus high digitalization investment needs equals a compulsion to cut expenses. Everything that generates little or no added value should be outsourced, consultancy firm Ernst & Young suggested already in its 2012 study titled “Retail Banking 2020.” That includes, for example, back office functions and payment transaction processing, but also standardized products. Instead of banks creating them themselves, the study proposes that in the future, banks should source such products externally and distribute them under their own branding. This “white-labeling” concept has long been a part of business models in other sectors such as retailing and the manufacturing industry.

“A new level of industrialization is needed,” SIX Group CEO Urs Rügsegger concurs. SIX today is already pursuing a strategy of taking over types of banking services that do not provide a way for banks to differentiate themselves. “This enhances banks’ flexibility and enables them to partake in economies of scale,” Rügsegger adds. In 2017, for example, SIX activated a service that makes it easier for banks to collect tax data on their clients in connection with the automatic exchange of tax information between countries. And with ATMfutura (see also page 20), SIX intends to provide services along the entire automated-teller-machine

value chain. Banks that outsource the operation of their ATMs to SIX can expect significant cost savings thanks to standardization, volume bundling and process optimization.

Banks collectively outsourcing bigger chunks of their back office functions to a third party – in the

sense of a superbank – appears unrealistic for three reasons, Rügsegger explains: “First, needs differ; a small bank wouldn’t be able to profit to the same extent from a joint solution. Second, the participants would have to settle on a standard, which would mean technology migrations for some of the banks involved. And third, there would need to be a timeline that everyone can agree on.” ■



## 2 The Bank of Tomorrow Concentrates on Its Strengths



**of Swiss financial companies intend to increase collaboration with fintechs over the next three to five years.**

*Global FinTech Report, PwC*

## *The Bank of Tomorrow Cooperates* 3

The investment business – Swiss banks’ specialty discipline – is a popular stomping ground for financial start-ups. Swisscom and the Institute of Financial Services Zug IFZ have examined customers’ opinions about digital investing. Swiss investors turned out to be still on the conservative side in international comparison, with the accent on “still.” “Swiss banks shouldn’t count on their clients staying passive,” the authors of the study admonish. “Half of the survey respondents today can already envisage utilizing a digital investment product within the next five years.” The study revealed that half of the survey respondents obtain information on the Internet today, but ultimately transact the deal through a client advisor, from person to person. In trade jargon, that’s called the ROPO effect: research online, purchase offline. That also has to do with concerns

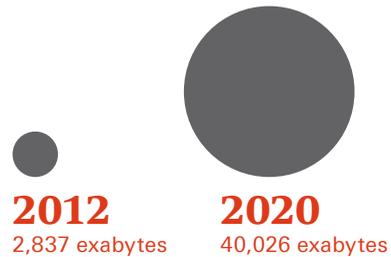
about security and data privacy. However, digital investing has enormous potential, according to finance professor Andreas Dietrich, who co-authored the study. He estimates that by the year 2020, some 83 billion francs will be invested digitally, which equates to around 14% of Swiss households’ aggregate invested wealth. And that will happen thanks not just to start-ups, but also to established banks.

Conscious of their strengths vis-à-vis fintech firms – market power, know-how, trust, customer base – banks are slowly but surely beginning to defend their territory. They are forming teams composed of people with open eyes, a passion for technology and a nose for trends, and are developing their own offerings. Credit Suisse has launched an app for wealthy private clients, and UBS has rolled out the UBS Advice investor tool. Digital banking now also enjoys top priority at Zürcher Kantonalbank, which intends to invest CHF 100 million by 2020 in developing new apps.

And the established incumbents are cooperating with the newcomers. According to the latest Global FinTech Report from PwC, 45% of all financial services providers brought fintechs on board in 2016. Meanwhile, 59% of financial companies in Switzerland now collaborate with fintechs, and 83% plan to enter into or build out a partnership with fintechs. SIX is promoting cooperation by opening its fintech start-up accelerator F10 to additional companies in the Swiss financial sector as an association. As an incubator and accelerator, F10 brings together financial services providers, academia, fintechs and start-ups. ■

# The Bank of Tomorrow Knows What Customers Want

# 4



**The annual data volume generated will skyrocket by 2020.**

*Christoph Kley, lecturer on banking & finance at the Zurich University of Applied Sciences*

**D**eficient knowledge of customers and offerings that thus are not tailored to customers' individual needs are the most frequently cited reasons for market share and performance losses. Yet banks are sitting on a treasure chest of data. Zeros and ones are well on their way to becoming a factor of production alongside land, capital and labor. Facebook and Google earn billions with data; banks harness data only fragmentarily, if at all.

Data – the dimension and dynamics are vast: “The digital data volume generated in 2012 amounted to 2,837 exabytes,” says Christoph Kley, a lecturer on banking and finance at the Zurich University of Applied Sciences, “and that will increase to an estimated 40,026 exabytes in 2020.” “Against this backdrop,” he adds, “technologies, new analytical methods, and the use of artificial intelligence are gaining a wider-reaching importance.” Microsoft has Cortana, Apple has Siri, and Amazon has Alexa. When will the first bank have a virtual assistant? Consultancy firm KPMG has already come up with a name for it: EVA – Enlightened Virtual Assistant. EVA

someday is to become the only visible element of a bank, and an attractive one at that for the bank customers of tomorrow. Raised on gaming consoles and online games, the millennial generation is intimately familiar with the avatar concept.

Experts are in agreement that the present-day developments are only the beginning and that the banking world is in the midst of a radical upheaval. Where they disagree is on how the future of the banking world will actually look. But here, too, there is one certainty: The market will determine which ideas catch on and survive. And the market is and will remain constituted by customers, regardless of the digital revolution. ■



# Honey in the Bank

**"If the bee were to disappear from the surface of the earth, man would have no more than four years to live," according to a quote often attributed to Albert Einstein. Although the brilliant physicist probably never said it, and the forecast is a bit too grim, it is based on a kernel of truth: Given their complex interactions with the plant world, bees are a critical part of our ecosystem. This is why SIX has adopted a new Corporate Responsibility Engagement dedicated to protecting the honeybee.**

**Three beehives were installed in early summer on the roof of the new SIX headquarters and the Swiss stock exchange in Zurich. Thomas Frei, Head of Construction & Engineering at SIX, takes care of the hives and is looking forward to the first honey harvest in late summer. SIX will sell the honey and donate the proceeds to conservation efforts.**

**Investing in bees and enjoying a dividend in honey is simple – whether adopting, renting, or owning a beehive. Under an adoption plan, the bees stay with the beekeeper. A rental agreement means making room for the beehive over several weeks in your own garden or on your patio. Or you can take the role of beekeeper and care for your own bee colony. In any case, the returns are sure to be sweet.**

→ For more information on local bee projects: [wabe3.net](http://wabe3.net) (CH), [stadtbiene.org](http://stadtbiene.org) (DE), [bienenmieten.at](http://bienenmieten.at) (AT), [barnesandwebb.com](http://barnesandwebb.com) (GB), [beecity.fr](http://beecity.fr) (FR)



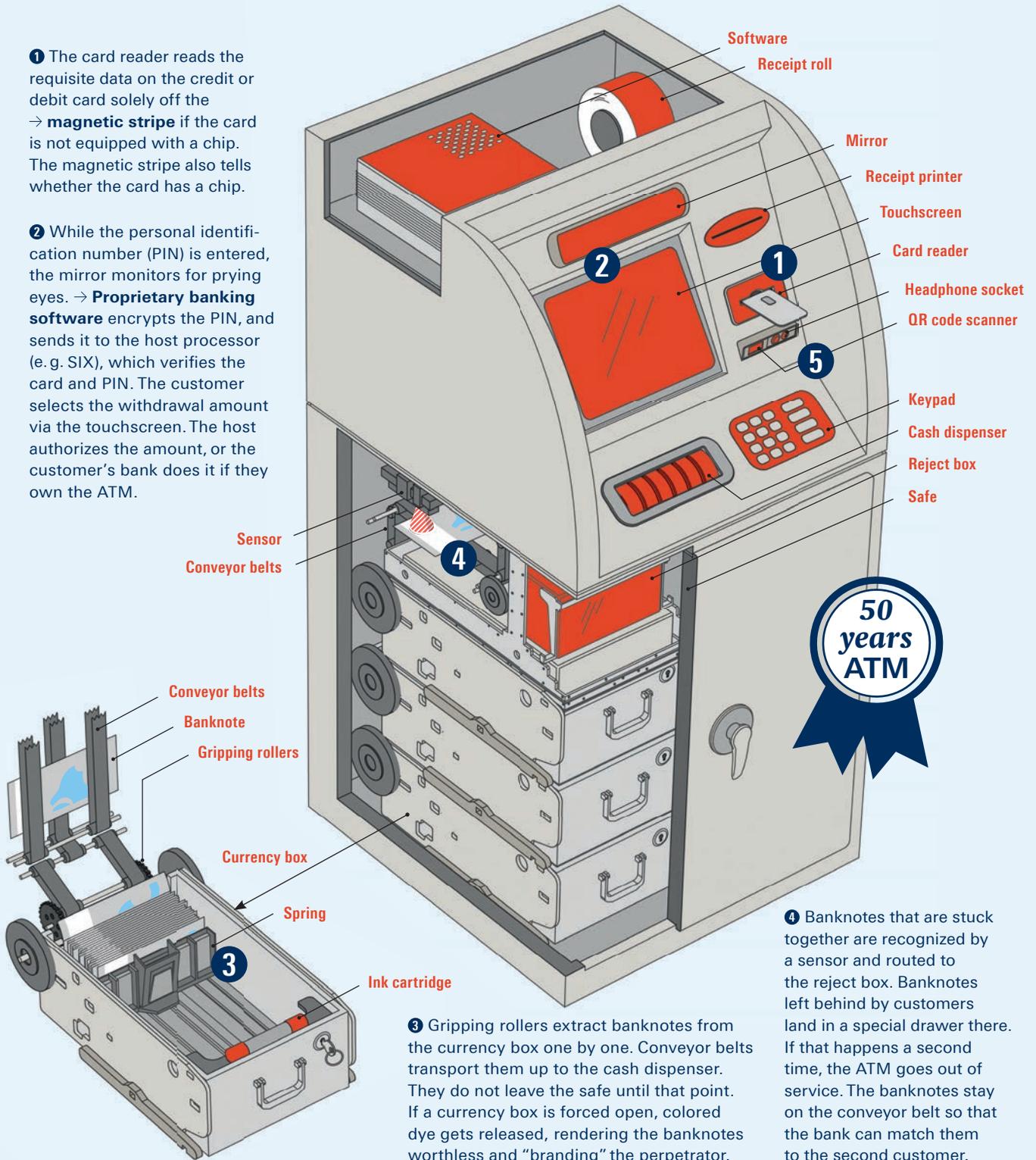


# How Do ... ... ATMs Dispense Banknotes?

1 The card reader reads the requisite data on the credit or debit card solely off the → **magnetic stripe** if the card is not equipped with a chip. The magnetic stripe also tells whether the card has a chip.

2 While the personal identification number (PIN) is entered, the mirror monitors for prying eyes. → **Proprietary banking software** encrypts the PIN, and sends it to the host processor (e.g. SIX), which verifies the card and PIN. The customer selects the withdrawal amount via the touchscreen. The host authorizes the amount, or the customer's bank does it if they own the ATM.

5 ATMfutura from SIX (see box on right) turns added functions into standard features. Via a headphone socket, ATMfutura provides audio assistance for the sight-impaired. Its QR code scanner enables cash to be preordered and withdrawn via smartphone, or even enables → **cash transfers to third parties.**



Sensor  
Conveyor belts

Conveyor belts  
Banknote  
Gripping rollers

Currency box  
Spring

Ink cartridge

Software  
Receipt roll

Mirror  
Receipt printer

Touchscreen

Card reader

Headphone socket

QR code scanner

Keypad

Cash dispenser

Reject box

Safe



3

2

1

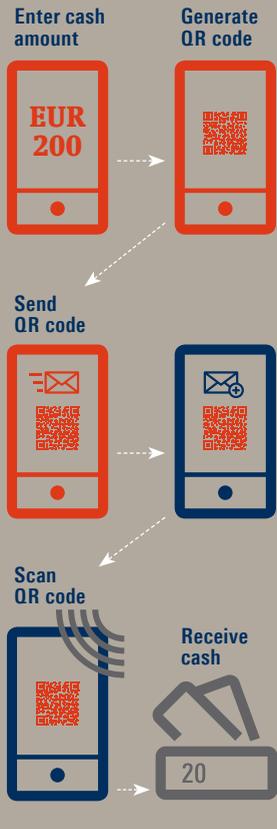
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4

3 Gripping rollers extract banknotes from the currency box one by one. Conveyor belts transport them up to the cash dispenser. They do not leave the safe until that point. If a currency box is forced open, colored dye gets released, rendering the banknotes worthless and “branding” the perpetrator.

4 Banknotes that are stuck together are recognized by a sensor and routed to the reject box. Banknotes left behind by customers land in a special drawer there. If that happens a second time, the ATM goes out of service. The banknotes stay on the conveyor belt so that the bank can match them to the second customer.

## → Cash Transfers to Third Parties



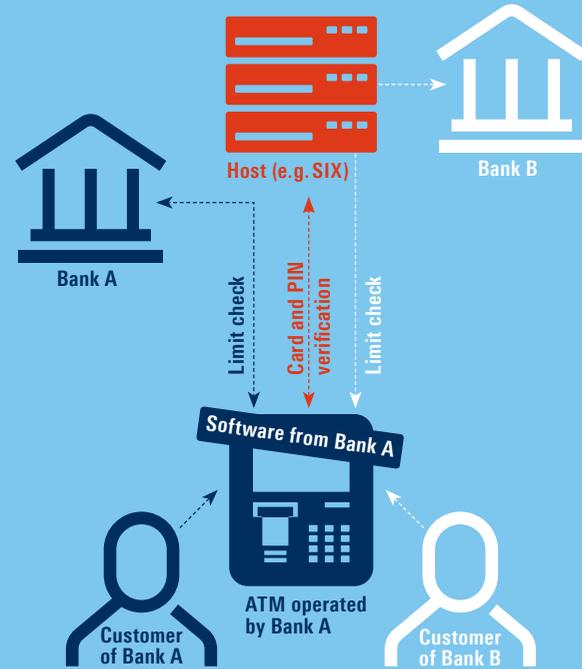
- 1
- 2 Relevant for ATM
- 3

## → Magnetic Stripe

**Track 1** Personal information, e.g. for airport check-ins.  
**Track 2** Card number, expiration date, chip info, etc.  
**Track 3** Country-specific information, e.g. for customer loyalty programs.

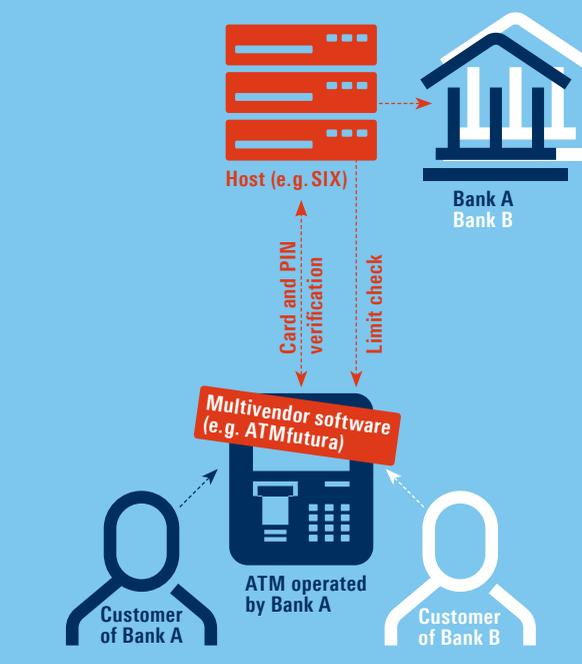
## → Proprietary Banking Software

Banks currently perform limit checks and other services internally when a customer uses an ATM operated by his or her bank (Bank A in example).



## → Multivendor Software

A multivendor software proceeds limit checks and other services identically for all customers (of Bank A and B in example), freeing banks from internal work.



## ATM Then

The world's first ATM made its debut in England. Barclays Bank put the invention by the Scotsman John Shepherd-Barron into service in the year 1967. The original ATM worked without software and plastic bank cards. It dispensed banknotes in exchange for a paper check that was mildly radioactive in order to be capable of storing data. The basic working principle of the ATM was as simple as its impact was radical: bank business hours no longer mattered. The automated teller machine blazed a trail to the individualized society.

## ATMfutura

SIX has been commissioned by the Swiss banks to develop a centralized → **multivendor software** under the ATMfutura project. It will function on all Swiss bank ATMs from 2018. There are currently over 20 individual solutions in use. The new standard reduces banks' costs, and their customers will encounter the same user interface wherever they go and will be able to use added functions. Furthermore, ATMfutura will enable SIX to take over the monitoring and management of ATMs in the future, allowing SIX to offer a full-service package ranging from installation to final disposal of the machines.

# A Kick-Start Thanks to Omnichannel

**Modern Customer Journey** “Omnichannel” is the technical term for a multichannel shopping experience in which customers can embark on their journey at one point and continue it anytime, anyplace. Companies like 24Helmets.de that understand how their customers act across the channel spectrum can boost sales and reinforce customer loyalty.

Text **Franziska Garbe**

**L**ike all good new-economy fairy tales, this story begins in a garage: Until just a few years ago, entrepreneur Daniel Dimpker used a garage to stockpile boxes of motorcycle helmets. After work, he would market and ship helmets to friends and their friend networks. Soon his hobby grew into something more. Dimpker gave up his job as a direct marketing specialist in order to concentrate on sales and distribution of motorcycle helmets, apparel and accessories. Ever since, his company 24Helmets.de has reported sales growth of 30% each year. For some leading brands in this segment, 24Helmets.de is one of their largest agents in Germany and Europe.

“Austria and Switzerland are our biggest foreign markets,” says Dimpker, “but we have an increasing number of customers in Eastern Europe, and even a few from overseas. We’ve had orders from Australia, Canada and Mexico.” In his Hamburg shop, surrounded by carefully arranged helmets,

**71% prefer to pick up online orders at the shop.**



racks of leather jackets, and ceiling-high shelves of boxes, he stands behind the sales counter with a fresh cup of coffee. In 2015 he opened the store to complement his online shop: The 300 square meters include a showroom, storage space and an office.

Today, consumers can view, rate, and purchase practically any product, at any time, from anywhere in the world, through various channels. Social networks and online ratings make for better-informed consumers before a sale is concluded. “A purchase on 24Helmets.de typically begins with a visit to our website also: 75% of our sales originate online. But we also provide style advice to our customers by email and phone. Many customers even make the trip downtown just to try on their favorite product in the store,” he says. Dimpker uses an iPad as an “extended shelf” – to show the customer other available models, sizes, or colors in his inventory that are not on display due to the limited size of the showroom.

Availability is key. “We ship an order within one day, and in the case of a return, we reimburse the customer’s money just as quickly. This makes us one of the most reliable partners in the business.” For Dimpker, advice, promptness and easy returns are the factors underpinning his multinational success.

## A Cross-Channel Overview

Inventory and logistics, consultation and sales, orders and returns – all that with just a few employees? “Small service-oriented firms like 24Helmets.de that do not have a large team can particularly benefit from our easily manageable omnichannel solution,” points out Andrea Rickenberg, Sales Manager at SIX Payment Services. “Logistics, shop systems, and payment procedures must be optimally aligned in order to keep the business profitable after all the costs. In addition, the correct and efficient settlement of payments and reimbursements requires a cross-channel overview of all transactions.”

Companies like 24Helmets.de that manage to offer their customers comprehensive service across all channels can not only increase their reach, and thus their sales – they can also improve customer satisfaction. A 2015 study by corporate consultant Deloitte found that omnichannel customers are more loyal, make more

repeat purchases, and spend up to 300% more at their favorite stores.

#### Centrally Accessible Customer Data

For the merchant, providing multichannel shopping for customers is also a challenge: 71% of consumers prefer to order and pay for products online, and then pick them up at a store (Click & Collect). Just as many want to be able to order products online, try them out at home, and return them to a store if they don't suit (Click & Return). The seamless integration of all channels in the back-office system, and the central availability of customer data, is a must in order to process such orders efficiently.

Merchants must guarantee the secure processing and maintenance of customer data, as required by applicable law. Any breach of these regulations could cause enormous financial damage. At the same time, customers are becoming increasingly cautious about divulging personal data.

**Omni-channel customers spend up to 300% more.**



Daniel Dimpker confirms this. Many of his customers do not want to be required to register in the online shop, although their next purchase could be processed much more rapidly if they did.

And as the use of smartphones increases, customers are less and less willing to spend time typing in lengthy data entries. An analysis by SIX shows that access to centrally stored customer data decreases the rate of cart abandonment in online purchases by up to 50%. "Security must be maintained, but the experience



Daniel Dimpker of 24Helmets.de uses an iPad as an "extended shelf." He shows customers models, sizes and colors in his inventory in addition to the samples in the showroom.



**With central customer data, cart abandonment rates can be cut by 50%.**



still needs to be fast and easy," maintains Andrea Rickenberg.

The 3D Secure Code, which the Saferpay solution from SIX requires for secure credit card purchases, is another frequent showstopper. Nonetheless, Dimpker won't do without it. The code provides a guarantee from the issuing bank in the case of fraud. In the absence of a code, the merchant is liable.

**Always the Preferred Payment Method**

The payment process is the last obstacle during which an otherwise successful shopping experience can come to grief. This is why a practical solution that satisfies all parties is so important. "Customers want to be able to choose their preferred payment method, whether in a shop or online," affirms Rickenberg. "So merchants should offer the entire spectrum of payment methods: from bank transfer and PayPal, to debit and credit cards, to mobile payment."

In the meantime, Daniel Dimpker has finished his coffee. Rickenberg shows him how an automated function in Saferpay can create a link for shoppers who have broken off the payment process to select an alter-

native payment method. He doesn't yet use all the functions available today through omnichannel; he has only just begun to discover the possibilities for his growing business. "Every omnichannel solution from SIX is flexible enough to meet the needs of the future too," emphasizes Andrea Rickenberg. "And the key question of the costs and benefits of an omnichannel solution is something every business owner must answer individually." 24Helmets.de is a prime example of how innovative entrepreneurs can thrive when they tailor their offering to the modern customer journey. ■

An easily manageable omnichannel solution frees up time for inventory and logistics, consultation and sales, orders, and returns.



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# A Question of Answers

**Early Access Program** Flexible Data Selection promises an innovative, user-oriented approach to consuming financial data. To keep this promise, SIX adopts a customer-centric approach in consulting with target users early in the project.

Text **Matthias Bill**

The meeting was supposed to finish 15 minutes ago, yet no one wants to leave: The discussion is too lively. “The dictionary attached to the data will be extremely useful,” says Youenn Le Bris, Head of Securities Database Management at Société Générale Bank & Trust (SGBT) Luxembourg. “I like how intuitive it is to use,” adds his colleague Christine Scherer, Business Analyst Manager. The two have just tested an early version of Flexible Data Selection, an innovative means of accessing financial information provided by SIX. Now their appetite is whetted.

Julian Jakob, Senior Product Manager, and Hugo Neto, Sales Manager at SIX Financial Information, in turn put their customer’s enthusiasm to good use in their own quest for knowledge. That’s why they’re here: on-site, with them in Luxembourg. They were hoping for direct reactions and answers to their questions – and that’s exactly what they found. Besides the positive feedback, they also received plenty of suggestions for improvement, ranging from the layout of buttons to a missing search function to specific requirements for a delivery format. “Anything else would have been surprising, since this preliminary version includes only a fraction of the features we have planned,” explains Neto, who had prepared SGBT accordingly.

SGBT Luxembourg is one of ten banks that participated in the Early Access Pro-

gram (EAP). “With this program, we invited selected customers to provide their input during the development of Flexible Data Selection. We deliberately allowed a couple of weeks for this,” remarks Julian Jakob. In return, SIX gains insights directly from future users, feedback that can then be channeled into further development.

For Youenn Le Bris, taking part in the EAP was a matter of course: “We’ve been collaborating successfully with SIX for so many years, it’s only natural to be completely open in our discussions. Especially when it concerns the future of the collaboration. We’re happy to be involved because, like SIX, we love innovation.” Le Bris particularly hopes that Flexible Data Selection will help to simplify IT and business: “If this can give us a new perspective on the financial information delivered by SIX, one that is exploitable by machines and intelligible to people, we can optimize our entire data process.”

Hervé Fayolle, Head of Securities Database Management at Banque de Luxembourg, has a similar view: “Not all of the staff members involved in the data process have a background in IT as I do. I’m hoping that Flexible Data Selection will be a user-friendly tool that eases the burden on all of us when reconciling data in our banking software.” Despite the press of daily business, Fayolle was happy to take time for the visitors from SIX. Now he is eager to see the next version of Flexible Data Selection and how SIX will incorporate his input. ■

**Taking  
time out  
from  
daily  
business.**



## **Flexible Data Selection**

### **A new view on financial data**

Flexible Data Selection is a new and intuitive tool that enables selecting, ordering, and integrating reference data, corporate actions, tax and regulatory information as well as other award-winning content provided by SIX. It is based on a completely redesigned, client-oriented data model as well as state-of-the-art usability and technology standards. After concluding the Early Access Program, SIX will integrate customer feedback so that by the end of 2017, they will get access to the first commercial release of Flexible Data Selection. While initially limited in scope, half-yearly releases will allow incremental delivery of new features such as additional content and delivery formats as well as timeliness factors.



Christine Scherer and Youeen Le Bris (middle) from Société Générale Bank & Trust Luxembourg engage in the test version of Flexible Data Selection while Hugo Neto (left) and Julian Jakob of SIX collect the instant feedback.

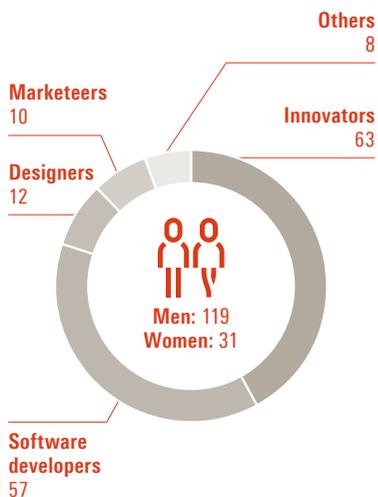
The Statistic

# Hackathon: A Trend Is Catching On

A hackathon is a competitive event in which computer programmers, graphic designers, web designers, and others involved in software development collaborate intensively over a short period to jointly create a working prototype. A total of 3,450 hackathons were held around the world last year according to the website [hackathon.com](http://hackathon.com). One of them was hosted by SIX. The third SIX Hackathon took place from March 10–12, 2017.

## SIX Hackathon 2017

150 participants from 14 countries.



## Worldwide 2016

In 2016, a total of 3,450 hackathons took place in more than 100 countries.



SIX Hackathon	Hackathons worldwide
150 Participants	over 200,000
31 Prototypes	over 13,000
48 hours Duration	1 to 7 days

Source: SIX; [hackathon.com](http://hackathon.com)

The List

# The world's newest museums

1

## Yves Saint Laurent Museum, Paris and Marrakesh

Two museums for one fashion icon: As of October 2017, the haute couture creations of Yves Saint Laurent will be on display in Paris and Marrakesh. → [fondation-pb-ysl.net](http://fondation-pb-ysl.net)

2

## Louvre, Abu Dhabi

After a series of delays, the architecturally gripping Louvre Abu Dhabi is slated to open in November 2017. → [louvreabudhabi.ae](http://louvreabudhabi.ae)

3

## Victoria and Albert Museum, London

The renowned V&A is expanding: As of July 2017, art lovers will be able to use a new entrance to access an inner court and subterranean galleries. → [vam.ac.uk](http://vam.ac.uk)

4

## Swiss Finance Museum, Zurich

At the end of June, the Swiss Finance Museum in Zurich will open its doors. The museum, operated by SIX, will highlight the history of the Swiss financial sector and how it functions. It will also host the world's most significant collection of historical securities. → [swiss-finance-museum.com](http://swiss-finance-museum.com)

5

## Zeitz Museum of Contemporary Art Africa, Cape Town

The historic grain silo on Cape Town's waterfront is being transformed into a cultural center. The Zeitz MOCAA, opening in September 2017, will be one of the largest museums in Africa dedicated to contemporary art. → [zeitzmocaa.museum](http://zeitzmocaa.museum)



## The Glossary

# MVP

American football quarterback Tom Brady led the New England Patriots to victory in the 2017 Super Bowl. After staging an unprecedented 25-point comeback, Brady's team won the game in overtime. Afterward, Brady was named the Super Bowl's MVP, the game's most valuable player. But MVP means something entirely different in the product development arena. A "minimum viable product" is a product with just enough features to enable it to be demonstrated to a small circle of potential customers. The resulting customer feedback is then used to further develop the MVP. SIX has borrowed this quick and agile way of working from the start-up community and has applied it, including on its X-Chain project. With X-Chain SIX is aiming to improve data quality and efficiency in the corporate actions process. The wisdom of the crowd as used by Wikipedia and distributed ledger (blockchain) technology allow market participants to validate corporate actions in collaboration.

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## The Find

### The Coffee Kitty

WiFi, the power drill, and the cardiac pacemaker – Australians have invented quite a few things that make the world a little better. The coffee cups manufactured by the Melbourne-based company Frank Green also make the world a little better, or at least they help to reduce the mountain of disposable beverage cups. And they look good to boot. But it's their inner virtues that really make them special. It's no accident that they're called SmartCups. Australian coffee drinkers can use them to make wireless, cashless purchases of their daily dose of caffeine. The built-in chip com-

municates with a corresponding app that lets users manage their credit, coffee preferences, and discounts, while the app's preordering function lets them not care beans about the waiting line at the coffee shop.

That frees up time for further inventions from Down Under.

→ More information:  
[frankgreen.com](http://frankgreen.com)



#### RED – The Magazine from SIX

Published in German and English in a combined circulation of 6,000 copies.

#### Publisher

SIX Group Ltd  
P.O. Box  
8021 Zurich, Switzerland  
[six-group.com/red](http://six-group.com/red)  
[RED@six-group.com](mailto:RED@six-group.com)

#### Editorial staff

Claudia Holfert (SIX, Overall Direction);  
Matthias Bill (SIX, Editor in Chief);  
Franziska Garbe (SIX); Hanna Hecht  
(SIX); Iris Kuhn-Spogat

#### Publication design

C3 Creative Code and Content  
(Switzerland) AG, Zurich,  
[c3.co/switzerland](http://c3.co/switzerland)

#### Picture credits

Thomas Eugster (cover, pp. 4/10/11/  
30/32/34); Kyeni Mbiti (pp. 8/29);  
Thomas Landis (p. 9); Nick Diggory  
(p. 12); Ethan Oelman (pp. 18/19);  
Enver Hirsch (pp. 23/24); Ramon  
Haindl (p. 27); Frank Green (p. 29)

#### Translations, proofreading

Mark Rabinowitz, Text Control AG

#### Printer

gdz AG, Zurich, Switzerland



Gerhard Burman asserts that people who think outside the box are needed.

Dan Aetherman pulls Victorian-seeming contraptions out of his hat.

# “Complex Processes Are Disappearing into a Black Box.”

## (Retro)future Talk: Grasping Digitalization

To crank, or to click? Creation or function? Steampunk Dan Aetherman and bank-customer interaction expert Gerhard Buurman on the side effects of digitalization, the future of cash, and the core mission of infrastructure providers.

Interview **Matthias Bill**

*Dan, we're sitting here in your steampunk parlor (see box on page 34) surrounded by your retro-futuristic devices. I feel like a time traveler. Can the future of innovation be found in the past?*

**Dan Aetherman** I wouldn't go that far because technology is inexorably evolving. But loads of new products are being styled in a retro look. There is a romantic yearning for the good old days. And for uniqueness. Especially nowadays, when every smartphone looks the same.

**Gerhard Buurman** I would call that the poetry of technology. Design of yore also always conveyed something about how an object worked. Dan pays homage to what has since become superfluous. Wires are disappearing, and entire infrastructures exist now only digitally.

*Has the principle “form follows function” become obsolete?*

*We soon will be surrounded only by screens ...*

**B** That credo makes no sense any longer in a world composed of just screens and clouds. Steampunk, on the other hand, restores form to the formless.

**A** That succeeds because we steampunks reconceptualize today's devices in the spirit of the Victorian era using materials like brass, copper, wood, and glass. We highlight the function – even almost caricature it – through form, without paying any regard to size, weight, or handiness. Take my Space Communicator, for example: an age-old telephone receiver lets you listen in to live astronaut conversations on the ISS.

**B** Does that mean all of your machines work?

**A** My steam telex prints out my fan mail, I write my invoices on an old typewriter equipped with a Pentium processor and Windows 98, and I can remote-control my replica of Chopper from “Star Wars.” So with a few exceptions, yes, all of my devices work. But that is less an attribute of the steampunk movement and more a hallmark of my personal ambition. But I, too, accord greater weight to form than to function. I simply love the beauty and romance of all my unique contraptions.

*What about product design today? Isn't that beautiful as well?*

**B** Our smartphones are basically improved worry stones. They're nice to handle physically, but they've literally become almost impossible to grasp mentally. Complex processes elude our influence and disappear into a black box. Today there's a lot that we no longer fathom because it is invisible to us. We can no longer intervene ourselves nor repair anything ourselves.

**A** As a steampunk, making things myself is very important to me. But I get the feeling that society is increasingly losing the do-it-yourself urge.

**B** There once was a time when most people made what they needed in life themselves. They were thus masterful in using those things and were convinced about the sensibleness of them. Sustainability was accordingly high. Those aspects disappear in a division-of-labor-based society in which new technological advancements are hardly comprehensible any longer. Consuming has taken the place of making. Enough free time has certainly been liberated for that.

*What consequences does that have?*

**B** I played the cello for many years. Learning to play a musical instrument proved a way for me to apprehend the world, in the sense of “I can do this, I understand it.” ➤



Figuring out how a camera works imparts skill, confidence, and – I’m with Dan on this – a feeling of uniqueness: Only I am capable of mastering this device in this way. This arguably also explains the fascination of automobiles.

**A** Moreover, most of my gadgets can do only one thing. My Expedition Audiophone plays music, and my Zenobiaflex One snaps photos. That facilitates comprehension.

**B** Multifunction devices, in contrast, can’t contribute anything to understanding. We no longer comprehend them, we merely operate them. The manual actions employed have become indistinguishable. I rate my purchase with a click. A click, though, can also activate a payment.

#### Dan Aetherman

Swiss citizen Daniel Tännler, alias Dan Aetherman, is a steampunk to the core. He transforms technical devices from the digital age into futuristic visions from the 19th century. But the family man earns his living as an ice cream product developer for a supermarket chain. He previously worked for 25 years as a chocolatier. In steampunk circles he is also known as “the chocolatist” because he still makes chocolate at home today using recipes from 1826.

#### Prof. Gerhard Buurman

The German designer and cultural scientist founded the Interaction Design and Game Design study majors at the Zurich University of the Arts. In 2005 he began setting up the Swiss Design Institute for Finance and Banking. The pilot project concerned itself primarily with future forms of bank-customer interaction. The interface between design and economics remains Prof. Buurman’s core subject to this day.

*Or your voice can. Dan’s contraptions still sport dials, cranks, levers, and buttons. Today, voice recognition is already supplanting touch screens. Devices operated by thought commands will probably be the next thing. Under those conditions, to what extent can design foster trust – trust in a payment app for instance?*

**B** I don’t believe that it’s the job of designers to symbolically recreate manual actions that have long gone. Trust also isn’t forged by password protection nor by a confirmation screen. Trust is forged by something working reliably. One’s savings or pension deposit have to be there at the time they’re supposed to be. And instead of seeking to explain something that actually is too complex to explain anyhow, financial institutions should participate in the societal dialogue. At some point or other, every one of us will be a bank. The job of infrastructure providers like SIX will be to resolve transactions for everyone reliably.

*Every one of us a bank? How important is money to you, Dan?*

**A** Since I’m a family man, money is naturally important to me. You can’t survive without it. But with my devices, I try to also demonstrate that money isn’t always the decisive factor. Visitors often estimate the material costs in the several-thousand-franc range. But if truth be told, I have never invested more than 50 francs in any one of my devices, and oftentimes even nothing at all.

**B** This proves that there are still things today that possess an innate value. In our economized society, we usually talk only about present cash value, with the consequence that everything gets equated with money. The steam radio behind me isn’t buyable, though. Yet Dan created it from the remains of the consumerist society.

**A** In that sense I benefit from the throwaway culture. I obtain 95% of the parts for free. Also, I hold a mirror up to people, saying: “Look what you’ve thrown out!”

*“I use brass, copper, wood, and glass to give digital devices a soul.”*

Dan Aetherman

*Is steampunk the logical countertrend to digitalization?*

**A** I wouldn’t call it a countertrend. It’s more a return to the 19th century, but only with regard to exteriors. I’m not an old-fashioned person by any means. I want to utilize the achievements of digitalization as much as anyone. My modified smartphone, though, just isn’t a worry stone. I use the wonderful materials at my disposal to give it a soul. It remains a digital device, but when I touch it, I feel the warmth of wood and the chill of the metal. The blending of the new with the old is what charms me.

*You’ve just touched on the materials, the haptics. Are they the reason why we still also use cash today?*

**A** I do view banknotes and coins as being a kind of last bastion of security because they can be seen and touched. Even if cash is sometimes inconvenient, do we really want to wean ourselves off that as well?

**B** I believe that we wouldn’t renounce cash for long. New



*“I believe that we wouldn’t renounce cash for long.”*

Gerhard Buurman

currencies that still also physically represent value would quickly come into being. Coins and banknotes also stand to a certain extent for anonymity. Can I buy cigarettes cashlessly without my health insurer finding out? That, incidentally, presents an opportunity for financial services providers, by them finding creative ways to protect clients’ integrity even in a cashless world without, at the same time, opening the door to abuses.

*The Internet, artificial intelligence, blockchain technology. Apart from the pharmaceutical industry, can innovation be achieved today solely with zeros and ones?*

**A** The steam engine was invented, just like the electric motor was. I have the impression that the importance of machines that we can physically handle, take apart, and put back together again is dying away. The age of classic discoverers and inventors is drawing to an end. There are fewer and fewer blank spots on the map.

**B** It definitely can make sense to break through the digital fray in

certain areas with human handiwork, to create spaces where the invisible takes form. What Dan is doing isn’t a strategy for a better world. But people like him who think outside the box can spark an impulse.

**A** To intentionally make life more inconvenient than it is.

**B** Exactly. For instance, would we in the future want to live forever merely because we could? I myself make an effort to preserve places where young people can challenge established design paradigms, where they can think creatively against the grain. Such people used to be called madcaps.

**A** But it’s precisely those people who have advanced the world, in my view – the madcaps and the dreamers. I try to keep dreaming alive with my gadgets. Dreaming is the only way we can stay innovative. That’s why I also work with schoolchildren. A little brass and an old electron tube turn a USB stick into a magic memory wand and awaken ingenuity. Throw in Jules Verne’s undersea adventure of Captain Nemo

on the Nautilus, and students begin to dream again. And dreams, after all, are the impulse for everything. Without them the world would stand still.

*Does the financial industry also need to do more dreaming?*

**B** I would make an exception for the financial system, where deadlines, lot sizes, and risk management are what really matters. Everything has to be just right. There is no latitude there for dreaming. Function matters there, not form or surface. Room for creativity exists in the societal mission to build future infrastructures that continue to work for everyone, and thus forge trust. ■

## Steampunk

Steampunks are the genuine heirs of Jules Verne. Applying the aesthetics of the Victorian era, they reinterpret modern innovations as futuristic visions from the past – digital cameras and computers meet airships and steam engines. Steampunk has also made its way into popular culture through movies like “Wild Wild West,” starring Will Smith, and “The League of Extraordinary Gentlemen,” featuring Sean Connery. While some steampunks content themselves with dressing up in anachronistic costumes, artists like Dan Aetherman create entire retro-futuristic worlds.

→ Take a look at Dan Aetherman’s wondrously creative contraptions in the video: [sixgroup.com/red](http://sixgroup.com/red)



The steampunk version of Chopper from “Star Wars” contains a cocktail bar.

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