

Data Passport

Every Security Master Needs One



Just as your passport is proof of your identity, financial services firms need to understand data lineage. At every stage of its journey, SIX monitors the quality and traceability of data, so that you can integrate it into your business workflows with confidence.

www.six-group.com/financial-information



Data Passport

Is your financial data really safe to travel?



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Foreword

Welcome to SIX

Data is the fuel for financial markets. Yet major institutions are at great operational and regulatory risk of acting on stale or incorrect information. Just as your passport constitutes a proof of your identity, financial services firms need to understand data lineage. Do we now need a financial “data passport”?

Quality and provenance of data is important to a bank’s operations, growth, risk and performance. Thus, financial institutions need to know where data comes from, where it goes and how it is used.

According to research¹, two-thirds of companies struggle with poor data quality and inconsistent data. Companies spend exponentially more on managing data than on acquiring it. Given the nature of financial markets where data is fuel, there is a huge burden on financial market participants dealing with friction driven by data reconciliation issues in day-to-day operations. Data is key to any digital transformation strategy where automation of manual processes is a crucial feature. It is necessary to have a trusted source, understand lineage and manage the golden thread of data integrity as data powers applications across the front, middle and back office.



SIX understands the role data plays in financial markets and provides you with the passport to increased growth and performance as well as reduced risk and regulatory exposure.

¹According to SIX research, across data management leaders from 15 tier one and tier two US and European based financial institutions



Marion Leslie,
 Head Business Unit Financial
 Information
 Member of the Executive Board

SIX IN BRIEF

 GLOBAL We are the 4th largest stock exchange in Europe	 SECURE We had a trading turnover of CHF 1 trillion in 2019	 LEADING We are the world’s leading international Clearing and Settlement house for 5 years running
 QUALITY SIX is a registered and certified national numbering agency	 CONFIDENCE We have been in the business of financial information for more than 9 decades	 COMPLETENESS Covering over 29.7 million instruments and over 8.4 million corporate actions per year

A little bit about our history

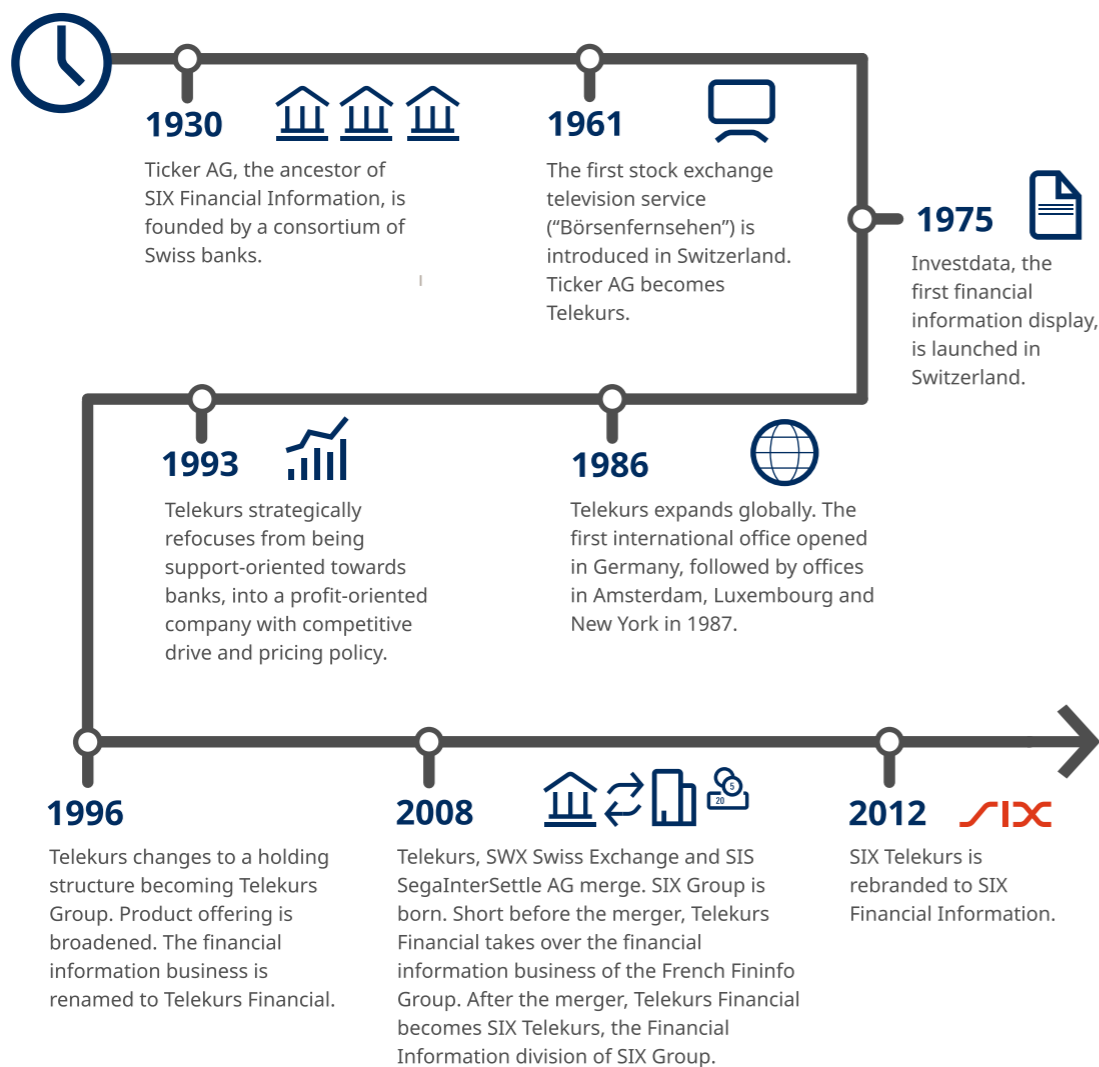
SIX at 90



SIX has stood for innovation and stability on the global financial markets for 9 decades. Our strength is founded on our history: SIX was formed from the merger of experienced financial companies - with their beginnings going back to around 1930.

However, even as we turn 90 this year, we still continue to shape the market by:

- Increasing investment insights
- Boosting operational efficiency
- Helping businesses with regulatory compliance
- Improving risk management



Data you trust

Data Quality and Timeliness



Can any financial institution be 100% confident of where its data comes from these days? Do they really know what other data has been linked to the original source, and who has manipulated it?

Regardless of whether it is Corporate Actions, Reference or Valuation Pricing Data - financial institutions no longer see data as the provision of a commodity. The reality is the industry is now seeking the provenance and purity of data, the security of the decisions made to protect its reputation, and those all-important key risk indicators.

COLLECTION AND AGGREGATION

To create a truly authoritative database, we gather data of all sorts, including:

- Market
- Pricing
- Corporate actions
- Tax
- Regulatory
- News

TRANSFORMING RAW DATA INTO READY-TO-CONSUME INFORMATION

- Data consolidation
- Data completion & correction
- Data standardization
- Data analysis
- Data updates
- Data value change

FLEXIBLE DATA DELIVERY

- Tailored, easy-to-integrate feeds
- Batch files, ready for instant processing
- Intuitive desktop and mobile GUIs, set to the business user

THE RESULT: ACCURATE, COMPLETE AND CONSISTENT DATA, DRIVING VALUE ACROSS THE BUSINESS

- Enhanced business and regulatory reporting
- Streamlined operations, fewer manual errors
- Strengthened tax and regulatory compliance
- Efficient securities administration
- Greater support for investment decision making
- A more cost-effective approach to data, reporting and compliance



Cement a secure foundation

Reference Data



SIX reference data helps you enhance the quality, speed, and efficiency of your pre- and post-trade activities.

THE CHALLENGE

For global financial institutions, problems around timeliness of data linked to newly issued instruments are very much front of mind. Today, the primary question is: how much time has there been between the instrument being issued and the delivery of the data?

Financial institutions demand high **quality** data to be delivered instantly and accurately. In today's world of electronic markets, financial institutions need to be aware of where its data comes from **as soon as possible**, about where its data comes from in order to act **efficiently** on it.

One of the biggest barriers is the integration of multiple data sources. For financial institutions, it is not just a case of taking data from a few market data vendors; there is a pressing need to integrate data from internal sources

and business partners too. If a financial institution doesn't have instant access to the changes being made to their data, how do they know if there is a problem or not? How do they know for certain if the data is up to scratch from a reporting perspective? Reference data is the lifeblood on which any financial institution bases its decision making, so it shouldn't be putting firms at financial or reputational risk by being siloed.

Upcoming regulatory requirements mean there is more data than ever before to be interchanged between banks and their clients. For instance, the reporting template for the Securities Financing Transactions Regulation (SFTR) alone has up to 155 different data points.

THE SOLUTION

Based on the challenges currently confronted by financial institutions, they can only build strong value propositions based on high quality and efficient data. With the growing importance of providing and proving excellent data quality, SIX has devised a data framework that enables firms to move from being reactive to being proactive to incidents, calls and escalations.

The framework includes the following SIX steps:

- 1. Discover:** Using different business channels to build a map of current data quality issues
- 2. Cluster & Evaluate:** Defining metrics to prioritize the data quality issues & developing data quality roadmap
- 3. Design quality objective:** Adopting customer-facing definition of quality & including SIX data quality expectations

4. Assess: Execution of data quality objectives leads to KPIs reflecting the different dimensions of quality, completeness, accuracy, consistency, coverage, timeliness, uniqueness and conformity

5. Find: Seeking out and eliminating root causes

6. Track: Continuous improvement through monitoring of progress

This framework captures the broadest range of information from legal entities to financial instruments.

The in-depth levels of insight on key data attributes enable faultless compliance with regulatory and audit requirements. When it comes to reference data, SIX ensures the right data is delivered quickly, securely and accurately to the right place, at the right time.



Rigor and detail create value

Corporate Actions Data



Corporate actions data of the highest caliber doesn't simply arrive that way. SIX cleans, structures and enhances data, turning it into powerful, trusted information.

THE CHALLENGE

With a boom in stock splits, dividends, and M&As, not to mention rights issues and IPOs, there has been a corresponding increase in corporate actions data over the past two decades. In 2019, SIX processed over 8.4 million corporate actions events globally. With the highly complicated nature of certain corporate actions meaning that they are updated several times in their lifecycle, constant monitoring is often required.

These factors have now combined to put significant pressure on teams internally and have forced them to look for a remedy. Back-office staff now find themselves with a starring role in the battle to avoid seeing their bank's reputation being tarnished. But it can sometimes be hard for the back-office to secure the financial backing need to implement satisfactory corporate actions solutions, as banks don't always see immediate benefits.



375
corporate actions data sources



8.4m
corporate actions per year

THE SOLUTION

The place to look for answers? Automation. We already know that corporate actions' complexity demands huge amounts of human processing power to ensure accuracy and timeliness of delivery. However, this doesn't mean that the more repetitive, simple events can't be left to automated systems. Mandatory dividends or quarterly earnings, for example, would be obvious places to start. It might not sound like much, but it would free up back-office staff for more complex tasks; including events that require constant back-and-forth between the team and the client (such as an IPO or M&A).

SIX has done exactly this. We've designed solutions that allow the tedious aspects of corporate actions to be automated. For firms looking to integrate information more easily and reduce operational risk, it's a win-win scenario. After all, efficiency and reliability are two cornerstones of a successful business. It's also why SIX goes out of its way to promote industry standards, such as ISO 15022 (MT564), that enable firms to reconcile data from multiple sources more easily. The leading players of the financial world, who make up our client base, depend on receiving high quality data about these events in an efficient and timely manner. So, we've made it possible.



Collate & accumulate

Easy to integrate

Free back office

Creating new value

Rethinking our Data



Historical Corporate Actions Data

Our Corporate Actions history goes back more than 25 years and provides access to the same detailed corporation actions data available on each instrument as our daily corporate actions service. This can be complemented with securities pricing information going back to the early 1980s.

At a glance:

- Access to full corporate action event history of 25+ years
- Useful in the areas of research analysis and investment insight
- Proven data quality since 90 years
- Focus on primary, official and trusted sources
- Highly structured data model enabling complex events to be standardized, decrypted, and delivered
- Data model linking corporate actions to security master and cross reference data



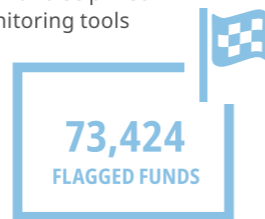
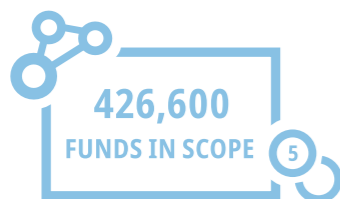
Premium Fund Data

SIX has upgraded its fund data offering by integrating new content and marking it with a premium flag.

The Premium Fund Data flag from SIX certifies comprehensive and timely fund data enhanced with additional tax and regulatory content. This list number of premium data grows continuously, encompassing more funds and markets than ever. The detail and quality of this data allows you to rely on a single source to make your investment decisions and to speed up your back-office processes.

At a glance:

- Premium flag certifies comprehensive & timely fund data with additional tax & regulatory content
- Comprehensive fund insights for European fund companies
- Detailed fund classification scheme covering Mutual Funds & ETFs
- Regulatory enriched fund content to satisfy cross-border & investor suitability compliance requirements
- Quality assurance with disciplined processes and monitoring tools



Connecting you to global markets

Valuation Pricing Data



The complex nature of global markets is a challenge for financial institutions. SIX consolidates and standardizes market data from over 1,800+ sources to create an authoritative data source for financial professionals.

THE CHALLENGE

The primary goal of regulations is to ultimately increase transparency into the type of products sold to investors. By definition, this means that a vast amount of pricing information needs to be made available quickly. The knock-on effect has been compliance costs shooting up.

The reality is that most firms - be it product manufacturers (issuers) or distributors such as asset management houses - are in some way affected by the dramatic cost implications regulation has on doing business.

If market participants have any hope of overcoming these regulatory-linked valuation pricing challenges, they will need to do everything to reduce time to market and the cost of compliance. Easier said than done, particularly with the time-sapping nature of the data management issues covering various instrument and pricing data reporting requirements. Whether providing numerous instrument classification codes (ISINs), or intricate detail on who has contributed to the price of a newly issued bond, all this needs to be captured for reporting, before being connected to related workflows.



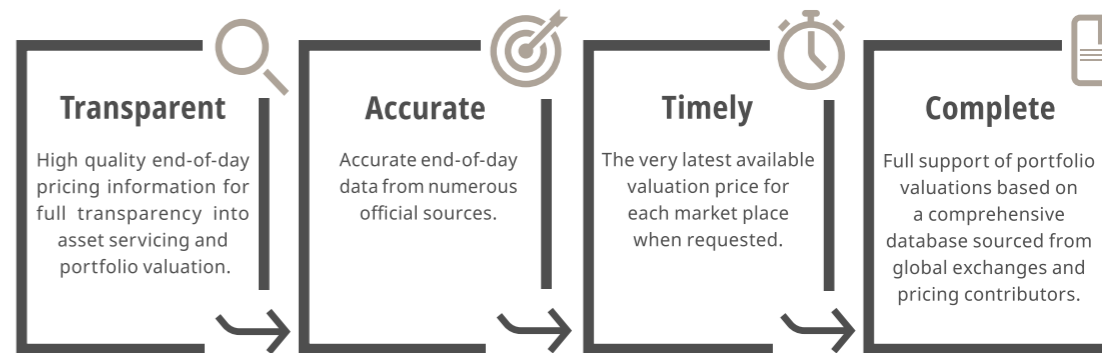
THE SOLUTION

SIX provides professionals at a range of financial institutions with swift and free access to accurate end-of-day data from a multitude of asset classes - helping clients ensure compliance and make better decisions.

With access to over **14 million instrument** listings across asset classes, this scalable service provides

reliable valuation prices with related listing data to ensure complete, consolidated and formatted end-of-day pricing data that ensures accuracy in pricing valuation and reporting.

Financial institutions can choose to receive multiple listings for an instrument or specify the market place required on each instrument.



Controlling the provenance and traceability of our data

Data Journey



Sourcing

SIX takes the operational burden away from financial institutions by sourcing 1,800+ different data sources. We also negotiate the right licensing terms and build the right connectivity to those sources.



Cleansing

No firm can afford to make investment decisions based on incomplete or incorrect data. SIX provides full quality assurance by plugging any errors or gaps in the data before it reaches the end user.



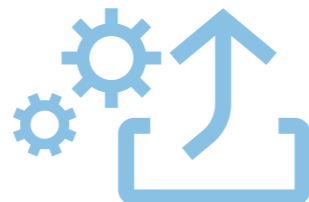
Normalizing

Financial institutions have numerous different data sources, all coming in with different identifiers. SIX provides the pre-integration and normalization to ensure that market participants receive their data in their desired format.



Processing

Today there are 7 to 8 billion pricing updates per year that need to be made to ensure market participants receive the latest bid/ask prices. SIX processes a huge volume of data that ensures financial institutions can fully process transactions and control volumes.



Working on standardizing financial assets

Financial Industry Standards



SIX does more than just deliver data: our work on data standardization helps to create a more efficient industry.

For over 29 years, SIX has been actively involved in standards bodies, had leading roles in national and international committees and associations (e.g. Chairman of ISO/TC 68/SC 8 and contributed with its expertise). The goal is to promote the adoption of consistent standards and encourage strong and open communication within the regulatory community and with the industry.

As the official numbering agency for Switzerland, Liechtenstein and Belgium, SIX is also responsible for assigning the International Securities Identification Number (ISIN), Classification of Financial Instruments (CFI) and Financial Instruments Short Name (FISN) to financial instruments. Further, SIX is not only a founding member of the Association of National Numbering Agencies (ANNA), but also one of the Operators of the ANNA Service Bureau (ASB).

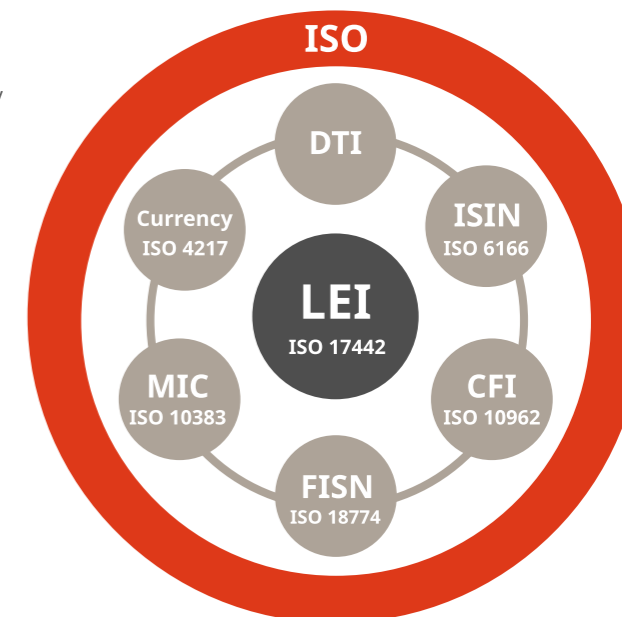
Key Benefits

- Expertise in industry standards
- Cost and error reduction
- Global recognition and uniform application of industry standardization formats - avoidance of using vendors' propriety formats
- Significant benefits to clients (early knowledge of external trends)
- Free use of standards by the whole industry
- Increased levels of automation and straight-through processing (STP)

EXAMPLE: STANDARDIZING DIGITAL ASSETS

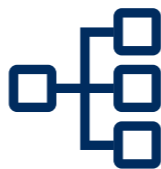
SIX is part of the new ISO Working Group "Digital Token Identifier" (DTI). A new ISO Standard DTI will be developed to identify any created digital token, e.g. Bitcoin.

- DTI** - Digital Token Identifier
- ISIN** - International Securities Identification Number
- CFI** - Classification of Financial Instruments
- FISN** - Financial Instruments Short Name
- MIC** - Market Identifier Code
- LEI** - Legal Entity Identifier



Access our data in the format you need

Delivery Capabilities



User-Focused

We work closely with our clients to develop data delivery capabilities that fulfill their data needs. Whether you require powerful data feeds, or specific data packages, we deliver them with accuracy, timeliness and ease of use.

Tailored to You

Our extensive data delivery capabilities ensure that you will find the right solution for your business needs. We provide specific data packages, regulatory documents, snap on demand, continuous data feed, and flat files.

Our capabilities cover all types of financial data, delivering it in whichever format you need.

- 1) **SIX Flex:** Experience a new way to access global reference, corporate actions, pricing and regulatory data from SIX.
- 2) **VDF:** Empower your business with our award-winning Valordata Feed that makes accessing near-real-time securities data easy.
- 3) **MDF:** Enhance your work with the Market Data Feed: a customizable, real-time stream of global market information.
- 4) **IPS:** Gain access to accurate and timely pricing information for millions of instruments with our world-class securities database.
- 5) **Regulatory Hub:** Get ahead of complex regulatory requirements in a strategic way that frees up time to focus on your core business.
- 6) **apiD:** Overtake the competition by seamlessly integrating high-quality data into your website or application with apiD.

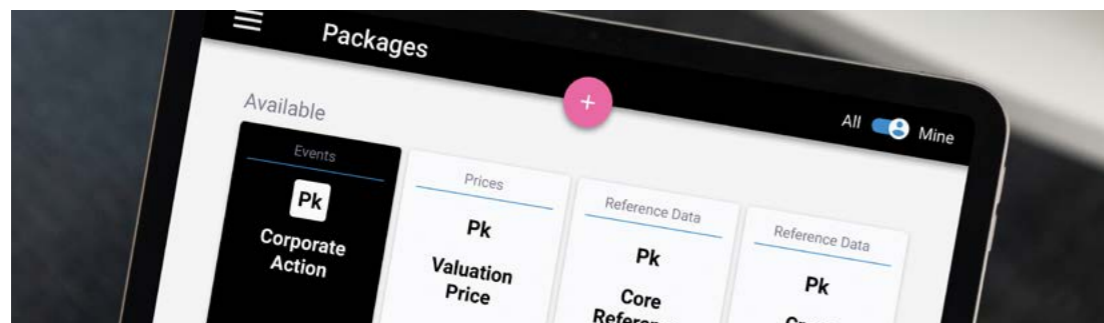
EXAMPLE: DATA DISCOVERY MADE EASY

SIX Flex

SIX Flex lets you turn on only the data streams you need. Use it to tailor your data consumption. With this new, easy-to-integrate application, you can subscribe to data, define the delivery interval and analyze your data, consumption and activity.

Key Benefits

- Reduced cost of ownership thanks to easy integration
- Support for data governance
- Increased productivity for all internal roles through self-service functionality
- Enhanced business analysis capability
- Automated data supplier reporting



Data you can rely on

Quality Comes First



The world's leading institutions rely on SIX because of our commitment to delivering financial data of the highest caliber. Our award-winning data feeds are comprehensive and consistent, ensuring the integrity of your trading and reporting.

FAST FACTS

5% higher trading turnover than in 2018



Growth in bonds

Growth in structured products & warrants



Exchange Traded Funds

WE ARE ALSO

SARON

The official SARON administrator for the Swiss National Bank (SNB) - putting us at the heart of benchmark reform.

The leading numbering agency for numerous countries across Europe - including Belgium and Lichtenstein, as well as Switzerland of course.

ANNA

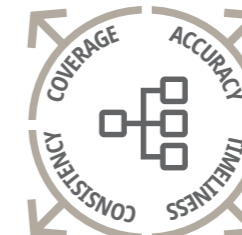
The official operator of the ANNA Service Bureau and one of the founding members of the Derivatives Service Bureau (DSB) alongside WM Daten and Euroclear.

The world's leading international clearing and settlement house for the 5th consecutive year.

RIGOROUS QUALITY CONTROLS

From aggregation to delivery, SIX continuously runs a detailed set of quality checks to ensure that data is complete, up to date and always ready for immediate use.

Capturing a wide range of asset classes, covering global, national and local markets.



Scrubbing and cross-referencing data across multiple sources, along with normalizing and enriching this information.

Structuring and harmonizing data into standard formats, tailored for various delivery channels.

Updating information in a continuous fashion, capturing every market event and ensuring delivery of the most up-to-date data.

Driving the transformation of financial markets

About SIX

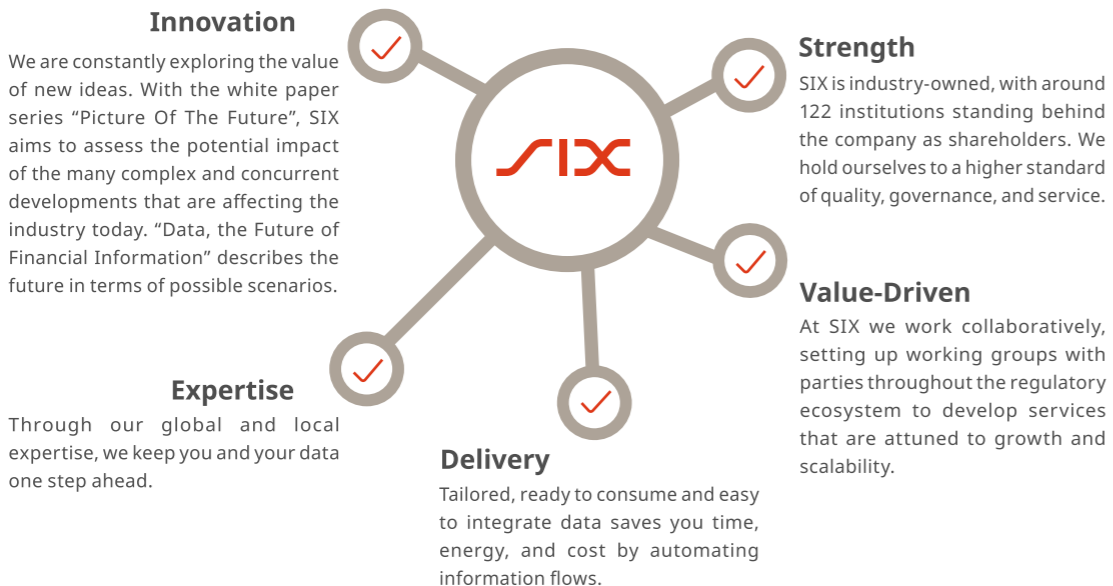
SIX operates and develops infrastructure services in the areas of securities, payment transactions, and financial information with the aim of raising efficiency, quality, and innovative capacity across the entire value chain of the Swiss financial center.

FINANCIAL INFORMATION AT SIX



DATA YOU TRUST

A long-standing leader in financial information, SIX has continually invested in developing data and services that help institutions transact and engage with confidence and make more informed decisions. We are driven to help institutions navigate the intricacies of today's markets and regulation while building a viable path for future growth.



Outstanding services

Award-Winning Data

For over 90 years, SIX has been innovating and developing new value-added services by growing its quality and coverage of reference and corporate actions data. We look at industry problems that we can solve by leveraging data to drive that solution or by creating new ways of working together such as SIX Flex. We are proud that the industry has recognized our efforts by granting 42+ awards over the last 10 years.

AWARDS WON



2010 - 1x	2015 - 3x
2011 - 2x	2016 - 5x
2012 - 2x	2017 - 5x
2013 - 3x	2018 - 9x
2014 - 5x	2019 - 7x

2019 AWARDS

SECURITY MASTER

- Best Corporate Actions Solution Provider
Waters Rankings
- Best Pricing & Valuations Data Provider
Data Management Insight
- Best Corporate Actions Data Provider
IMD & IRD 10 years running

REGULATORY SERVICES

- Best RegTech Solution
FTF Tech Innovation
- Best Sell-Side Compliance Product
Sell-Side Technology
- Best Buy-Side Compliance Product - KYC
Buy-Side Technology
- Best Vendor Solution for Tax Compliance
RegTech Insight

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