Euroclear
APIs Securities use cases

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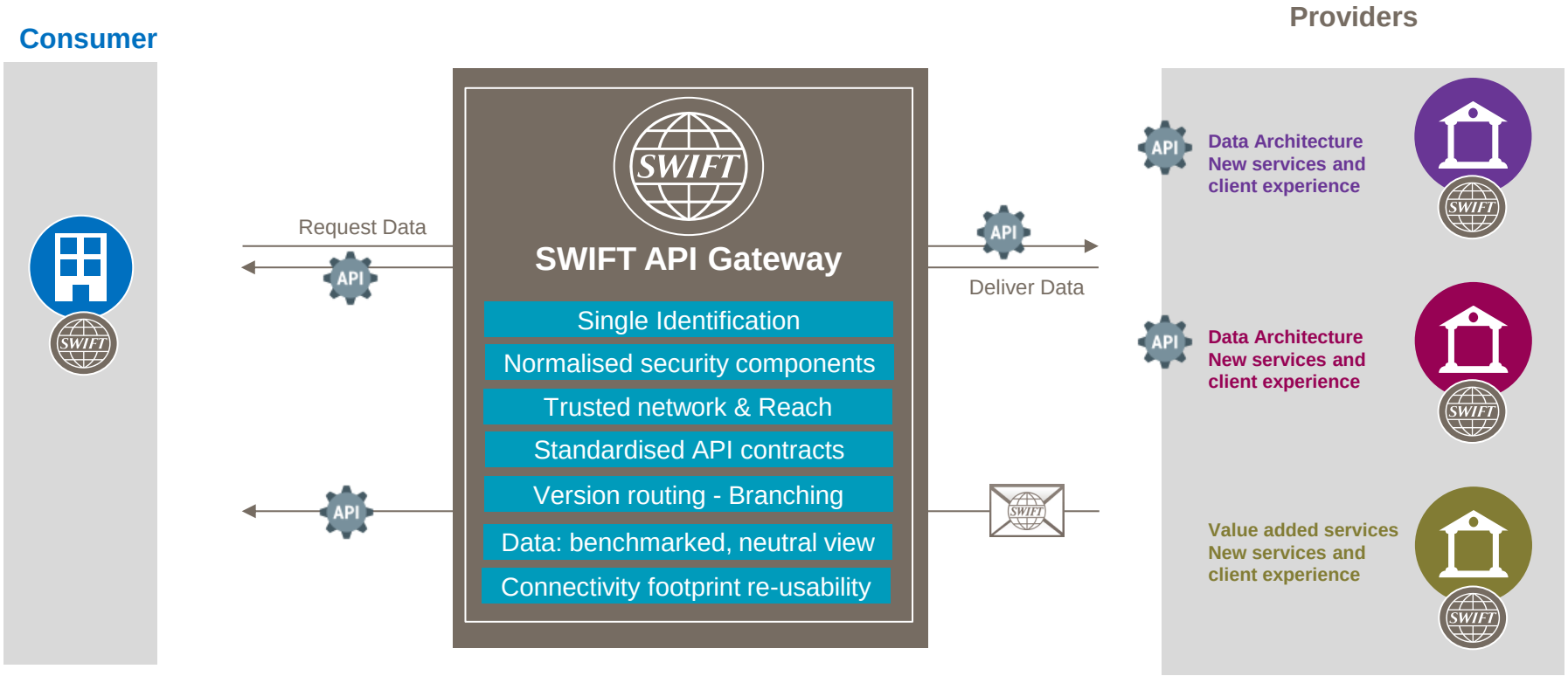
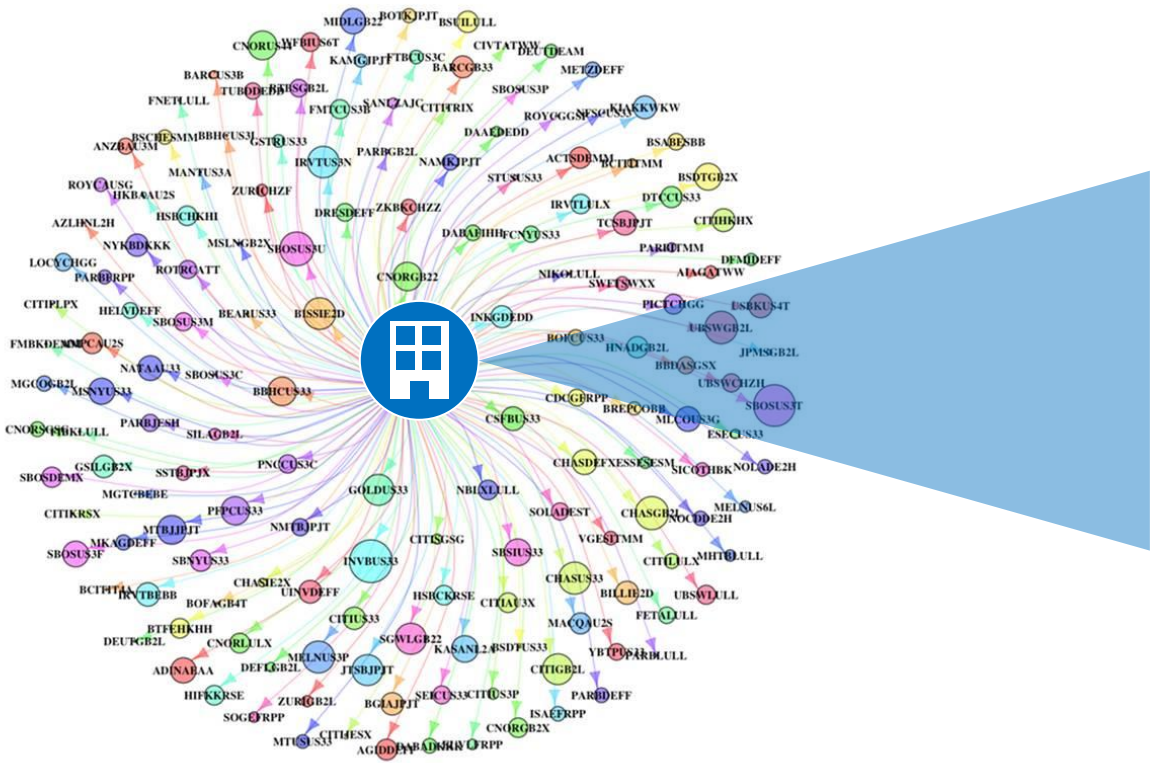
Key areas of focus for API’s in Securities markets

Providers can focus on true competitive differentiators and revenue generators



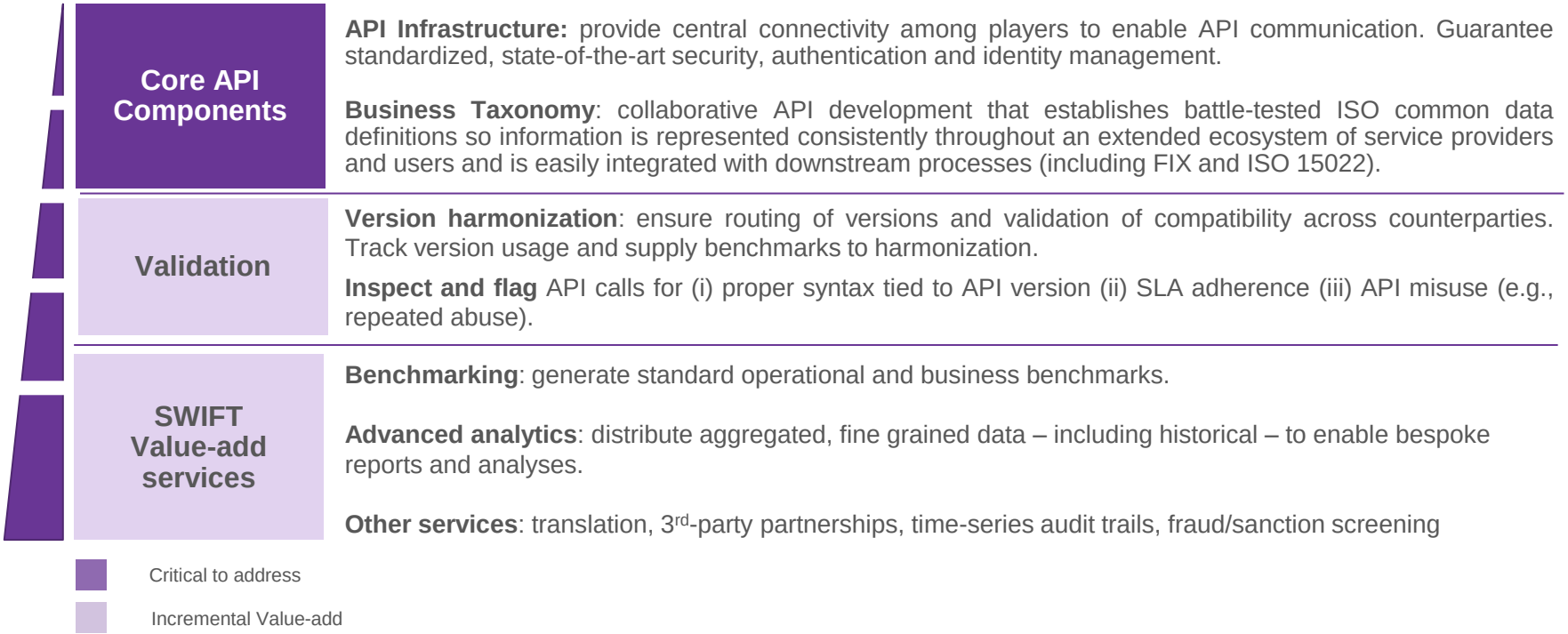
An asset manager's network of custody, fund administration and asset servicing



Asset managers and brokers can have as much as 150 account servicers (potential API providers) only on the SWIFT network

Source: SWIFT 2018

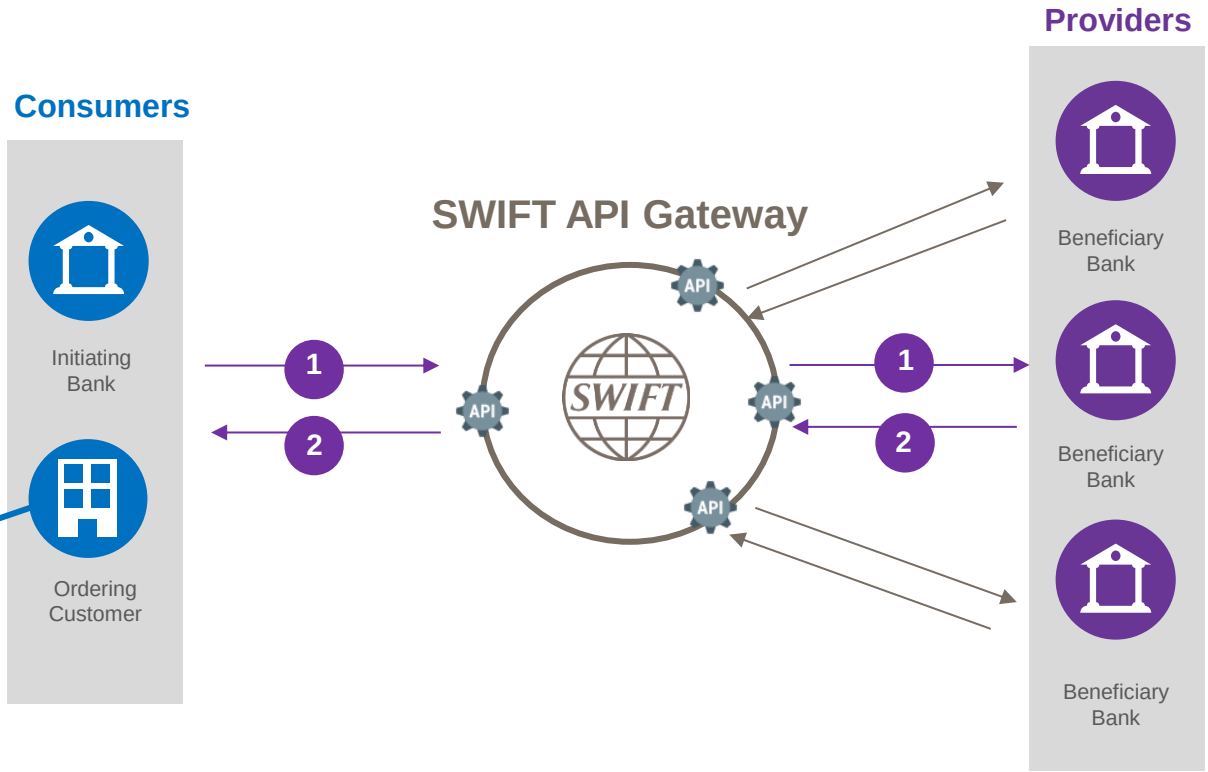
API Value Proposition Building Blocks



Current Securities use cases

Use case 1: pre-cash movement account Verification

- Verify beneficiary account existence prior to sending a payment instruction
- Standardized beneficiary account verification API



- Corporates
- Asset managers
- Brokers
- Fund distributors
- Custodians

- Beneficiary bank to check account exists/can receive funds
- Depending on the jurisdiction, perform name matching
- Standardized API status response

Use case 1 : key challenges observed with outgoing cash movements

Cash transactions are slow and often subjected to a 'black box' experience once released, meaning there is no transparency on the status of the payment. Blockages in the flow are not visible in real time and are often signalled only upon a client query or after a time-consuming investigation and resolution.

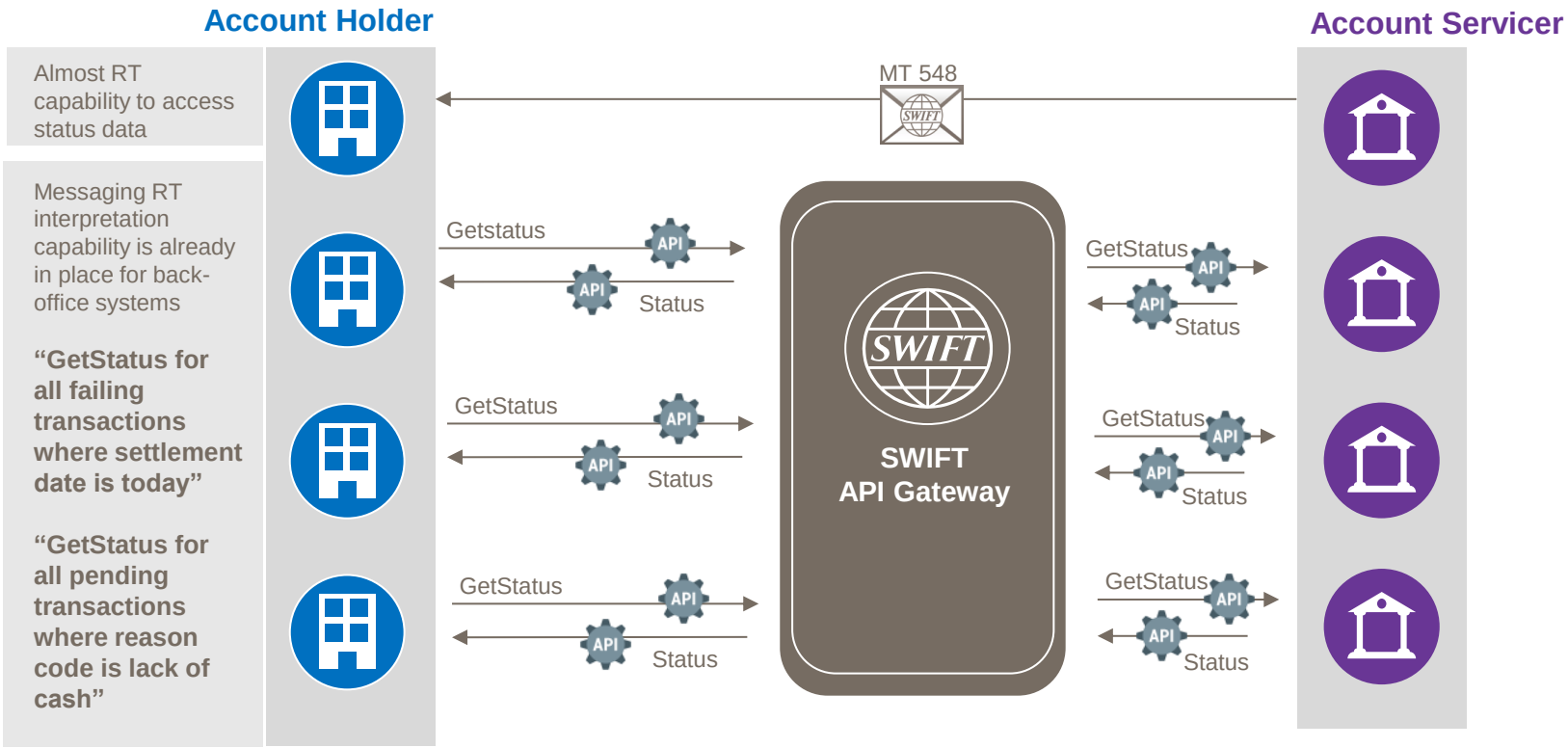
Critical payments, such as large coupons, redemptions, collateral, FX, and new issues – including those for premium clients – **are time sensitive** and often trigger a multitude of customer queries.

The capital markets industry is increasingly dealing with **new client types** (e.g. hedge funds, insurers and Fintech companies) **that are highly dependent on incoming liquidity** for financing or have back-to-back transactions with tight deadlines.

Incorrect or missing information about the beneficiary institutions provided when the payment is initiated is one of the main causes of such errors.

The **pre-validation service** is a real-time API-based mechanism that will enable FIs to send and receive API calls to seamlessly check beneficiary account information with the ultimate receiving institution. This will allow market participants to remedy any inaccurate or missing information instantly, reducing delays and costs.

Use case 2: on demand and real-time status of settlement instructions



Use case 2: on demand and real-time status of settlement instructions

Current status reporting mechanisms are not suited to current industry needs. Exception monitoring should be fast and automated. However, today's mix of high reporting volumes of status messages with low data quality do not help the industry to streamline exceptions and quickly resolve problems and process breaks.

Traditional settlement status messages (MT 548) are often verbose and sent to selling and buying counterparties on a push approach at specific moments of the day (often after batch cycles).

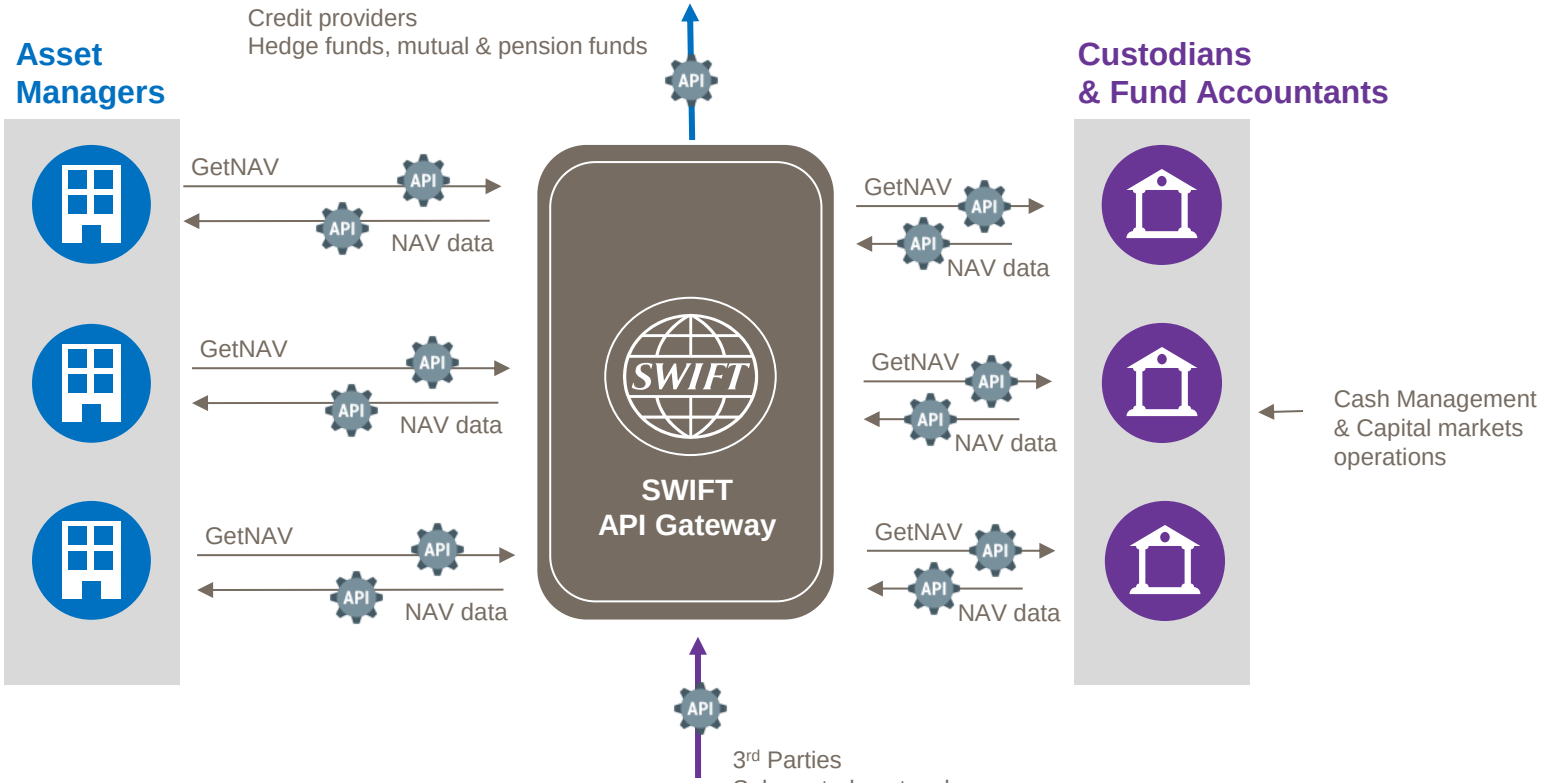
Access to settlement status through APIs can increase the flexibility and reduce the latency since notifications can be retrieved on demand, on real-time and still in a standardized format.

For this specific use case, APIs offer also the ability to **customize the information needed** in the status based for instance in the reason code, the settlement date or the quantity or value of the transaction.

Moreover, the capability to interpret and act on near-to-real time status information is already an integral part of back-office operations making the perfect case for API synchronous communication.

Current pilot participants have also underline the **ease to implementing this API by leveraging their SWIFT connectivity** and potentially reach SWIFT connected entities without disrupting current processes.

Use case 3: ad-hoc access to NAV information across fund accountants



Use case 3: ad-hoc access to NAV information across fund accountants

Currently, **data needed for NAV calculation is batch processed** by custodians/fund accountants at different cut off points end-of-day primarily through manual processes.

Incorrect data in NAV calculations is the cause of **heavy litigations and massive settlement** or fines.

Setting up and maintaining bilateral connections with multiple fund accountants (including API infrastructure, data taxonomy and specific SLAs) can be a challenge both for the consumer (asset manager or other) and the fund accountant itself.

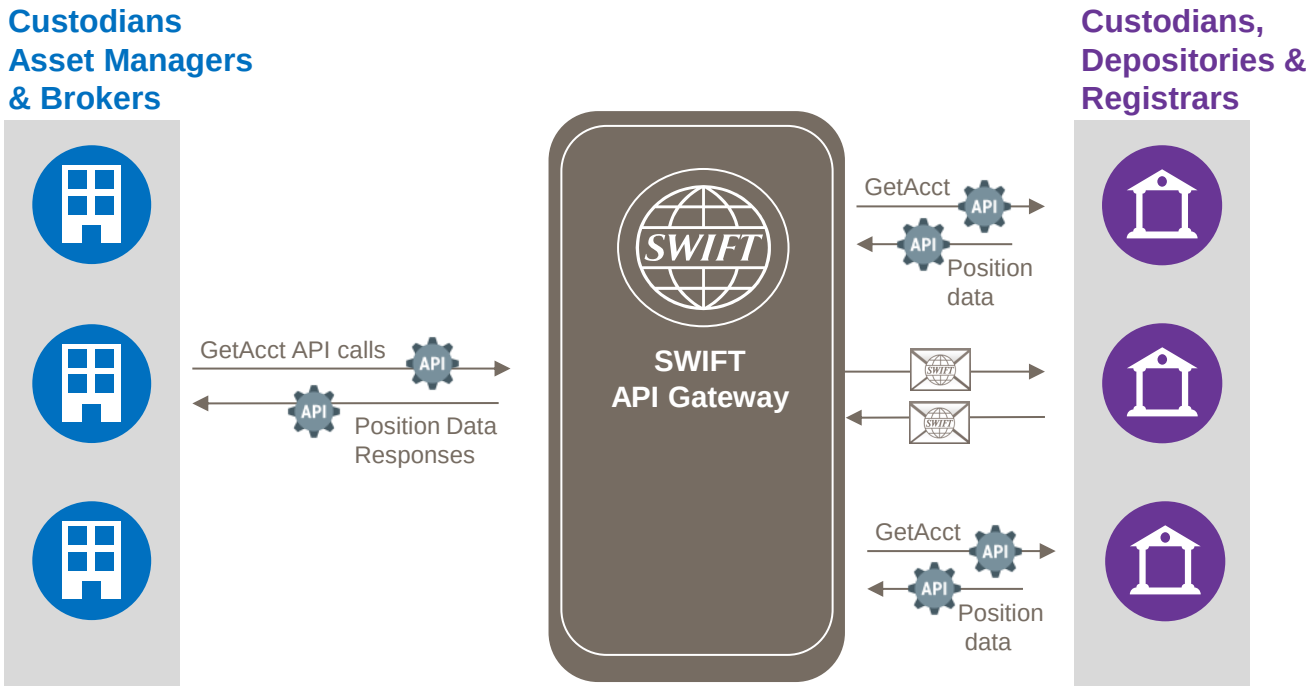
The objective of this use case is to **improve the timeliness of receipt of NAV** calculations and in a future state, consider intra-day view of NAV evolutions.

In this use case the **API platform normalizes the interactions between the NAV consumer with its fund accountants**, while allowing the flexibility to create and manage bespoke data sets for individual funds or to cater for specific market practices.

The possibilities of evolution of this case are numerous: the normalization of APIs can be offered also to credit providers or data vendors, SLAs can be created around NAV processes (cut-off times, tracking errors), misuse or abuse can be flagged, NAV send-outs can be tracked with audit trails, etc.

Use case 4: request securities positions held across custodians and depositories

Potential use case for the French market where “nominatif pur’ and bearer positions could be consolidated for an individual investor



Use case 4: request securities positions held across custodians and depositories

Current communication of holdings can represent a challenge when a position in a specific asset is needed in an ad-hoc basis.

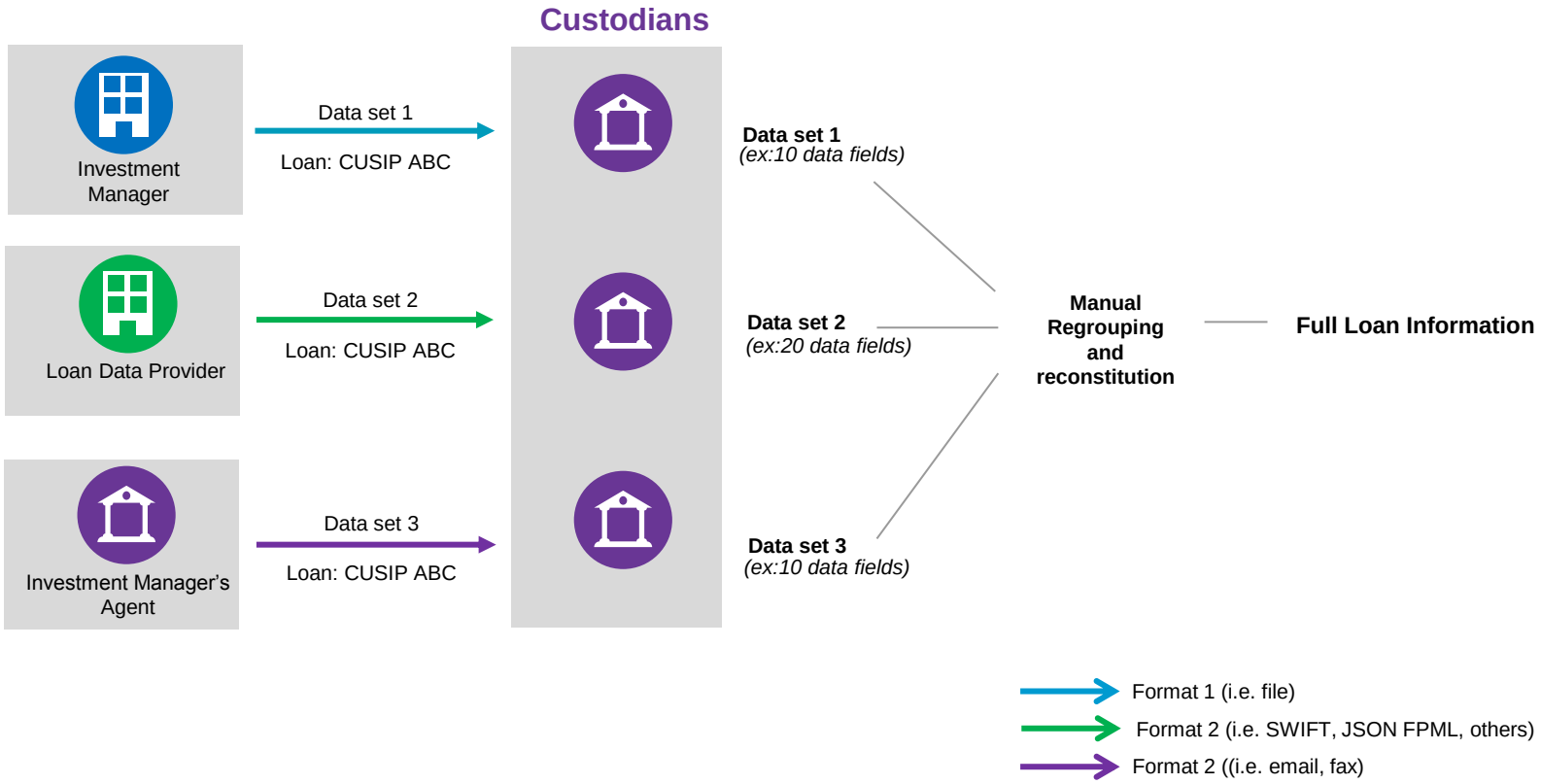
The most compelling case for this need to have access to a position across multiple accounts is when the selling party in a trade receives an **allegement notificatio**n from the depository. Before instructing on the specified trade, the selling party must have a view on its position and cannot wait to receive a statement of holdings at the end of day.

The “GetAccount” API allows account holders to request via a **single API call the securities or cash positions held at different custodians or account servicers.**

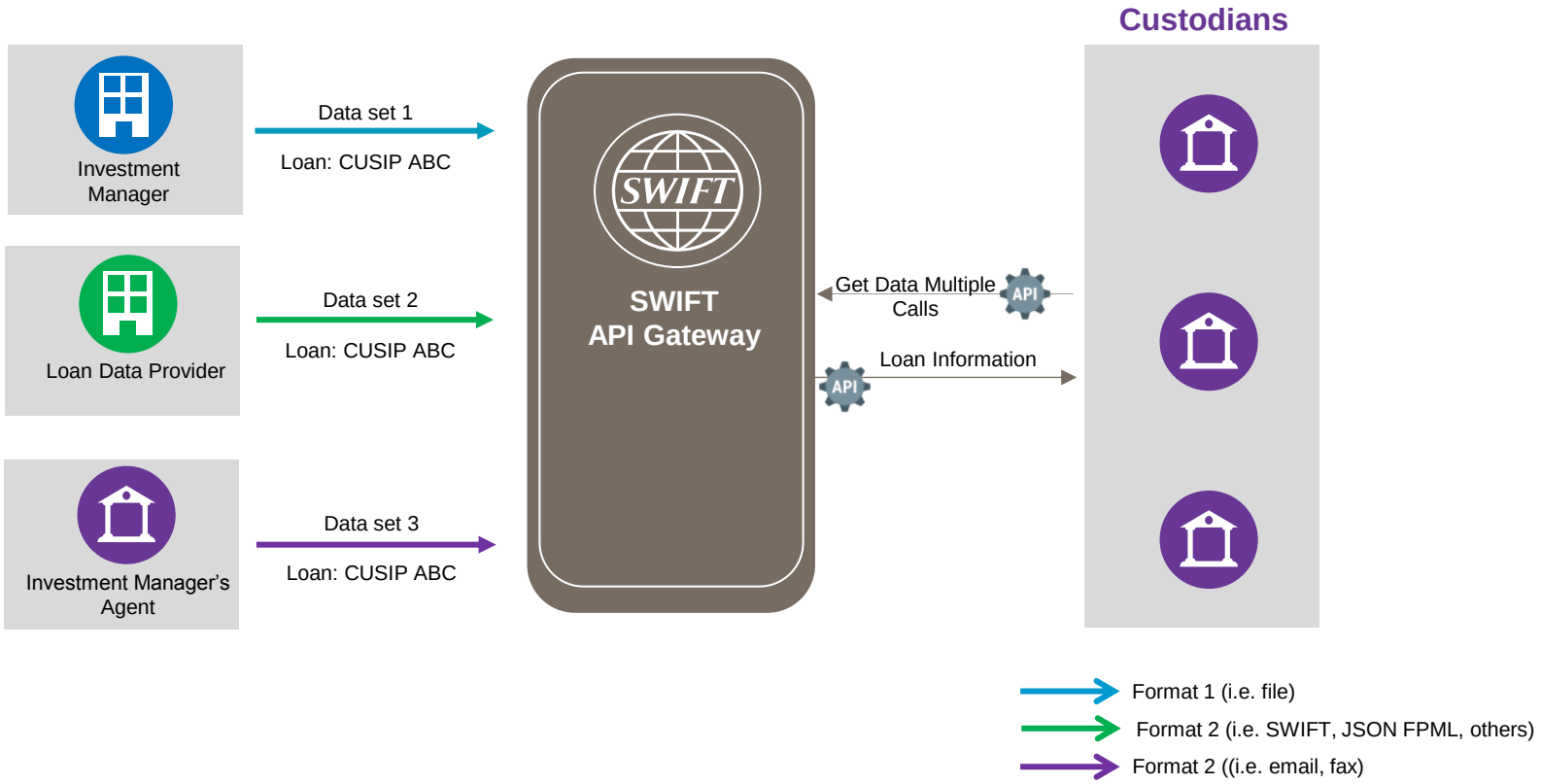
The API Gateway **ensures proper routing of API versions** including conversion to other means of communication as well as validation of version compatibility across counterparties.

The gateway can also track version usage and supply benchmarks to enable consumers to influence harmonization amongst services providers.

Use case 5: syndicated Loan information distribution (1/2) – Current status



Use case 5: syndicated Loan information distribution (2/2) – API orchestration



Use case 5: syndicated Loan information distribution

Syndicated loans are complex and dynamic. In addition to data changing with each market rate changing and a multiplicity of data providers (vendors, agents, investment managers) loans and the information needed to process them tend to be divided into pieces.

The syndicated loan communication flow (as for other complex asset classes) is characterized by a **fragmentation of data and a lack of standardization and automation.**

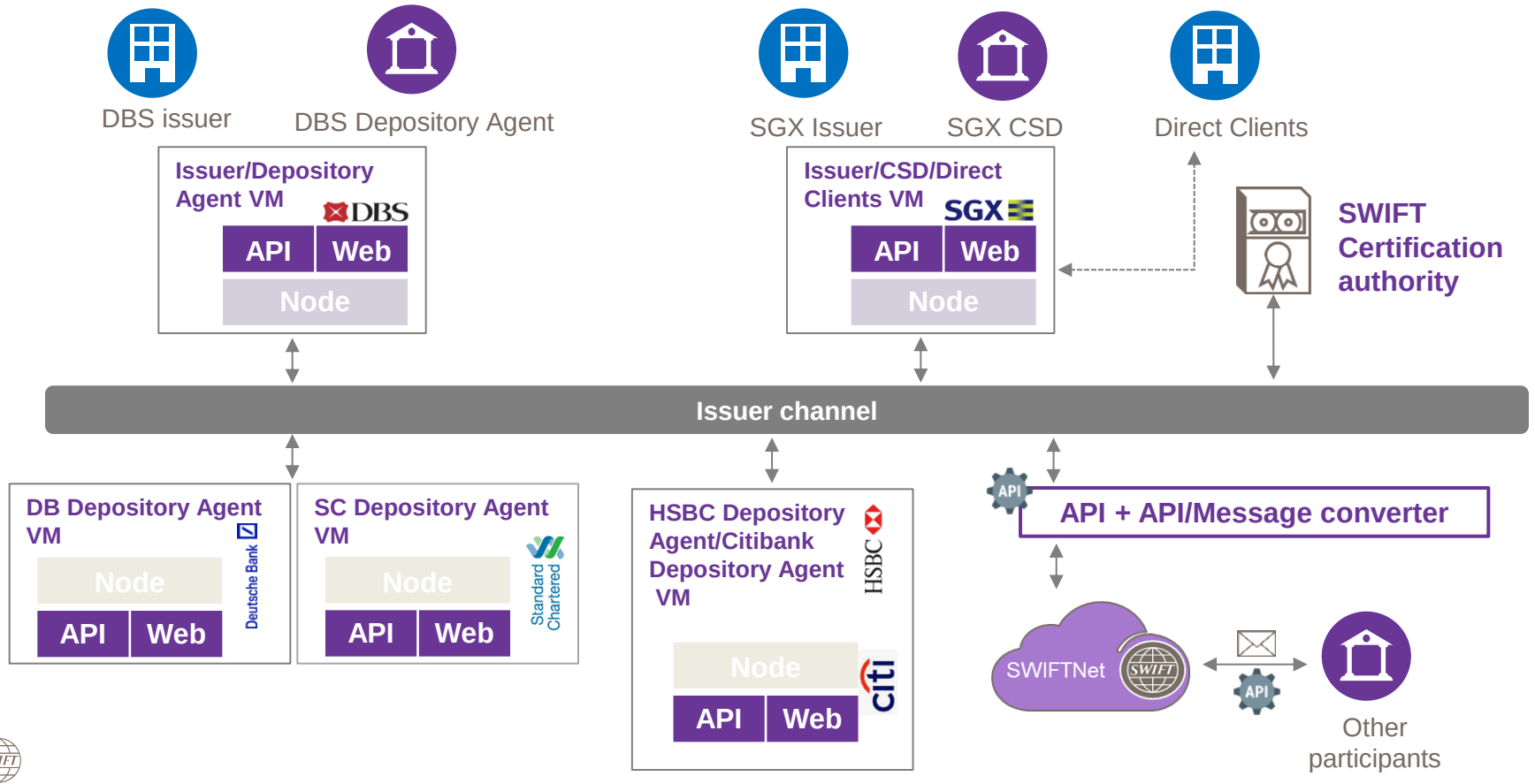
Revolving credit facilities (the borrower can draw down a loan and repay it, and then to borrow again) **call for real-time access to data** (at any time, each party will need to know how much they have lent or borrowed).

Today, some data vendors offer STP means to communicate loan information but other **chunks of data** which sit on the agent's side **are communicated manually** via fax or email.

This manual and slow interaction between multiple parties causes **important operational and counterparty risks** for a business that is already sensitive to liquidity and market changes.

A central API gateway can offer multiple capabilities to solve this problem: it can orchestrate the different channels of communication, can give access to all parties using with a single authentication mechanism, can validate or flag deviation of SLAs, can track transactions based on single ID (i.e. CUSIPs), etc.

Use case 6: DLT-based e-voting solution leveraging APIs



Use case 6: DLT-based e-voting solution leveraging APIs

Managing votes for general meetings is a **time sensitive, resource consuming process** with many parties along the chain.

Market participants ask today to **improve the security and scalability** of operations, demand **greater transparency** and efficiencies and better shareholder rights management (in alignment with digitalization and the capabilities offered by new technologies). By leveraging a DLT based issuer channel, the industry can connect all the stakeholders of general meetings: issuer, agents, intermediaries, CSDs, and shareholders.

This solution and the technologies its uses (DLT, APIs) will allow to **reduce friction and manual intervention in the voting process** and also ensure that all information is transparent to stakeholders when required with the proper security, governance and risk mitigation procedures in place.

The solution allows for a **clear identification of shareholders** and their representatives, for easy-to-reach information about meetings, agenda items and management proposals, a full track record of casted vote and real-time monitoring of pre-assembly phases and voting results.

Through APIs, shareholders have real-time access to the data, including holdings and votes and have the ability to view the full voting history on a single account. **Thanks to a DLT-based ecosystem information is fully auditable with a holistic view of all actions recorded in an immutable ledger**. The usage of ISO 20022 as a base standard allows for full interoperability between the business applications, the ledger and the consumption channels (APIs or messaging).

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