



Open Day 2019

Future Clearing APIs

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New technologies drive transformation

APIs Help Drive Digital Transformation

CIOs can champion an API strategy that promotes business transformation by enabling self-service IT and the reuse and monetization of existing APIs. **THE WALL STREET JOURNAL**

CIO

How API adoption can boost annual profits

Digital transformation success underpinned by API economy

DXJOURNAL

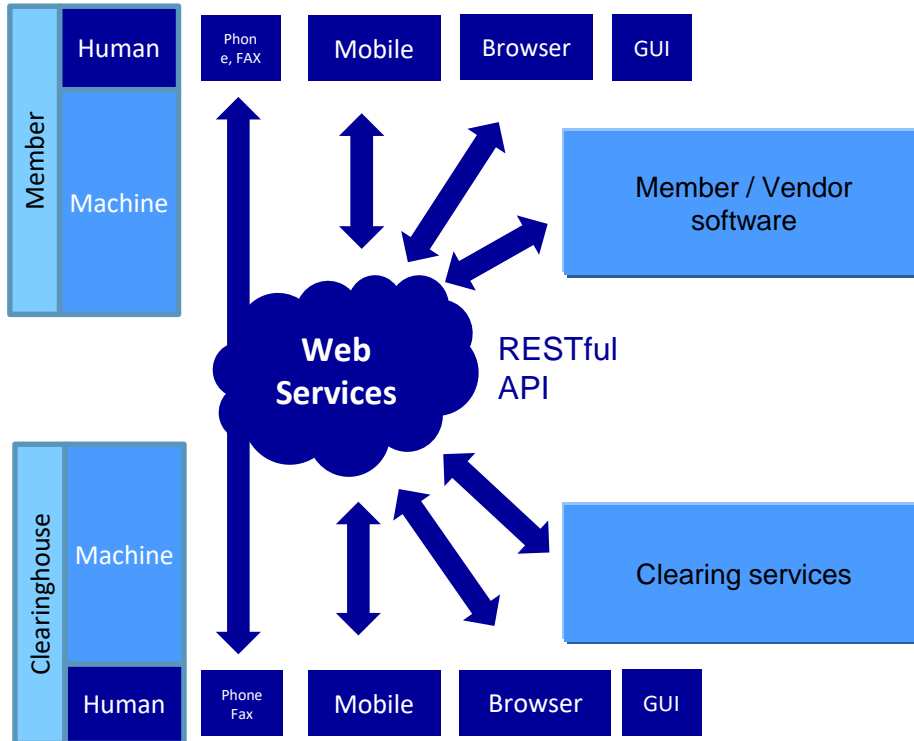
Why The API Economy Is Exploding

Forbes

The classical drivers

- Extend client-partners' ecosystem
- Composition / co-creation
- R&D externalisation / innovation
- Flexibility / enterprise as a service
- Gain compliance with regulation
- Improve digital user experience

Member interaction



- Flexibility
- Content configurability
 - Channel configurability
 - Intelligent workflows

- Channel
- Human-to-human
 - Human-to-machine
 - Machine-to-machine

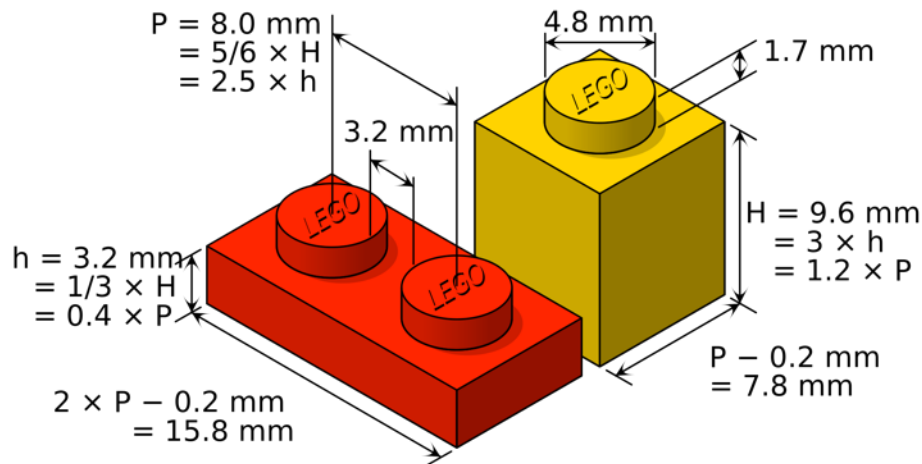
- Content
- Reference Data
 - Transaction* Data
 - News, status, alerts

*Trades, positions, collateral, payments,...

What is driving Eurex Clearing

- Interface are message based, file based or GUIs
- File interfaces represent a classical approach coming from the traditional end of day process
- Current developments are pushing for longer trading and clearing business days
- It is getting more and more difficult to finish the end of day across all services and instruments
- Eurex Clearing generates hundreds of reports for hundreds members generating excessive loads
- No control of report usage and consumption
- Huge storing volume demand to cover required storage period on both Member and Eurex Clearing Side
- Cumbersome automation
- Flexibility
- ...

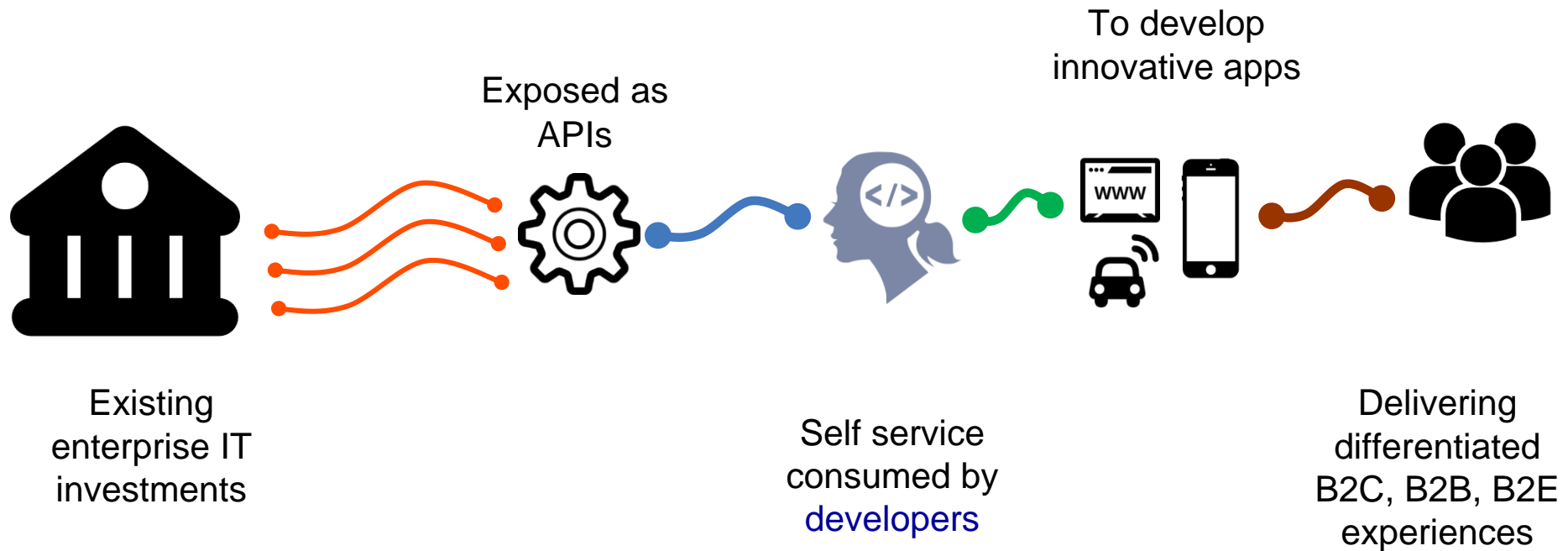
What is an API



APIs, the Application Programming Interfaces, are machine interfaces between application/services

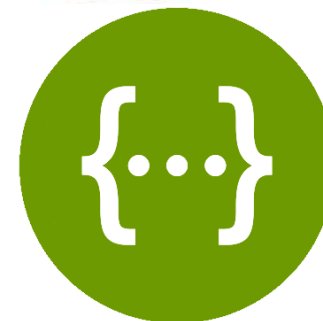
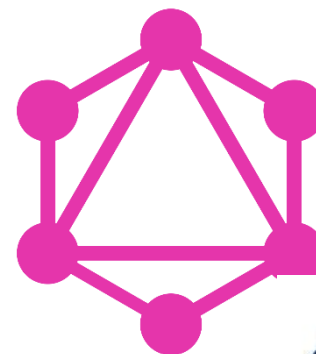
- An API specification includes
 - Design style REST, SOAP
 - Data transmission HTTP(S), MQ
 - Data representation JSON, XML, WS-*
 - Data access SAML, OAuth 2.0
- APIs can be
 - Private
 - Partner
 - Member
 - Public

API economy



API technology

- An API is a communication tool for IT systems that allows the exposure of an asset, service, business function or information between two entities
- Leveraging / consuming business functions, allowing the execution of actions
- Exchange information between different sources.
- An API is easy to understand, access and use by developers of the applications that consume them and it can be seen as a door to consume a DBAG service.
- API utilize standard technologies
 - Open API 3.0, 2.0 Swagger
 - http/REST
 - GraphQL
 - OAUTH
 - API gateways
 - Open endpoint
 - Live cycle management

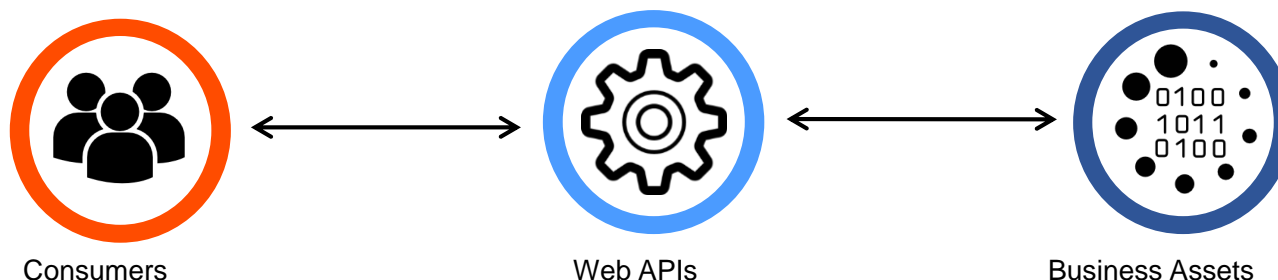


{ REST }

API eco system

API - a new channel to

- Reach clients & partners (and internal organizations)
- Enable new businesses models



APIs are an enabler of **new business models**, allowing Deutsche Börse AG to open to new markets and asset classes, either by exposing their own APIs or consuming third party APIs.

APIs allow **to accelerate and outsource the innovation** within Deutsche Börse AG, allowing third parties to innovate on the products and services, accessing them through APIs in a controlled and safe way.

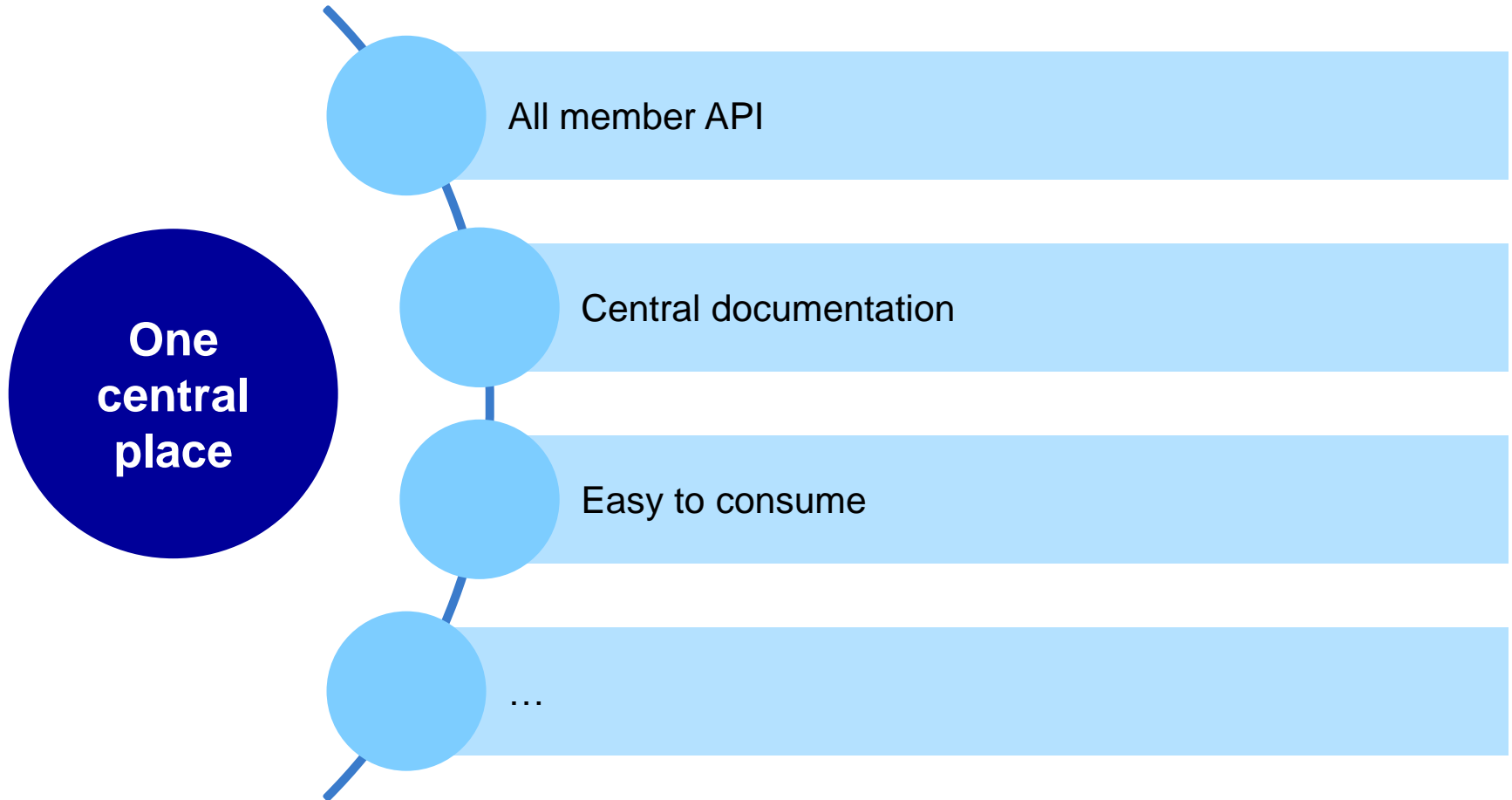
APIs **accelerate relationships with business partners**, simplifying interoperability between DBAG's and members.

APIs **streamline the development of new applications** in the Deutsche Börse AG channels, also promoting a **unique user experience** across all channels.

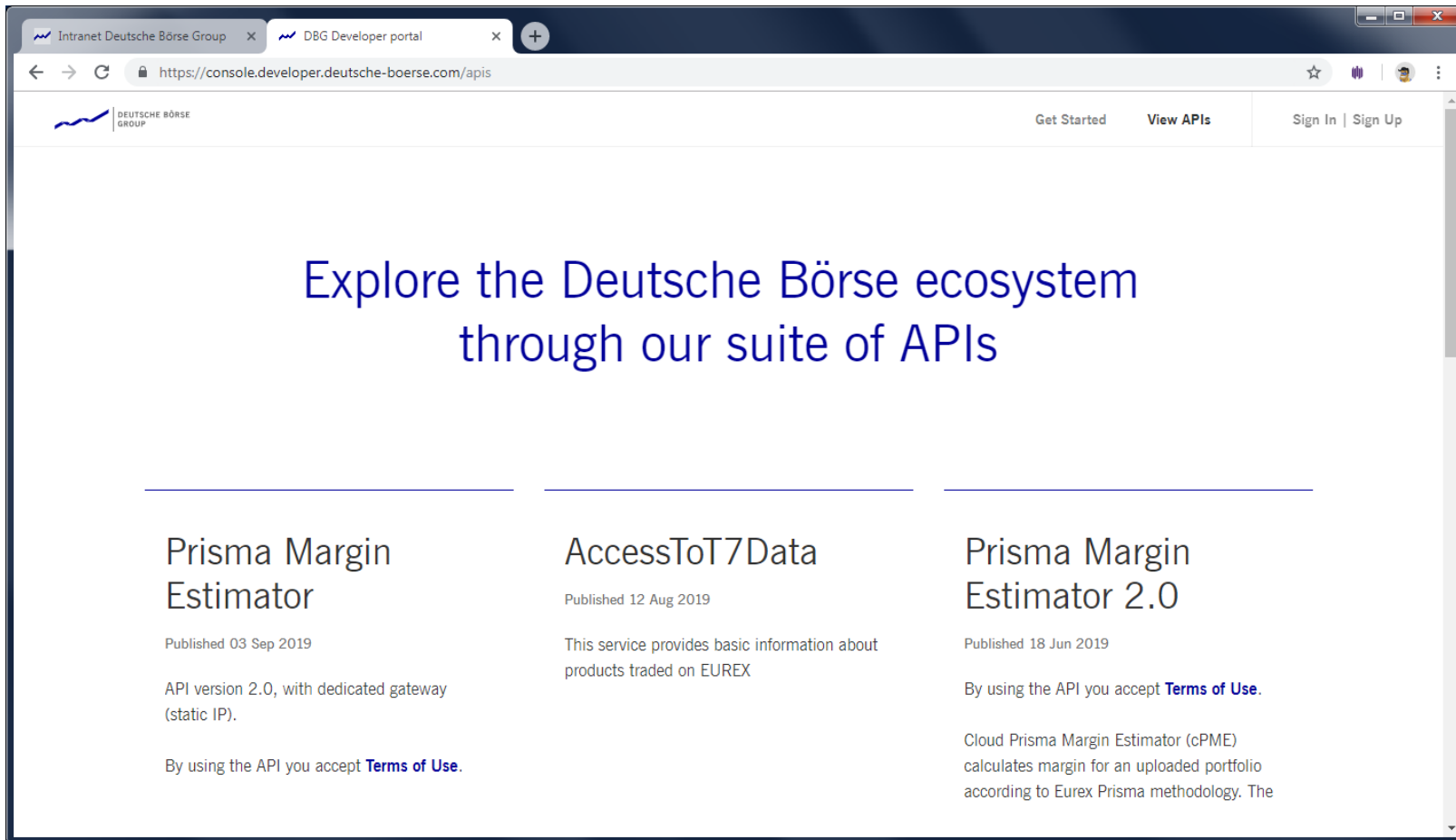
API benefits

- Central location for publishing API
 - The focus here is on REST API
 - Strict regime on formats and protocols
- Enforcing usage policies
 - Policies are applied and maintained centrally
- Access control
 - Access to resources is controlled by tracking and monitoring
 - Subscribers are identified, data access is transparent
- Community
 - API user have a single point of access to documentation
 - Provide API catalogue
 - Providers have a channel to consumers
- Improved usage tracking
 - Usage of API service is tracked to support the development of future release
 - Release management can utilize usage data to make educated decision
- Reporting on performance
 - Performance analysis help to identify service failures
 - Support customer support

Deutsche Börse Group web portal



API manager



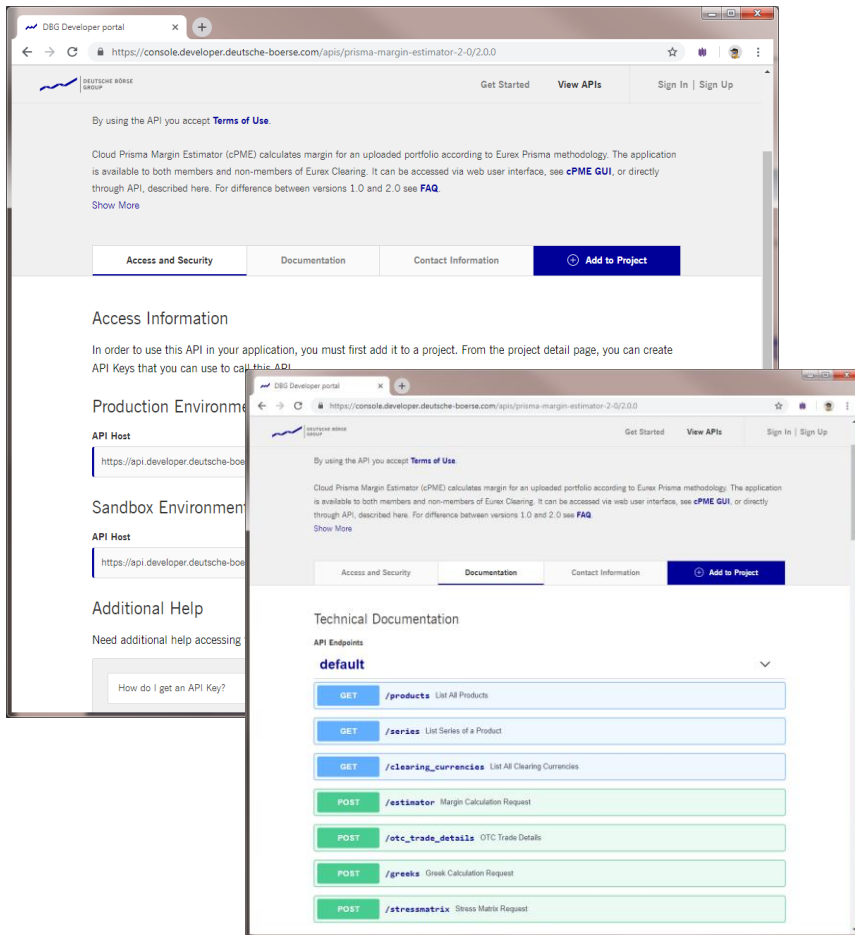
The screenshot shows a web browser window with two tabs: 'Intranet Deutsche Börse Group' and 'DBG Developer portal'. The address bar shows the URL 'https://console.developer.deutsche-boerse.com/apis'. The page header includes the Deutsche Börse Group logo, navigation links for 'Get Started', 'View APIs', and 'Sign In | Sign Up'. The main content area features a large heading: 'Explore the Deutsche Börse ecosystem through our suite of APIs'. Below this, three API cards are displayed:

- Prisma Margin Estimator**
Published 03 Sep 2019
API version 2.0, with dedicated gateway (static IP).
By using the API you accept [Terms of Use](#).
- AccessToT7Data**
Published 12 Aug 2019
This service provides basic information about products traded on EUREX
- Prisma Margin Estimator 2.0**
Published 18 Jun 2019
By using the API you accept [Terms of Use](#).
Cloud Prisma Margin Estimator (cPME) calculates margin for an uploaded portfolio according to Eurex Prisma methodology. The

Deutsche Börse Group API portal

- The API gateway acts as the single entryway for all API calls and ensures a reliable processing of each and every call. It provides a standard way for publishers and consumers to access, publish and consume APIs.
- The API gateway implements important end-to-end security measures to prevent data leakage and comply data protection requirements. It also logs all the API activity needed for audit purposes and it provides publisher/consumers with usage and performance measurement data.
 - API gateway features
 - ✓ Communication channel encryption
 - ✓ Consumer authentication / authorisation
 - ✓ End-user authentication / authorisation
 - ✓ Auditing / logging
 - ✓ Usage metrics
 - o Quota & limits enforcement
 - Integration with Deutsche Börse Group IdP (to authenticate existing customers)
 - Reporting and analytics
 - Rate limiting & quota management

Key capabilities

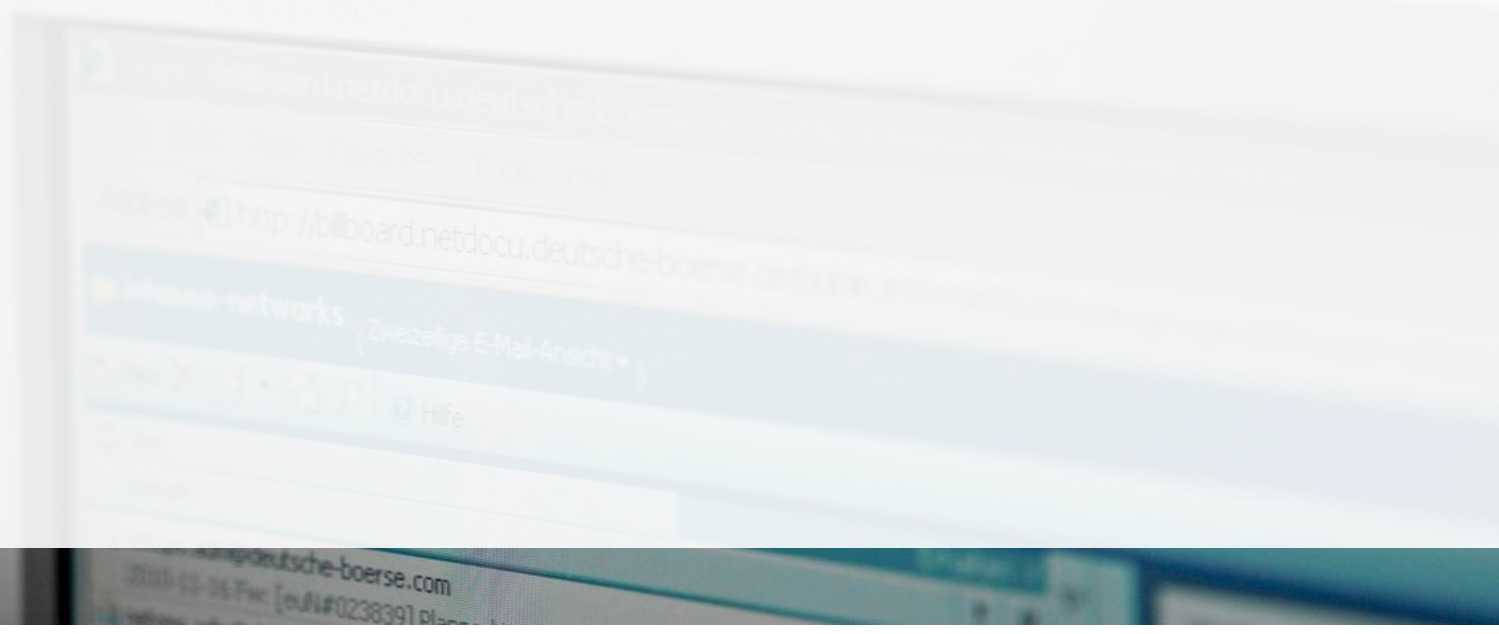


Socialize

- Engage with API consumers via community building features: blogs, forums, ratings etc.
- Online documentation



Q & A





Thank you for your attention.

Contact

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