



GLEIF's Data Quality Framework

Practical Approach for Effective Data Quality Management

UN Data Strategy Webinar

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Who is the Global Legal Entity Identifier Foundation (GLEIF)?

- GLEIF is a not-for-profit Swiss foundation, founded by the Financial Stability Board (FSB)
- GLEIF is overseen by the Regulatory Oversight Committee (ROC) with
 - **65 regulators** and
 - **19 observers**
 - from **50 countries**
- GLEIF Board has **17 independent directors**
- **38 accredited Partners** for LEI issuing (**LOUs**) and growing
- **> 2,7 million LEIs** as of today, available as open data without IP or copyright protection

The Financial Stability Board (FSB) and the Group of Twenty (G20) have endorsed the LEI, Global LEI System and GLEIF.



Legal Entity Identifier (LEI) and Key Reference Data

Who is who? Who owns whom?

"Level 1"

LEI Code 894500451FZY32C0B274 ⓘ	
(Primary) Legal Name	Liberty Holdco Ltd.
Registered At	Registry of Companies (General Registry) Registry of Companies (General Registry) Cayman Islands RA000086
Registered As	CO-364933
Jurisdiction Of Formation	KY
General Category	GENERAL
Entity Legal Form	limited liability company (en) MPUG
Entity Status	● ACTIVE
Entity created at	2000-03-31T15:00:00Z

- EntityID & Authoritative source
- Entity creation date
- Address information (...)

"Level 2": Direct & ultimate parents & fund relationships

Parents ⓘ	Hide
Parents ⓘ Published Relationship ⓘ Lapsed Relationship ⓘ Reporting Exception ⓘ	
楽天グループ株式会社 ⓘ (Direct Parent) ⓘ	楽天グループ株式会社 ⓘ (Ultimate Parent) ⓘ

LEI Data is available free of charge in various formats:

- GLEIF API: <https://api.gleif.org/docs>
- LEI Search: <https://search.gleif.org>
- Golden Copy: <https://www.gleif.org/en/lei-data/gleif-golden-copy>

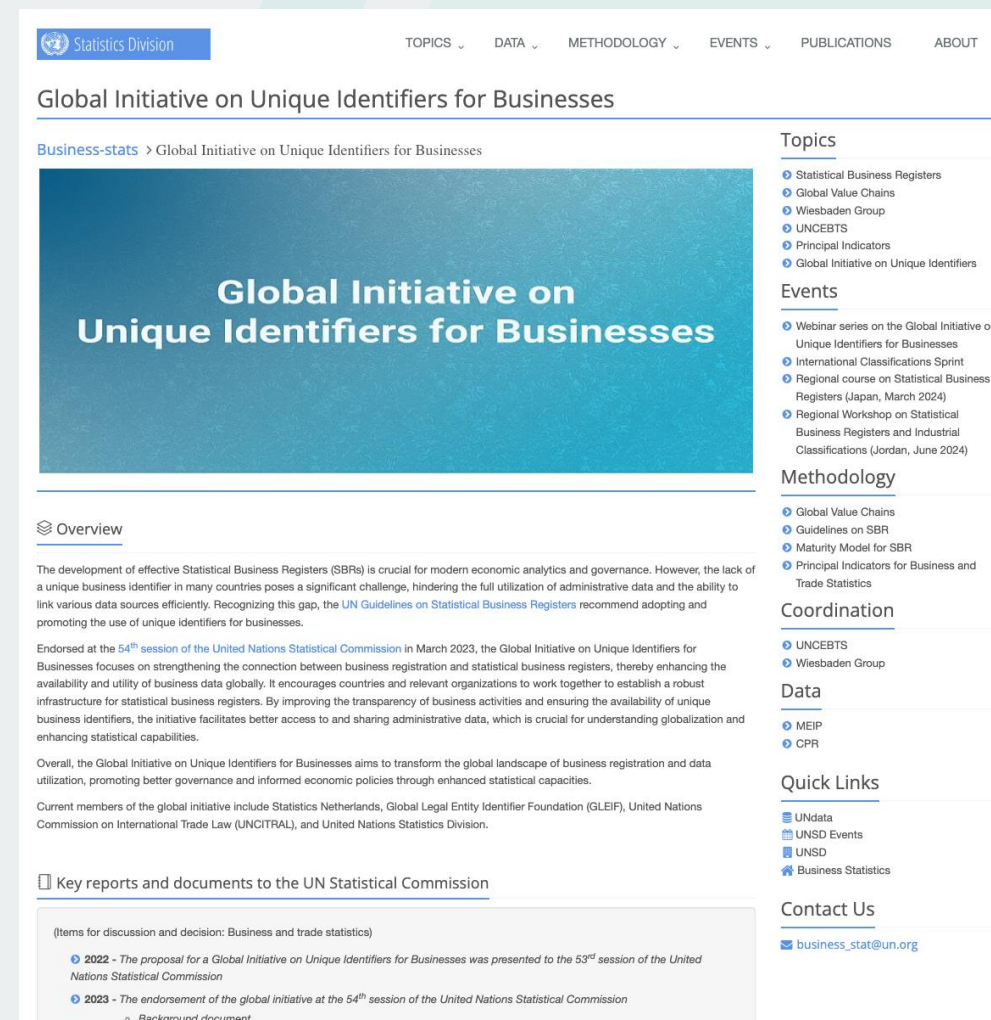


Joint initiative between UNSD and GLEIF

Initiative aims to:

- Strengthen the transparency on businesses in countries by improving their registration
- Improve the availability of unique business identifiers in administrative data sources in countries
- Promote access to and sharing of administrative data for statistical business registers
- Demonstrate the importance and benefit of linking national identifiers with global identifiers, such as the LEI

Learn more here: <https://unstats.un.org/unsd/business-stat/GIUIB.cshtml>



Statistics Division

TOPICS DATA METHODOLOGY EVENTS PUBLICATIONS ABOUT

Global Initiative on Unique Identifiers for Businesses

Business-stats > Global Initiative on Unique Identifiers for Businesses

Global Initiative on Unique Identifiers for Businesses

Overview

The development of effective Statistical Business Registers (SBRs) is crucial for modern economic analytics and governance. However, the lack of a unique business identifier in many countries poses a significant challenge, hindering the full utilization of administrative data and the ability to link various data sources efficiently. Recognizing this gap, the [UN Guidelines on Statistical Business Registers](#) recommend adopting and promoting the use of unique identifiers for businesses.

Endorsed at the 54th session of the United Nations Statistical Commission in March 2023, the Global Initiative on Unique Identifiers for Businesses focuses on strengthening the connection between business registration and statistical business registers, thereby enhancing the availability and utility of business data globally. It encourages countries and relevant organizations to work together to establish a robust infrastructure for statistical business registers. By improving the transparency of business activities and ensuring the availability of unique business identifiers, the initiative facilitates better access to and sharing administrative data, which is crucial for understanding globalization and enhancing statistical capabilities.

Overall, the Global Initiative on Unique Identifiers for Businesses aims to transform the global landscape of business registration and data utilization, promoting better governance and informed economic policies through enhanced statistical capacities.

Current members of the global initiative include Statistics Netherlands, Global Legal Entity Identifier Foundation (GLEIF), United Nations Commission on International Trade Law (UNCITRAL), and United Nations Statistics Division.

Key reports and documents to the UN Statistical Commission

(Items for discussion and decision: Business and trade statistics)

- 2022 - The proposal for a Global Initiative on Unique Identifiers for Businesses was presented to the 53rd session of the United Nations Statistical Commission
- 2023 - The endorsement of the global initiative at the 54th session of the United Nations Statistical Commission
 - Background document

Topics

- Statistical Business Registers
- Global Value Chains
- Wiesbaden Group
- UNCEBTS
- Principal Indicators
- Global Initiative on Unique Identifiers

Events

- Webinar series on the Global Initiative on Unique Identifiers for Businesses
- International Classifications Sprint
- Regional course on Statistical Business Registers (Japan, March 2024)
- Regional Workshop on Statistical Business Registers and Industrial Classifications (Jordan, June 2024)

Methodology

- Global Value Chains
- Guidelines on SBR
- Maturity Model for SBR
- Principal Indicators for Business and Trade Statistics

Coordination

- UNCEBTS
- Wiesbaden Group

Data

- MEIP
- CPR

Quick Links

- UNdata
- UNSD Events
- UNSD
- Business Statistics

Contact Us

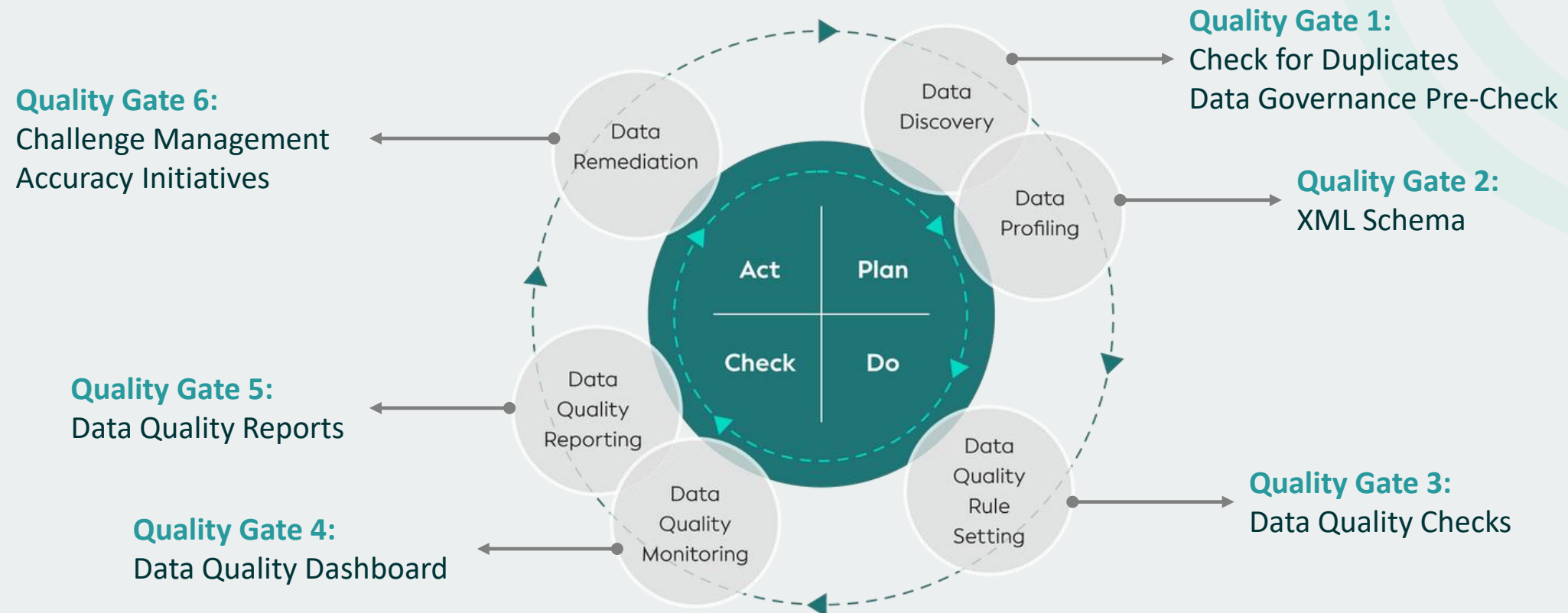
business_stat@un.org

The philosophy behind - Total Quality Management (TQM)

- Total Quality Management (TQM) is a management strategy that emphasizes a continuous, organization-wide effort to maintain quality customer service and satisfaction.
- The goal of TQM is to foster customer loyalty by delivering service levels that keep customers coming back again.
- TQM aims at meeting customer expectations and exceeding them whenever possible.
- TQM requires consistent feedback from employees and customers to determine how services and products can be improved across the organization.
- According to the TQM philosophy, the more you improve processes in every department, the easier it will be to deliver higher-quality products and services to customers.
- With TQM, everyone in the company should be focused on quality improvement with the shared goal of boosting customer loyalty and satisfaction.



Data Quality Gates



Full transparency: <https://www.gleif.org/en/lei-data/gleif-data-quality-management>



Quality Gate 1: Proactive Data Quality Management

Check for Duplicates

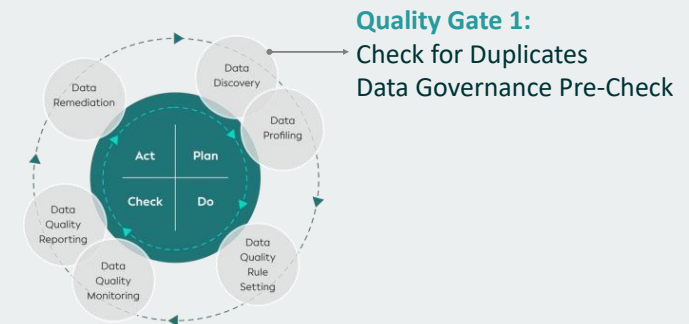
- API provided by GLEIF for LOU usage
- Supports LEI issuers in fulfilling their obligations and responsibilities to avoid the introduction of duplicate records
- Detects uniqueness (no two organizations shall have the same LEI code) and exclusivity violations (each organization shall have only one LEI code)
- Built on state-of-the-art fuzzy-logic algorithms, leveraging modern technology for delivering immediate responses
- Leverages experts' knowledge in pre- and post-processing steps for optimized results (e.g., legal form and entity category handling)
- Mandatory usage for new LEI records

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Useful documents and links:

- [How to Ensure Data Quality with the LEI \(video\)](#)
- [Check for Duplicates Dictionary v1.2](#)



Quality Gate 1: Proactive Data Quality Management

Data Governance Pre-Check

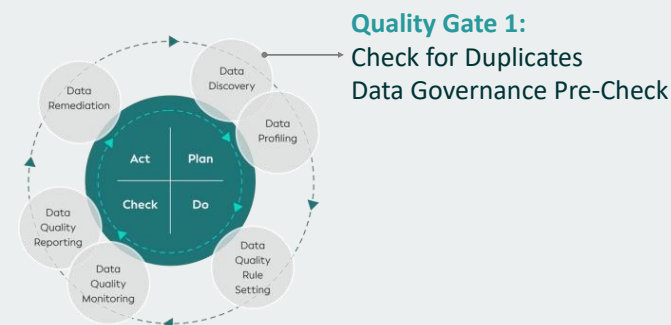
- API provided by GLEIF for LOU usage
- Supports LEI issuers in fulfilling their obligations and responsibilities for delivering high-quality LEI reference data
- Provides upfront feedback for potential data quality failures before the data enters the public data pool
- Provides detailed information about the cause of the failure
- Enables LEI issuers to remediate the potential issues prior to the data entering the Global LEI System
- Mandatory usage for new and updated LEI records

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[Episode 08](#)

Useful documents and links:

- [Data Quality Rule Setting v3.3](#)
- [Interactive Rule Setting](#)
- [State Transition and Validation Rules v2.71](#)



Quality Gate 1: Proactive Data Quality Management


Data Governance Pre-Check - Demo

Check results are communicated immediately to the requestor

Not only the results of the check but also the reason for failing is visible

Enables LEI issuers to remediate potential data quality issues prior to publication

Improved overall data quality for users of the Global LEI System



Data Governance

- Rule Setting
- Pre-Check

Pre-Check Facility

LEI	<input type="button" value="Choose File"/>	No file chosen
RR	<input type="button" value="Choose File"/>	No file chosen
REPEX	<input type="button" value="Choose File"/>	No file chosen



Quality Gate 2: Standardization

Common Data File (CDF) formats and the XML Schema

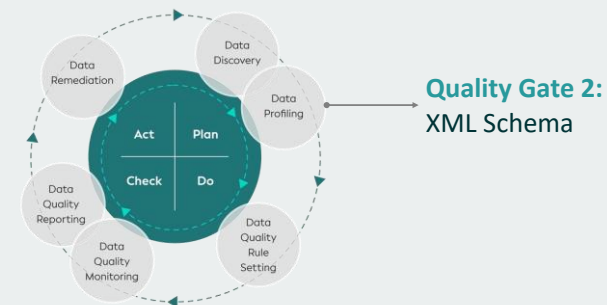
- The CDF formats standardize the form and the structure for LEI data exchange
- Each reporting format is defined in a detailed specification document - XML Schema Definition (XSD)
- The XSDs enforce minimum data quality
- Files not passing the XSD validation are not included in GLEIF services Concatenated Files and Golden Copy Files

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Useful documents and links:

- [Common Data File formats](#)
- [XSD LEI-CDF v3.1](#)
- [XSD RR-CDF v2.1](#)
- [XSD Reporting Exceptions v2.1](#)



Quality Gate 3: Data Quality Checks

Principles

- Black & White checks – less room for fuzziness
- Modular approach – a check is the smallest possible unit:
 - Complex use cases are described by multiple checks (Check Families) – checks could be assigned to one or multiple Check Families
 - Identical failures (reasons) are counted only once
 - “Pre-Check-only” tag allowing fuzzy checks and recommendations with no implication on the SLAs
- 12 defined data quality criteria – each check is assigned to one criterion
- Three defined maturity level – each check is assigned to one maturity level

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Episodes [12](#) and [13](#)

Useful documents and links:

- [Data Quality Rule Setting v3.3](#)
- [Interactive Rule Setting](#)
- [State Transition and Validation Rules v2.71](#)



Quality Gate 3:
Data Quality Checks

Quality Gate 4: Monitoring

GLEIF Data Monitoring Dashboard

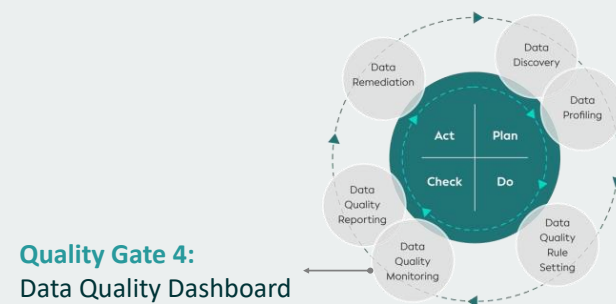
- Interactive state-of-the-art dashboard tool
- Supports LEI issuers in identifying any Data Quality issues enabling fast remediation
- Supports LEI issuers in fulfilling their obligations and responsibilities for managing high-quality LEI reference data
- Enables public data users to analyze the quality of the LEI data in a proactive and transparent manner
- Provides high-level aggregations and overviews of the defined KPIs as well as drill downs on the LEI level
- Provides detailed Data Quality Check descriptions and results

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Useful documents and links:

- [Interactive Data Monitoring Dashboard](#)
- Hint: The question mark icon on the top right corner of each element (Card) provides additional helper info



Quality Gate 4: Monitoring

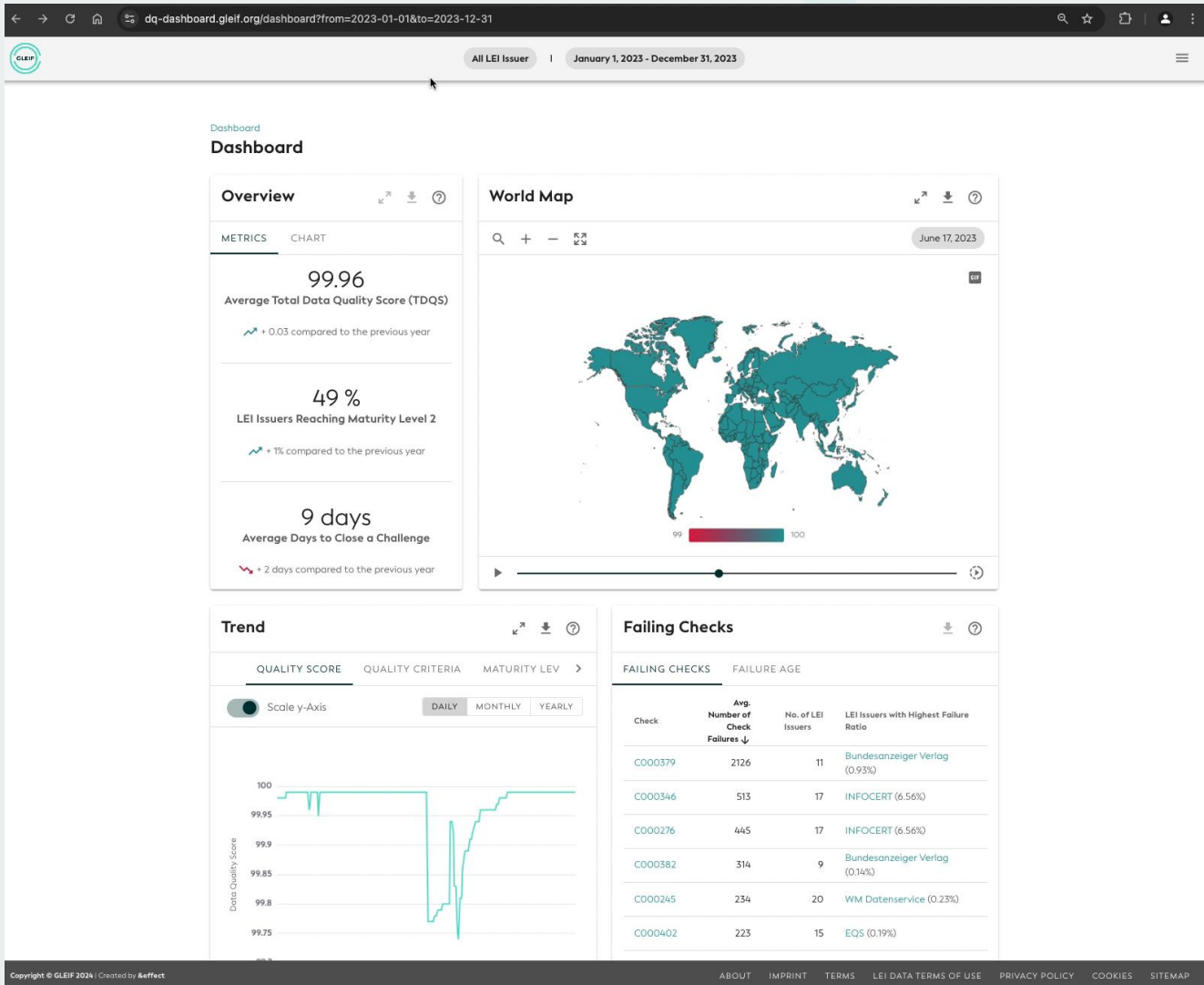
GLEIF Data Monitoring Dashboard - Demo

Publicly available service
<https://dq-dashboard.gleif.org/>

All KPIs are available over time and LEI issuer via global filters

Different Views provide insights on different levels and type of information

Dashboard users can compare the results or performance of different (groups of) checks and LEI issuers



Quality Gate 5: Reporting

Data Quality Monthly Reports

- Publicly available monthly Data Quality Reports published by GLEIF
- Global LEI Data Quality Reports demonstrate the overall level of data quality achieved in the Global LEI System
- LEI Issuer Data Quality Reports demonstrate the level of data quality achieved by the individual LEI issuing organizations

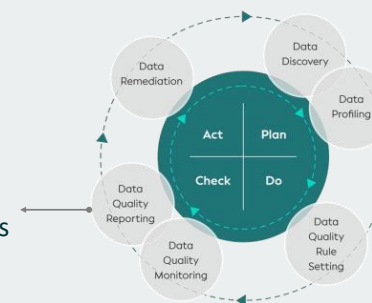
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Useful documents and links:

- [Data Quality Report Dictionary v3.0](#)

Quality Gate 5:
Data Quality Reports



Quality Gate 6: Data Remediation

Challenge LEI Data

- Central challenge facility provided by GLEIF available free-of-charge to any public user
- Provides public users with the opportunity to substantiate doubts regarding the accuracy of the related reference data
- Extends the ability to trigger updates to the LEI record

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Useful documents and links:

- [LEI Search](#)
- [User Guide](#)

Quality Gate 6:
Challenge Management
Accuracy Initiatives



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