

ESMA Data Strategy 2023-2028

2025 Update

Table of Contents

1	Executive Summary	3
2	Drivers, stakeholder expectations, and current situation	5
2.1	Background	5
2.2	Driving factors for ESMA Data Strategy 2023-2028	6
2.2.1	New or evolving ESMA mandates and activities:	6
2.2.2	Technological developments/digitalisation:	6
2.3	Stakeholders' expectations	7
2.4	Current ESMA Data Situation	8
3	Data Vision and Strategy	9
3.1	Data vision	9
3.2	Data strategic objectives	9
3.2.1	Objective A – Enhanced data hub: enhance ESMA's role as data hub, focusing on improved data, information accessibility, interoperability and usability, along with data harmonisation and standardisation.	10
3.2.2	Objective B – Access to data of public interest: contribute to providing relevant, useful and understandable information to the market in machine-readable form, and facilitate its use, including by retail investors.	11
3.2.3	Objective C – Data-driven supervision: enable cutting-edge, smart and effective data-driven supervision.....	12
3.2.4	Objective D – Thought leadership: pursue thought leadership and collaboration on data standards, technologies, and reporting innovations	12
3.2.5	Objective E – Efficient data policy: promote efficiency, transparency, and cooperation in data policy, and reduce reporting burdens	14
3.2.6	Objective F – Systematic data use: systematically use data for evidence-based policy development, supervision and risk assessment.....	15
4	Target capabilities	17
5	Implementation plan (2025 update)	20
5.1	Context for an updated roadmap	20
5.1.1	Background.....	20

5.1.2	Review exercise.....	21
5.2	Updated roadmap	21
5.2.1	Objective A – Enhanced data hub	22
5.2.2	Objective B – Access to data of public interest.....	22
5.2.3	Objective C – Data-driven supervision	23
5.2.4	Objective D – Thought leadership	24
5.2.5	Objective E – Efficient data policy	25
5.2.6	Objective F – Systematic data use	25
5.3	Resources.....	26
6	Communication plan	29
7	Annexes	30
7.1	Annex I – Acronyms and definitions.....	30
7.2	Annex II – 2023 Implementation Plan	31
7.2.1	Objective A – Enhanced data hub	31
7.2.2	Objective B – Access to data of public interest.....	32
7.2.3	Objective C – Data-driven supervision	32
7.2.4	Objective D – Thought leadership	32
7.2.5	Objective E – Efficient data policy	33
7.2.6	Objective F – Systematic data use	33

1 Executive Summary

Reasons for publication

This document supplements the ESMA Strategy 2023-2028 by elaborating on how ESMA data assets will be mobilised to best serve and help deliver on its strategic and thematic objectives in the period covered.

Contents

The ESMA Data Strategy 2023-2028 first lays out the internal and external motivations for this report, which serve as a baseline for subsequently articulating ESMA's data vision and objectives. It then provides details on how ESMA intends to scale up its data capabilities to ensure the successful delivery of the listed projects and tasks within the proposed timeline, and to achieve its strategic objectives:

- enhance ESMA's role as data hub, focusing on improved data, information accessibility, interoperability and usability, along with data harmonisation and standardisation;
- contribute to providing relevant, useful and understandable information to the market in machine-readable form, and facilitate its use, including by retail investors;
- enable cutting-edge, smart and effective data-driven supervision;
- pursue thought leadership and collaboration on data standards, technologies, and reporting innovations;
- promote efficiency, transparency, and cooperation in data policy, and reduce reporting burdens; and
- systematically use data for evidence-based policy development, supervision and risk assessment.

2025 update of the implementation plan

At the time of the ESMA Data Strategy's publication in 2023, ESMA had already started with the scaling up of its data capabilities and the implementation of some of the first planned deliverables and has continued to do so since then. This document, and in particular the implementation plan section, was and is meant to be revisited over time as new legislative, technological or any relevant types of development emerge that need to be addressed in a way that would require adjustments to the ESMA Data Strategy 2023-2028. Accordingly, the implementation plan is now updated to reflect the evolving environment in which ESMA operates. This 2025 update places particular emphasis on the adoption of emerging technologies, the political impetus for simplification and reporting burden reduction, and the

aspiration for increased efficiency by ESMA and NCAs. The data vision and data strategic objectives continue to be pertinent for the period covered and therefore remain unchanged.

2 Drivers, stakeholder expectations, and current situation

2.1 Background

The mission of the European Securities Market Authority (ESMA) is to enhance investor protection, promote orderly financial markets and safeguard financial stability. Established in January 2011 as part of the European System of Financial Supervision (ESFS), ESMA's central objectives are achieved by assessing risks to investors, markets and financial stability; completing a single rulebook for EU financial markets; promoting supervisory convergence; and directly supervising several key actors in financial markets.

In October 2022 ESMA announced its new strategy for 2023-2028, which focuses on three strategic priorities (fostering effective markets and financial stability, strengthening the supervision of EU financial markets and enhancing the protection of retail investors) and two thematic drivers (enabling sustainable finance and facilitating technological innovation and effective use of the data).



The existing ESMA Data Strategy, which was developed in 2017, was instrumental to establish ESMA as an Authority that relies regularly on the use of evidence-based analyses; that is a key and reliable data hub for its stakeholders; that facilitates data access, distribution, and analysis for NCAs achieving EU-wide synergies; and that is the reference for EU financial markets data regulation and the development and adoption of international data standards.

It now needs to be reevaluated to account for the many changes that occurred between 2017 and 2023, as well as to tackle the new challenges ahead, in order to best support the ESMA Strategy 2023-2028.

2.2 Driving factors for ESMA Data Strategy 2023-2028

ESMA has become an established regulator and supervisor playing a significant role in the well-functioning of the EEA financial markets. Meanwhile, the strategic role and importance of data has evolved significantly since 2017, as new legal mandates, new regulatory frameworks and new technologies – such as Big Data and Artificial Intelligence (AI) technologies – increase the ability for authorities to obtain better and broader insights. These developments result in increased expectations from various stakeholders and ESMA must strive to meet them. To keep up with a fast-changing landscape and uphold the appropriate level of regulatory and supervisory oversight, ESMA must consider the following driving factors in its new Data Strategy:

2.2.1 New or evolving ESMA mandates and activities:

- Recently established supervisory mandates (e.g., Critical Benchmark Administrators, DRSPs, Tier 2 CCPs);
- New regulatory work on Digital Finance (e.g., DORA, MiCA, DLT Pilot Regime) and Sustainable Finance (e.g., CSRD, SFDR);
- The European Commission Strategy on supervisory data in EU financial services¹;
- The further progress on the Capital Markets Union agenda, including the establishment of a European Single Access Point (ESAP).

2.2.2 Technological developments/digitalisation:

- The possibilities created and challenged posed by the rapid growth of new technologies suited for supervision, reporting, data collection or data use, and fast-evolving digital developments (e.g., in the areas of Cybersecurity, Big Data, DLT, Artificial Intelligence, RegTech / SupTech);
- The lack of sufficient resources and expertise across ESMA and NCAs to closely follow technological innovation, while grasping at the opportunities offered.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0798>

2.3 Stakeholders' expectations

The ESMA Data Strategy 2023-2028 objectives consider the expectations of and added value for ESMA's stakeholders. Specifically, 25 interviews were conducted with a sample of representatives of different groups: ESMA staff, NCAs, European Bodies, International Organisations, entities supervised by ESMA and market participants. This section summarises the key findings from the interviews, as regards the stakeholders' expectations of the ESMA Data Strategy 2023-2028.

While ESMA invested a lot of effort in improving data capabilities, which is recognised by its stakeholders, some areas for improvement and expectations for the future have been voiced moving forward, which are summarised in the paragraphs below and have been considered when establishing the objectives of this new Data Strategy. In that respect, stakeholders consider that to create additional value ESMA should:

- increase the efficiency of data reporting processes by realising economies of scale in collaboration with the other ESAs and other EU bodies through **enhanced governance and cooperation**;
- further reduce the reporting burden and increase data quality by using simplified, standardised, non-duplicative, and unambiguous requirements achieving **data harmonization and a common data dictionary**;
- be a thought leader and reference point in modernising data reporting technologies, to reduce compliance cost and provide high quality data to stakeholders through the **optimisation of reporting and dissemination flows**;
- contribute further to the improvements in data quality and usability, through the promotion of **more efficient data quality responsibilities and governance**, in collaboration with NCAs and other stakeholders;
- promote effective and efficient collaboration among authorities by improved **sharing of data, information, analytical tools** (i.e., the data hub) **and expertise** to provide analytical insights. This should be done through harmonized and interoperable data sharing processes, including improved machine-to-machine interactions to reduce interpretation issues and processing costs, thus contributing to an overall reduction of reporting burdens by, e.g., reducing duplicative data requests;
- have organisation-wide capabilities for advanced **risk-based, data-driven supervision**, thereby improving the availability and quality of data for direct supervision and increased supervisory convergence;
- be a thought leader on the regulation of new financial products and services for the purpose of supervisory reporting and regulation, with an increased focus on information related to **sustainability and investor protection**; and

- increase **communication, transparency, and feedback** on why and how the data is used by the regulatory and supervisory community through, among others, closer cooperation with market participants, and other authorities
- improve access to data and analytics by market participants, by extending the scope of shared data and ensuring easy access, in particular in a machine-readable form.

2.4 Current ESMA Data Situation

An assessment of the ESMA data capabilities was performed at the end of 2021 based on an industry-leading data capability maturity framework.

Overall, the assessment concluded that:

- **Data is a strategic driver at the core of ESMA:** ESMA has developed consistent data reporting standards in all areas where ESMA has a regulatory/supervisory role and has processes in place to access and use data, create analytical content, as well as plan and recruit data talents; however,
- **ESMA is mostly on an “opportunistic²” maturity level:** initiatives and efforts to exploit data are not systematically coordinated internally, and capacity to analyse, integrate, organise and access data could be more advanced. ESMA data governance is also too complex and not clearly defined enough, which strains resources in coordination efforts.

2025 update

Regarding the latter point, it is worth noting that by 2025, the implementation of strategic initiatives outlined later in this document has already enabled ESMA to make significant progress in strengthening its internal organisation, data governance structures, and technical capabilities.

² “Opportunistic” to be understood in this context as ESMA not having a fully consistent and coordinated approach to data initiatives across the different work areas and departments.

3 Data Vision and Strategy

The below ESMA Data vision and objectives are based on the overall ESMA Strategy 2023-2028 recently published, the ESMA stakeholders' expectations detailed in a previous section, as well as the limitations exposed during the capability assessment mentioned above.

The ESMA Data Strategy complements the ESMA's Strategy by reflecting on the data challenges posed by the latter and translates them into a vision and actionable objectives that will help ESMA to deliver on its mission during the 2023-2028 period; focusing on its three strategic priorities and being driven by the two key themes.

3.1 Data vision

The ESMA Data vision is to “contribute to ESMA's mission with high quality data and analytical information”

This vision has three underlying drivers:

- **Data efficiency:** Reducing compliance costs of market participants and streamlining the use of data
- **ESMA and NCA data capabilities:** Sharing of information, knowledge and tools
- **Data at the core of ESMA:** Providing evidence based on data to support ESMA decisions and activities (including outcome-driven supervision)

A first step undertaken by ESMA that translates this vision into a tangible outcome is the creation of the Data Intelligence and Technology department. This department will cover the full set of competences related to the entire data lifecycle by the establishment of centres of excellence supporting internal and external stakeholders. The new organisation will be one of the key enablers for the implementation of ESMA's Data Strategy by setting up a close cooperation and understanding of the stakeholders needs, a comprehensive overview of data, processes and technology, efficiency, synergies, and economies of scales. The combined competences will enable exploiting the full potential of data by internal and external stakeholders.

3.2 Data strategic objectives

For the ESMA data vision to take shape, six strategic objectives have been defined. For each, a short explanation of the backdrop (where ESMA is, where it wants to be, and why) serves as an introduction to the main actions ESMA will undertake in the coming years to deliver on these objectives.

3.2.1 Objective A – Enhanced data hub: enhance ESMA's role as data hub, focusing on improved data, information accessibility, interoperability and usability, along with data harmonisation and standardisation.

As part of its previous data strategy ESMA has developed a standardised access to data for stakeholders via the creation of centralised systems providing access to supervisory data for competent authorities (e.g., the single access point to trade repositories data, transaction reporting exchange mechanism), to reference data on which market participants can rely for their day-to-day operation (e.g., the European Rating Platform, the Financial Instruments Reference Data System, the Financial Instruments Transparency System, the Prospectus database), as well as to public registers³ accessible on the ESMA website via a unified search engine.

ESMA will continue the development of the data hub to provide, in addition to data exchange functionalities, a **shared platform where stakeholders⁴ and ESMA can work on the same data in a unified manner and without duplicating it**. This will also help reducing the overall cost by avoiding building multiple systems for the same purpose and having the possibility to use the same platform for different projects, including joint projects with ESAs and NCAs.

The specific actions envisaged by ESMA are:

- Where appropriate, launch new joint projects to achieve economies of scale:
 - Explore the possibilities to provide NCAs with common data and supervisory tools⁵;
 - On the basis of the ongoing project to standardise order book data, develop a **mechanism facilitating order book data exchange⁶**;
 - Set up **data sharing arrangements** to facilitate data exchange between ESMA, NCAs and other authorities⁷
- Continue developing the **ESMA Data Platform based on big data technologies** towards a shared analytical platform:
 - Enable **advanced analytics** (Artificial Intelligence, Machine Learning, etc.) across datasets on the ESMA Data platform;

³ E.g., the list of MiFID authorised investment firms, UCITS and AIFMD fund managers, third-country benchmarks.

⁴ Stakeholders may include regulators and supervisors at national and European level, market participants, investors and academics.

⁵ E.g., ICT-related incident data under DORA, retail investor data under existing reporting regimes, data sources to support the supervision of ESG disclosures, supervisory tools for crypto-asset service providers or for exploring and analysing fund data.

⁶ As envisaged in the "Capital Markets Union: clearing, insolvency and listing package".

⁷ E.g., with central banks to contribute to developing an integrated reporting system as envisaged by the proposed AIFMD and UCITS directives.

- Provide high quality consolidated **master data⁸ to NCAs**;
- Develop **dashboards** with analytical functions and ready to use data aggregates **to serve internal and external stakeholders**;
- Allow **collaborative work with NCAs** on ESMA available regulatory and supervisory datasets (e.g., EMIR, SFTR, Securitisation, MiFID) as well as commercial ones (when contractually permitted) **via scripting, visualisation, and communication tools**.

3.2.2 Objective B – Access to data of public interest: contribute to providing relevant, useful and understandable information to the market in machine-readable form, and facilitate its use, including by retail investors.

Data, provided it is made available to the general public in a user-friendly format and an easily accessible way, can also serve ESMA's strategic priorities by enhancing transparency in the markets and reducing barriers to accessing regulatory information, thus contributing to building trust in the EU financial markets from all its participants, especially the (retail) investor community. This has become all the more relevant over the last years with the European Capital Markets Union (CMU) topic back on the regulatory agenda, as well as the growing role played by retail investors in financial markets and the risks they face.

ESMA has identified several areas of action to successfully deliver on this objective for which it will **leverage on its role as a data hub** and the foreseen improved capacities listed previously:

- Ensure **public data and information on securities markets is easily accessible and usable by all its stakeholders** (e.g., via centralised data access points and interfaces suitable for manual or automated access with intuitive search functionalities), in particular via the development of **ESAP⁹**;
- Provide **access to anonymised or aggregated supervisory data¹⁰** otherwise not publicly available to facilitate, e.g., innovation and research¹¹;
- Share **data and analytics with the market** in an intelligible, structured and user-friendly manner by leveraging the ESMA Data Platform, in order to grant retail investors easier access to public information¹².

⁸ Master data to be understood as a unique source of reference data that NCAs can reuse in their processes and analytics in order to ensure a consistent approach and comparability of results.

⁹ ESMA will also contribute to this objective by facilitating the establishment of Consolidate Tape Providers.

¹⁰ E.g., EMIR, SFTR, MiFIR or CRA data.

¹¹ E.g., by contributing to the EU Digital Finance Platform Data Hub.

¹² E.g., by exposing key metrics and interactive dashboards on financial entities and instruments.

3.2.3 Objective C – Data-driven supervision: enable cutting-edge, smart and effective data-driven supervision

Data plays an increasingly important role in ESMA's and NCAs' supervisory activities, with new types of data and growing volumes available to authorities. On the other side, innovative technologies also drive changes via new types of activities becoming subject to supervision. Therefore, ESMA will continue to use and **make available to supervisors the necessary data, information and tools** enabling data-driven supervision and harnessing the synergies between the complementary ESMA and NCAs supervisory activities.

In particular, ESMA intends to:

- Strengthen the cooperation with NCAs on the use of data in supervision, to identify and exploit synergies between the supervisory activities of ESMA and NCAs, by **sharing expertise and performing joint undertakings** benefiting ESMA and NCAs¹³;
- Ensure efficient use of modern analytical tools¹⁴, for the ESMA direct supervision mandates and by NCAs, in particular by carrying out **projects using novel technologies**¹⁵, such as artificial intelligence and web scraping, that will allow **gathering knowledge and experience** and the **joint development of supervisory tools**¹⁶.
- **Modernise the approach to data quality** to a more automated, outcome-focused, data-driven and risk-based approach, based on EU-wide monitoring, common KPIs, benchmarks and dashboards; and **expand it to a wider range of datasets**¹⁷.
- Develop **common methodologies** and models to be applied for the detection of potential breaches and for enabling a **risk-based approach** and more targeted ESMA and NCAs supervisory actions.

3.2.4 Objective D – Thought leadership: pursue thought leadership and collaboration on data standards, technologies, and reporting innovations

Over the past years, ESMA has been a driving force to strengthen the development and consistent application of data standards, as demonstrated by its efforts to foster the use of common identifiers and standards such as the Legal Entity Identifier (LEI) and other ISO standards in reporting regimes under its remit and by other jurisdictions.

¹³ Past examples include emission allowances, trading of sanctioned instruments, Article 25 of AIFMD and ESMA assessment, short selling opinions.

¹⁴ Including monitoring dashboards, with early warning indicators, alerts, triggers and scoring to support an efficient prioritisation of supervisory and convergence work.

¹⁵ E.g., advanced machine learning, natural language processing.

¹⁶ E.g., existing projects on the use of artificial intelligence in market abuse monitoring (to be run with a group of 16 NCAs) and on the detection of anomalies in CRA data.

¹⁷ Such an approach is already successfully applied to the work on EMIR and SFTR data quality.

ESMA's ambition is to reinforce its role as a **global thought leader** in the development, coordination, implementation and promotion of international data standards and best practices and to **increase collaboration with NCAs and other stakeholders** to explore new ways of funding and delivering joint projects for the benefit of the whole community.¹⁸

At the same time, the advent of new technologies has created new opportunities in the regulatory and supervisory landscape that ESMA seeks to seize by building up subject matter expertise in order to position itself as a **reference point on RegTech / SupTech for NCAs**, international regulatory and supervisory authorities, and the broader financial sector.

To deliver on the above, ESMA plans the following:

- **Facilitate pilot projects and experimental environments** in order to increase collaboration with and between NCAs and to develop joint expertise around new data-related technologies such as RegTech / SupTech and facilitate their adoption in day-to-day processes;¹⁹
- **Explore the use of alternative funding sources** beyond ESMA and NCAs budget²⁰ for projects related to data and new technologies, performed jointly by ESAs²¹, by ESMA and NCAs, or by NCAs, and coordinated by ESMA, for the benefit of all NCAs.
- **Increase collaboration with public society** to gather feedback, gain new insights and strengthen expertise on data hosted by ESMA, and on new technologies and standards related to data. This should be performed via, e.g., research projects in partnership with academics, and by organising conferences or workshops to develop concrete proposals with field experts;
- **Strengthen ESMA's participation in international groups and governance bodies** relevant for data-related standards and technologies, while increasing knowledge and practice sharing;
- **Extend the use of data and information sharing with other European authorities and institutions** such as the ECB, the ESRB, other ESA, ACER and other authorities whose remit intersects with ours;²²
- **Intensify collaboration with the ECB on common data initiatives**, particularly on SupTech, RegTech and technological innovation, including in the area of crypto-assets²³.

¹⁸ E.g., projects developed by a few NCAs and made available to all NCAs under joint governance.

¹⁹ E.g., the study on how on-chain data can be retrieved that is conducted by ESMA in the context of the DLT Pilot regime.

²⁰ E.g., the Digital Europe Programme used for the ESAP development, or the Technical Support Instrument Programme (TSI) used for the project on the use of AI in market abuse.

²¹ Examples include common projects with a lead authority (e.g., DORA, MICA, ESAP) and joint procurement procedures as is already done in several areas such as for IT solutions and commercial data providers.

²² E.g., ESMA already uses ECB registers for its report on Trends, Risks and Vulnerabilities and plans to extend its use of ECB data with RIAD data.

²³ E.g., to study the underpinning technology and assess its reusability in other applications in the context of MICA or DLT Pilot.

- Develop a **data dictionary for securities markets**²⁸, as envisaged by the European Commission Strategy on supervisory data in EU financial services to contribute to the consistency across reporting regimes.

3.2.6 Objective F – Systematic data use: systematically use data for evidence-based policy development, supervision and risk assessment

Historically, technology and data have always served as enablers to achieve ESMA's mission. In its new strategy, ESMA has the ambition of taking a more systematic data-driven approach to regulation, supervision and risk assessment to deliver across its strategic priorities: to foster effective markets and financial stability, strengthen the supervision of EU financial markets, and enhance the protection of retail investors.

To achieve this, ESMA aims to **reinforce its ability to rely on and make use of data** to support its regulatory and supervisory work, help monitor supervisory convergence, detect financial stability threats, and address investor protection concerns. All of that through the **promotion of evidence-based ways of working**, both internally and in cooperation with NCAs.

The planned actions are:

- Promote a **data-driven approach**, in particular:
 - Ensure ESMA **deliverables**²⁹ are **supported by data** findings and evidence wherever possible;
 - Develop an **ESMA framework** defining the data governance supporting ESMA's **internal activities**;
 - Develop **common methodologies** in collaboration with NCAs and other stakeholders to enable **consistent and comparable work on data** amongst them and ESMA;
- Build a central access point for **ready-to-use standardised data and analyses** to ensure data interoperability, connect the dots between different datasets, and avoid siloed work:
 - Complete the **migration of datasets** to the ESMA Data Platform to leverage the synergies from data ingestion to dashboard production across all datasets;

²⁸ This dictionary will contain a description of the content and format of all data collected under various reporting frameworks in a structured, comprehensive, consistent and unambiguous manner, using terms anchored in legislation to establish a clear link between collected data items and the relevant legislative requirements.

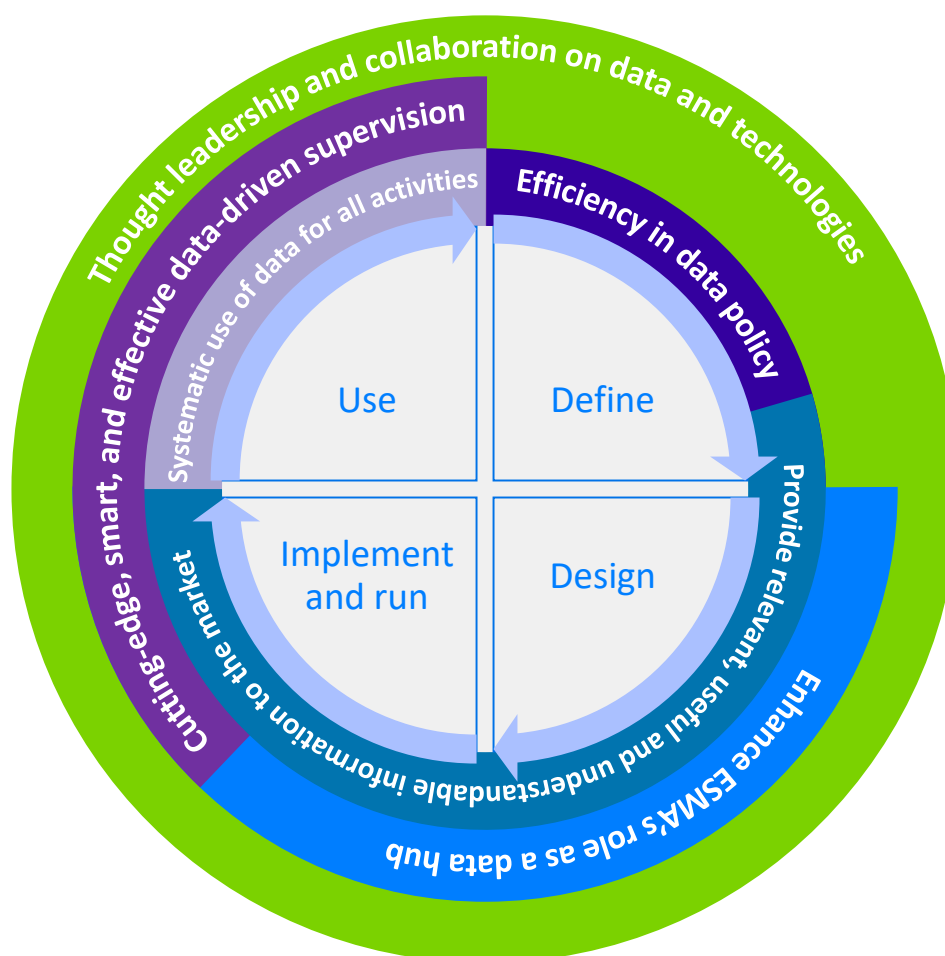
²⁹ RTS/ITS, guidelines, Q&As, peer reviews, opinions, supervisory outputs, risk assessment reports, etc.

- Create a **unified catalogue** of existing datasets, analytics, and processes, thereby promoting data literacy at ESMA;
- Develop the **ESMA metadata dictionary**³⁰ in lockstep with the **ESMA Data Platform** to ensure more controls across datasets and centralise relevant information (data sources, data models, glossary of terms, etc.).

³⁰ In this context, an inventory of data assets at ESMA through the discovery, description, and organisation of datasets.

4 Target capabilities

The actions listed in the previous section will impact ESMA activities across the entire data lifecycle, from the definition of data reporting requirements to the use of data by way of the design and implementation of data reporting systems. Given their scale and ambition, achieving all data strategic objectives within the next five years calls for a profound revamp of ESMA's approach towards the different activities the ESMA data lifecycle consists of, and how they do and should interact with each other.



ESMA's first response was to establish a new Data Intelligence and Technology department (DIT) that enables the consolidation of the full set of competences required to best leverage data assets, talents, and benefit from economies of scale and synergies, while supporting internal and external stakeholders throughout the data lifecycle. In this regard, **DIT will serve as the enabler of the Data Strategy**, working in close cooperation with other ESMA departments internally, and NCAs and other stakeholders externally.

Drawing from the results of the capability assessment conducted at the end of 2021³¹, DIT will focus its efforts on the **development, restructuring, or enhancement of the following capabilities**:

- Organisation and governance: Data functions should be designed to respond to stakeholder needs, avoid siloed work, and enable effective cross-department as well as cross-organisation coordination and collaboration (in particular with NCAs) at each step of the data lifecycle. It is under that premise that ESMA aims to leverage industry best practices and frameworks to **overhaul its existing data governance, establishing and clearly delineating roles, responsibilities, and processes**, so that it becomes more efficient and nimbler as an organisation³², while ensuring transparency and clear communication with its stakeholders. This new data governance model will be one of the first undertakings in the implementation of the Data Strategy.
- Processes and ways of working: For ESMA to become truly efficient in the coordination and execution of the many activities taking place throughout the data lifecycle, it will be of utmost importance to converge towards more streamlined processes, advance towards more standardisation and interoperability of data assets, while developing common ways of working. In that respect, important endeavours for ESMA will include designing **a common dataset framework** for defining prioritisation and measuring data quality, and providing **standardised data and analytics** to its stakeholders, both being particularly relevant in the context of our engagement with NCAs³³.
- Technology and tools: The technology and tools deployed at ESMA must be fit for purpose in that they should enable an efficient use of data by its stakeholders. To ensure this, as first step it is necessary to identify the key focus points to make ESMA best suited to help achieve the objectives laid out in the Data Strategy and, at a second stage, **prioritise and implement the required changes**. Amongst these changes, some such as the big data platform migration³⁴ are already under way, some are planned enhancements (e.g., a metadata dictionary, a unified catalogue of existing datasets, analytics, and processes), whereas some remain to be further specified (e.g., risk-assessment tools to identify risks and initiate supervisory actions);
- Talents and skills: In a fast-evolving technological environment, the palette of skills needed in data functions requires constant (re)-calibration as some practices, tools and (data) standards become outdated or supplanted by others. ESMA should maximise the use of existing resources and **demonstrate a strong capacity to not only attract, but also develop and retain data talents** in order to thrive in the medium- to long-term. More broadly speaking, and outside of the mere data functions, **data literacy**

³¹ See section 2.4.

³² By improving the identification of business needs and how to address them, ultimately facilitating the decision-making process.

³³ E.g., the many data quality engagement frameworks in place for major reporting regimes.

³⁴ To make data, information, and analytical tools facilitating the use of modern technologies available to ESMA stakeholders, enable collaborative analytics, and allow for “connecting the dots” between datasets.

also needs to be better embedded in the organisation culture to allow ESMA to realise the maximum value out of data for its stakeholders.

With regards to the above, ESMA has defined in the next section a **roadmap with clear milestones**. Going forward, this roadmap will be **communicated to stakeholders and updated regularly**. In addition, ESMA will monitor its fulfilment of the different objectives in the strategy and will develop appropriate metrics to assess the **progress** on the implementation of the listed points (e.g., by performing broad-based or targeted assessments and comparing their results with the results from previous ones). This will ensure that it remains on track to achieve the desired target state within the planned timeframe.

5 Implementation plan (2025 update)

5.1 Context for an updated roadmap

5.1.1 Background

Since the publication of the ESMA Data Strategy, **several key milestones have been achieved**, including:

- **Enhancing ESMA's role as a data hub** by migrating ESMA datasets to its new Data Platform and opening its access to NCAs (180+ NCAs users onboarded) and ESAs
- **Promoting joint undertakings with NCAs** such as the recently started delegated project to build a joint supervisory tool for the monitoring of crypto-asset markets under MiCA
- **Using external funding to facilitate pilot projects**, such as the ongoing TSI-funded projects related to the detection of market abuse and greenwashing
- **Intensifying collaboration with stakeholders on common data initiatives and data sharing**, e.g., with the ECB on the design of future AIFMD/UCITS integrated reporting and on facilitating reciprocal access to datasets held by each authority
- **Adapting ESMA's internal structure to maximise delivery of the strategy**, e.g., through the development and implementation of a new data governance framework and by raising awareness among stakeholders on data availability and use
- **Reusing existing datasets for multiple purposes**, e.g., reusing MIFIR transaction data for transparency calculations, thereby helping to reduce the reporting burden

However, the **context in which ESMA operates has evolved markedly** over the period, driven by both endogenous and exogenous factors.

First, there has been a renewed political impetus on improving the integration of EU financial markets, which led to the European Commission putting at the top of its agenda the **development of the Savings and Investments Union (SIU)**³⁵. ESMA is expected to play a pivotal role in supporting this initiative and the upcoming changes may result, among others, in streamlined data collection and sharing, and more centralised data processing and analytics.

Similarly, ESMA's contribution to the **Commission's goal of 25% reduction of reporting burden** is also driving the Data Strategy's priorities with initiatives related to integrated reporting in the area of asset management and major transaction-level reporting regimes, and with the ongoing simplification of MiFIR transparency reporting requirements.

Additionally, the past years have witnessed a **step-change in the usability and adoption of Artificial Intelligence (AI)**, particularly of generative AI, which has spread across financial

³⁵ https://finance.ec.europa.eu/regulation-and-supervision/savings-and-investments-union_en

markets and workplaces alike. The challenge is twofold for ESMA: understanding AI applications in financial markets, while also deploying and utilising it by ESMA and NCAs to enhance productivity and use of data.

Finally, new technologies create opportunities for ESMA and NCAs to modernise their supervisory processes and achieve efficiencies, which is particularly relevant against a backdrop of **ever-growing responsibilities and constrained resources**. Delivering on the ambitious objectives of this strategy under such conditions will require a carefully calibrated implementation approach, e.g., by mutualising solutions and projects to overcome capacity limitations, enhance operational efficiency and progress towards more convergent supervisory approaches. In this regard, the Data Strategy is complemented by the ESMA Digital Strategy 2026-2028³⁶ to ensure a coherent, organisation-wide approach to digital transformation. From 2029 onwards, the Data and Digital Strategies will be merged into a single strategy document, reinforcing synergies across ESMA's operations.

5.1.2 Review exercise

The mid-term review exercise provided an opportunity to gather insights from both internal and external stakeholders regarding the priorities for the remainder of the implementation period and any potential adjustments needed. While no revisions to the vision and objectives of the ESMA Data Strategy were expected, significant updates to its implementation plan were anticipated to account for the milestones already achieved and to align with the evolving context. These assumptions were confirmed by the feedback received through a dedicated survey conducted in Q1 2025. Stakeholders were specifically consulted on strategic matters, including ways to reduce compliance costs and reporting burdens, as well as on potential initiatives to be undertaken during the remaining period of the Strategy. The insights gathered through these consultations informed the updated roadmap presented in the following section. For reference, the original implementation plan published in 2023 is reproduced in Annex II – 2023 Implementation Plan.

5.2 Updated roadmap

This section outlines the key actions, milestones, and deliverables planned for the remainder of the ESMA Data Strategy implementation period. The updated roadmap introduces new initiatives, reports on completed ones, and, where necessary, revises the timeline, scope or description of existing actions in response to the new environment ESMA is operating, as described in the previous section. Actions with the highest priority and impact are highlighted by the ↑ pictogram placed before them. Actions marked with ** were not identified when the original roadmap was drafted but are relevant to the implementation of the strategic objectives. Due to the common themes present in the ESMA Digital Strategy 2026-2028 and this strategy, certain degrees of overlap exist between the two roadmaps.

³⁶ Link to be added upon publication

5.2.1 Objective A – Enhanced data hub

- **2023 [COMPLETED]:** Develop the project to share data with NCAs, by onboarding them to the ESMA Data Platform
- **2024 [COMPLETED**]:** Deploy a code-sharing solution in the ESMA Data Platform enabling NCAs and ESMA to access, contribute, and use shared analytical code
- **↑ 2024-2028 [UPDATED]:** Progressively expand the capacity of the ESMA Data Platform to ensure that all onboarded NCAs and EU bodies can seamlessly access data they are entitled to. In parallel, continue implementing use cases fostering collaboration on the ESMA Data Platform—such as the new common repository of analytical codes and the centralised provision of master data
- **2024-2025 [COMPLETED]:** Develop orderbook data sharing platform, on the basis of the new legislative proposal included in the listing package
- **2025-2026 [NEW]:** Expand the orderbook data sharing platform to collect data directly from Trading Venues that have a significant cross-border dimension and make it available to NCAs
- **↑ 2027-2028+ [UPDATED]:** Depending on the results of the study on the integrated reporting system for AIFMD/UCITS³⁷, initiate the development of the integrated reporting system, including arrangements to facilitate data exchanges between ESMA and other authorities (ECB, other ESAs, etc.)
- **2025-2026:** Implement, in collaboration with other ESAs, the system to support ICT-related incident reporting and/or exchange under DORA
- **2026 [NEW]:** Following the implementation of the dedicated platform to make ICT-related incidents reported under DORA available to both ESAs and NCAs, develop centralised analyses to be shared with them in support of coordinated supervision
- **2025-2027 [NEW]:** Explore avenues for common use of commercial data between ESMA, NCAs, and other EU bodies³⁸

5.2.2 Objective B – Access to data of public interest

- **↑ 2023-2028+ [UPDATED]:** Finalise the development of the European Single Access Point system (phase 1), and implement the next phases as envisaged in the ESAP Regulation

³⁷ See relevant action under [Objective E](#).

³⁸ Depending on contractual restrictions, considering the possibility of joint procurements, etc.

- **2024-2028:** Potentially through ESAP, implement ways of sharing data and analytics with the market (e.g., via interactive dashboards), extending gradually the number of datasets covered
- **2024 [COMPLETED**]:** Create a new 'Data' section on the ESMA website³⁹ to centralise data-related information and publish ESMA's first interactive dashboards
- **2024-2025 [COMPLETED]:** Engage with the EC to discuss the possibility to publish (on an anonymised basis) ESMA data through the EU Digital Finance Platform Data Hub
- **2025-2028 [NEW]:** Identify and implement additional new use cases for publishing synthetic ESMA data through the EU Digital Finance Platform Data Hub⁴⁰
- **2025-2028 [NEW]:** Increase general awareness around data provided by ESMA to the public, including aims and deliverables of ESAP and existing dashboards and registers, e.g., by expanding the "Data" section of the ESMA website⁴¹ and strengthening related communication efforts

5.2.3 Objective C – Data-driven supervision

- **2023-2026 [UPDATED]:** Develop the proof-of-concept for the detection of potential market abuse cases using AI techniques. Subsequently, depending on the outcome of the project, implement common AI-based tools for detection of market abuse cases
- **2023 [COMPLETED]:** Develop a tool for detection of anomalies on CRA data using machine learning techniques
- **2023-2028 [COMPLETED]:** Starting with the MiFIR reporting framework, progressively revise data quality frameworks for the key reporting regimes to ensure more outcome-focused, data-driven and risk-based approach⁴²
- **2023-2028 [COMPLETED / UPDATED]:** Following the development of advanced monitoring dashboards for CRA preliminary ratings, EMIR, SFTR, and MiFIR, develop additional ones, with early warning indicators, alerts, triggers, and scoring to support an efficient prioritisation of supervisory and convergence work, including in response to new tasks, mandates, and emerging risks

³⁹ See <https://www.esma.europa.eu/esmas-activities/data>

⁴⁰ See <https://digital-finance-platform.ec.europa.eu/data-hub/what-kind-of-data-available>

⁴¹ <https://www.esma.europa.eu/esmas-activities/data>

⁴² ESMA is continuously reviewing and enhancing the data quality indicators and tests pertaining to DQEFs.

- **↑ 2025-2028 [NEW]**: Following the agreement to launch the joint project and the selection of the vendor, implement the subsequent phases of the joint supervisory tool developed for the monitoring of crypto-asset markets under MiCA
- **↑ 2025-2028 [NEW]**: Build on successful AI-driven proof-of-concepts to further enhance ESMA's and NCAs' supervisory capabilities, including by continuing the development of existing tools and by expanding the application of AI techniques to new use cases

5.2.4 Objective D – Thought leadership

- **↑ 2023-2028 [COMPLETED / UPDATED]**: Following the allocation of DEP-funding to develop a platform to exchange transaction-level data, propose additional proof-of-concepts / projects on the use of modern technologies, including AI, while systematically considering using available EU funding programmes
- **2026 [UPDATED]**: Join ISO governance bodies relevant for data standards in financial markets
- **2023-2024 [COMPLETED]**: Engage with relevant stakeholders on the development of joint supervisory tools for crypto-asset services providers under MiCA
- **2023-2024 [COMPLETED]**: Leverage on existing and future common IT projects with ESAs to explore ways to ensure an efficient exchange of data. In particular, provide access to TRACE data to EIOPA
- **2023-2024 [COMPLETED]**: Establish a forum with ECB to discuss common data and technological initiatives, including data exchanges
- **2024-2028 [COMPLETED / UPDATED]**: Following a first collaboration with research institutes and universities in economics, finance, and data science in 2024, continue reinforcing ESMA's engagement with external stakeholders (market participants, academics, and other relevant actors) on data and data-related technologies by organising a Data Day and, e.g., by organising workshops, undertaking joint projects, collaborating on research papers, and gathering structured feedback
- **↑ 2025-2028 [NEW]**: Bolster ESMA's operational efficiency by deploying generative AI tools tailored to its needs and securely integrated within its digital ecosystem

- **↑ 2025-2028 [NEW]**: Support and expand the “SupTech Network of Experts”⁴³ to promote the sharing of tools, codes, and practical experience amongst NCAs, ESMA, and potentially other EU bodies

5.2.5 Objective E – Efficient data policy

- **2023-2024 [COMPLETED]**: In collaboration with the other ESAs, perform the study on further centralisation of ICT-related incident reporting under DORA
- **2024-2025 [COMPLETED**]**: Assess the feasibility of using MiFIR Article 26 data for transparency and volume cap calculations, and proceed with implementation if feasible
- **↑ 2023-2026**: Perform the study on the integrated reporting system for AIFMD/UCITS, in cooperation with the ECB and the other ESAs, and subsequently develop the RTS/ITS on reporting
- **2026-2028 [UPDATED]**: Subject to resource availability, develop a data dictionary for securities markets, as a contribution to the EC’s Strategy on supervisory data in EU financial services
- **2026-2028 [UPDATED]**: Subject to resource availability, explore ways to facilitate regulatory reporting by leveraging on existing technologies such as DLT and system-to-system reporting
- **↑ 2025-2028 [NEW]**: As part of the ongoing review of financial transaction reporting, prepare a report assessing the feasibility of greater integration across MiFIR, EMIR, and SFTR transaction reporting frameworks and the streamlining of data flows, to reduce reporting burden while maintaining the data needed for supervisory purposes. Subsequently, develop the corresponding L2 measures and an implementation plan

5.2.6 Objective F – Systematic data use

- **2023-2026 [COMPLETED]**: Complete the migration of all suitable datasets to the ESMA data platform
- **2023 [COMPLETED]**: Develop ESMA data governance framework
- **2023-2026 [UPDATED]**: Following the implementation of the ESMA metadata dictionary, finalise the development of a unified catalogue of datasets, analytics and processes, including services and activities that ESMA performs for or on behalf of its stakeholders

⁴³ The SupTech Network of Experts is an initiative coordinated by ESMA. It is designed to bring together supervisors and data experts across NCAs to strengthen and accelerate the development of SupTech capabilities and tools across NCAs and ESMA.

- **2024 [COMPLETED]**: Establish a data literacy programme across the organisation to raise awareness amongst ESMA stakeholders on what data is available at ESMA and how it can be or is already used to support their work
- **↑ 2024-2028 [UPDATED]**: Use RegTech and SupTech solutions to consolidate and analyse multiple sources of structured and unstructured data, while streamlining internal processes for the ingestion, validation, and analysis of both current and future data reported to ESMA, to enhance the overall efficiency and effectiveness of data use
- **2025-2028 [NEW]**: Expand the use of existing regulatory datasets in compliance with applicable rules and legislation to support ESMA's risk monitoring, direct supervision, and supervisory convergence activities⁴⁴

The implementation of the ESMA Data Strategy will be monitored continuously to ensure that it remains aligned with ESMA priorities and, if needed, it will be revised accordingly. Annual Work Programmes will ensure yearly reassessment of the prioritised projects.

5.3 Resources

The objectives and implementing actions of this strategy are ambitious and will have a substantial impact on the resources of both ESMA and NCAs. Nevertheless, it is clear that these objectives cannot be fully achieved within the structural resource constraints imposed by ESMA's current funding model.

In this context, ESMA wrote to the European Commission in July 2025⁴⁵ to express its view that a new, sustainable financial framework is essential to meet its mandates and adapt to future needs. Amongst other points, ESMA highlighted that additional EU funding should be allocated to cover the development costs of EU-wide ICT initiatives that support both NCAs and financial market participants across the Union. This approach would ensure that ESMA's investments in new tools and technologies—aimed at achieving economies of scale, enhancing efficiency, and ultimately reducing costs for the ESFS—are guided by the broader interests of the Union, rather than being constrained by budgetary considerations.

However, a review of ESMA's funding model would take time to be implemented and cannot be the sole solution to alleviating resource constraints. It therefore becomes critical to explore new ways of funding and running projects. To that end, ESMA intends to:

- Explore the opportunities of new funding sources: Traditionally, all work performed by ESMA has been funded either by joint contribution by NCAs and the EU budget or by specific NCAs contributions for delegated tasks. However, some of the projects highlighted in this strategy use alternative funding sources. Firstly, the Digital Europe

⁴⁴ Some of the already identified use cases include the reuse of data reported under MiFIR Article 26 to perform MiFIR transparency calculations, develop retail risk indicators, and monitor carbon markets.

⁴⁵ See ESMA's [Letter to the European Commission on ESMA funding model](#).

Programme (DEP) used for the implementation of the ESAP. Secondly, the Technical Support Instrument Programme (TSI) is used for the proof-of-concept project for detection of potential market abuse cases using AI techniques. This is the first instance where the TSI Programme is used to support a multi-country project coordinated by an ESA where the objective of the project is to enhance data-related processes. ESMA intends to systematically explore the possibility to use further the above-mentioned or similar support programmes for specific projects included in this strategy.

- Promote alternative approaches to organising data- and technology-related projects: ESMA intends to encourage alternative models for coordinating joint initiatives with NCAs, notably via delegated projects. The development of a joint supervisory tool for the monitoring of crypto-asset markets under MiCA perfectly illustrates this approach. Developed with NCAs and facilitated by ESMA, this delegated project aims to deliver a shared solution that enhances NCAs' supervisory capabilities while avoiding duplicative efforts and costs across NCAs. In addition, ESMA will work with NCAs to explore projects led by smaller groups of NCAs, with participation or facilitation by ESMA, with the aim of sharing deliverables and experience with the broader supervisory community. Finally, joint procurement for tools and data could also be considered.
- Increase collaboration with the other ESAs and ECB: ESMA intends to increase the collaboration with EIOPA, EBA, and ECB on data and IT-related projects to achieve economies of scales and reduce costs. Examples of such joint initiatives include the implementation of ESAP that is led by ESMA but will support data and information disclosures across the entire financial sector, the work on the data collection system for the oversight of critical third-party providers under DORA that is led by EBA, or the system for Fitness and Propriety Information envisaged by the ESAs' funding regulations which is led by EIOPA. The reuse of SupTech tools developed by the ECB is also being explored. In addition, joint procurement for tools, data, and services is already taking place and will continue being promoted to optimise resource allocation and avoid duplicative efforts in developing similar tools across NCAs and ESMA. Similarly, an exchange of best practices regarding the use of AI by NCAs and other EU bodies will contribute to a more efficient allocation of resources in the development and use of generative AI at ESMA.
- Deepen knowledge-sharing with NCAs and other EU bodies: ESMA plans to facilitate experience sharing across NCAs and other EU bodies in order to draw best practices, identify opportunities for synergies, and reduce the trial-and-error aspect inherent to innovative projects. This approach is already being implemented in the context of the SupTech Network of Experts where synergies have been identified to optimise resource allocation and avoid duplicative efforts in developing similar tools across NCAs and ESMA. Similarly, an exchange of best practices regarding the use of AI by NCAs and other EU bodies will contribute to a more efficient allocation of resources in the development and use of generative AI at ESMA.

The detailed planning of the work on the implementation of the strategic objectives will be included in the **annual Data & IT Work Programmes**. These documents will include further details on the projects to be launched in a given year, including their funding source(s) and allocated budget, supporting the annual planning that will help to prioritise the work in order to maximise the delivered value to the stakeholders given the resources constraints. It is also worth noting that some of the initiatives are already being started or ongoing and the funding for those projects⁴⁶ has been already secured, whereas the funding of the future projects will be defined on a case-by-case basis in due time.

⁴⁶ Or, in some cases, for the initial phases of the projects.

6 Communication plan

In its communication activities related to data, ESMA intends to continue to:

- position itself as the leading public authority in financial market data reporting policy making, in the EU as well as at the international level;
- increase awareness about ESMA's work on regulatory and supervisory data;
- promote the use of data and the value added of the reporting regimes.

ESMA intends to undertake the following activities:

- publish the Data Strategy;
- increase the number of publications / articles on the work related to data and data related technologies, e.g., specific use cases, data related projects;
- consider new ways to engage with and get feedback from stakeholders, e.g., interactive webinars on data-related work;
- progressively standardise the communication and documentation on data reporting regimes.

7 Annexes

7.1 Annex I – Acronyms and definitions

AI	Artificial Intelligence
AIFMD	Alternative Investment Fund Managers Directive
CCPs	Central Counterparties
Corporate search engine	Insight engine combining search with AI to deliver actionable insights derived from the full spectrum of content and data sourced within and external to the organization
Data Catalogue & Data Dictionary	A data catalogue and data dictionary maintain an inventory of data assets through the discovery, description, and organisation of datasets
Data literacy	The ability to read, write and communicate data in context, with an understanding of the data sources and constructs, analytical methods and techniques applied. It is the ability to describe the use-case application and resulting users' value or outcome
Delegated project	Project conducted under a delegation agreement pursuant to Article 28 of the ESMA Regulation
DEP	European Commission Digital Europe Programme
DORA	Digital Operational Resilience Act
DLT	Distributed Ledger Technology
DRSPs	Data Reporting Service Providers
EC	European Commission
ECB	European Central Bank
EMIR	European Market Infrastructure Regulation
ESAs	European Supervisory Authorities
ESAP	European Single Access Point
ESMA	European Securities and Markets Authority
ESFS	European System of Financial Supervision
ESMA Data Platform	A set of data processing tools implemented by ESMA based on cutting-edge tools, such as Big Data, Cloud Computing, etc., allowing to ingest, store, process and analyse all data available to ESMA
Experimental environment	Environment, also known as sandbox, that can be used to build prototypes and create new data outcomes in an iterative way
ICT	Information and Communication Technology
KPI	Key Performance Indicator
Machine-readable data	Data in structured so that software applications can easily identify, recognise and extract specific data, including individual statements of fact, and their internal structure
Metadata management	Elements that allow creating active metadata by: i) collecting and performing graph analysis on traditional design-based metadata and runtime metadata; ii)

	using results as input for ML/ AI algorithms; and iii) capturing the results in a knowledge graph of the data fabric that is ready for action
MDM / RDM	Master Data Management and Reference Data Management. These components manage the master data (= the consistent and uniform set of identifiers and extended attributes that describe the core entities of the enterprise) and the reference data in a consistent, quality assured way
MiCA	Regulation on Markets in Crypto-Assets
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
NCA	National Competent Authority
NLP	Natural Language Processing
RegTech	Regulatory technology
SFTR	Securities Financing Transactions Regulation
SIU	Savings and Investments Union
TSI	European Commission Technical Support Instrument
SupTech	Supervisory Technology
UCITS	Undertakings for the Collective Investment in Transferable Securities

7.2 Annex II – 2023 Implementation Plan

This annex outlines the key actions, milestones and outputs that were included in the original implementation plan published in 2023 as part of the ESMA Data Strategy 2023-2028 .

7.2.1 Objective A – Enhanced data hub

- **2023:** Develop the project to share data with NCAs, by onboarding them to the ESMA data platform
- **2024-2028:** Progressively extend data sharing with NCAs by implementing further use cases (e.g., set up a common repository of analytical codes with NCAs) and datasets (e.g., those related to the supervision of ESG disclosures, commercial datasets⁴⁷, or master data), on the basis of the identified needs and priorities
- **2024-2025:** Develop orderbook data sharing platform, on the basis of the new legislative proposal included in the listing package

⁴⁷ Depending on contractual restrictions, considering the possibility of joint procurements, etc.

- **2025-2027:** Develop integrated reporting system under AIFMD and UCITS, including arrangements to facilitate data exchanges between ESMA and other authorities (ECB, other ESAs, etc.)⁴⁸
- **2025-2026:** Pending the outcome of the feasibility study (see objective E), implement, in collaboration with other ESAs, the system to support ICT-related incident reporting and/or exchange under DORA

7.2.2 Objective B – Access to data of public interest

- **2023-2027:** Implement the ESAP system, in phases as envisaged in the regulation
- **2024-2028:** Potentially through ESAP, implement ways of sharing data and analytics with the market (e.g., via interactive dashboards), extending gradually the number of datasets covered
- **2024:** Engage with the EC to discuss the possibility to publish (on an anonymised basis) ESMA data through the EU Digital Finance Platform Data Hub

7.2.3 Objective C – Data-driven supervision

- **2023-2024:** Develop the proof-of-concept for the detection of potential market abuse cases using AI techniques. Subsequently, depending on the outcome of the project, implement common AI-based tools for detection of market abuse cases
- **2023:** Develop a tool for detection of anomalies on CRA data using machine learning techniques
- **2023-2028:** Starting with the MiFIR reporting framework, progressively revise data quality frameworks for the key reporting regimes to ensure more outcome-focused, data-driven and risk-based approach
- **2023-2024:** Develop advanced monitoring dashboards, with early warning indicators, alerts, triggers and scoring to support an efficient prioritisation of supervisory and convergence work

7.2.4 Objective D – Thought leadership

- **2023-2028:** Propose proof-of-concepts / projects on the use of modern technologies related to, e.g., anomaly detection on different datasets (EMIR, SFTR, etc.) or the

⁴⁸ The development of the system will be preceded by the study on integrated supervisory collection and the development of technical standards on reporting (see section 5.2.5), the implementation timeline will depend on the legislative deadlines.

detection of greenwashing practices, and consider using alternative funding sources such as the TSI programme or similar

- **2023:** Join ISO governance bodies relevant for data standards in financial markets
- **2023-2024:** Engage with relevant stakeholders on the development of joint supervisory tools for crypto-asset services providers under MiCA
- **2023-2024:** Leverage on existing and future common IT projects with ESAs to explore ways to ensure an efficient exchange of data. In particular, provide access to TRACE data to EIOPA
- **2023-2024:** Establish a forum with ECB to discuss common data and technological initiatives, including data exchanges
- **2024-2028:** Reinforce ESMA engagement with external stakeholders, including different categories of market participants and academics, on data and data-related technologies, e.g., by organising workshops, undertaking joint projects and collecting feedback

7.2.5 Objective E – Efficient data policy

- **2023-2024:** In collaboration with the other ESAs, perform the study on further centralisation of ICT-related incident reporting under DORA
- **2023-2026:** Perform the study on the integrated reporting system for AIFMD/UCITS, in cooperation with the ECB and the other ESAs, and subsequently develop the RTS/ITS on reporting
- **2023-2024:** Develop a data dictionary for securities markets, as a contribution to the Strategy on supervisory data in EU financial services
- **2024:** Study the possibility to implement machine-readable and executable reporting

7.2.6 Objective F – Systematic data use

- **2023-2026:** Complete the migration of all suitable datasets to the ESMA data platform
- **2023:** Develop ESMA data governance framework
- **2023-2024:** Develop a unified catalogue of datasets, analytics and processes, including services and activities that ESMA performs for or on behalf of its stakeholders, and finalise the development of the ESMA metadata dictionary

- **2024:** Establish a data literacy programme across the organisation to raise awareness amongst ESMA stakeholders on what data is available at ESMA and how it can be or is already used to support their work
- **2024-2028:** Use RegTech and SupTech solutions, to consolidate and analyse multiple sources of data, including unstructured data, to make the use of data more effective and efficient