MDD Practical Guide

Implementation of Machine-Readable Climate Reports for Swiss Companies

This guide offers companies sound orientation when choosing a suitable XBRL taxonomy, shows different approaches, outlines the key implementation steps, and highlights the main challenges on the way to machine-readable reporting.

These guidelines reflect our current assessment of the legal requirements and our practical experience. It is intended as a general guide and does not claim to be exhaustive or legally binding. The contents do not replace a qualified examination of individual cases by internal or external legal experts.

A glossary and a list of abbreviations can be found on pages 9 – 11.
Explanatory notes have been internationally omitted from the body text.

Contents

July 2025

1.
XBRL – a technical standard that combines language, structure and rules

Unlike formats such as CSV or JSON, XBRL ensures that information is not only transmitted and read, but also correctly understood in terms of content – regardless of what a report looks like or what language it is written in.

XBRL is not about simply staving a report in a machine-readable format. Instead, each relevant piece of content – such as a figure for CO_2 emissions – is given a unique "label", a so-called tag. This tag comes from an XBRL taxonomy that is based on internationally recognized reporting standards such as the ESRS or the IFRS Sustainability Disclosure Standards.

XBRL tagging is used to link the content in the report with the appropriate terms and definitions (XBRL tags) from the taxonomy.

An entire ecosystem is needed for XBRL to work

XBRL is not an isolated solution. For it to work in practice, it needs several coordinated building blocks:

- **XBRL taxonomies:**
  They provide the predefined terms and definitions for the respective disclosure obligations or data points for XBRL tagging. This tagging allows the relevant contents of the report to be clearly assigned.

- **Rules and guidelines:**
  They specify how and what must be tagged – i.e. which content is mandatory to tag, what the technical structure of the report must look like and how it is submitted or published. This increases the quality, reliability and comparability of the data.

- **Technical validation:**
  Validation software can be used to automatically detect errors in form and content. This ensures that the requirements of the regulations are met, thereby improving the quality, reliability and comparability of the data.

- **Use of the data:**
  The full benefits of XBRL only unfolds when investors, supervisory authorities or other stakeholders systematically use the machine-readable data – for example for comparisons, analyses or automated audits.

The following sections of the practical guide provide an overview of:

- Which XBRL taxonomies are currently available to Swiss companies – and what challenges are associated with their use?

- How can the machine readability of climate reports be made possible under the current framework conditions – and what specific implementation options exist?

2. Overview of available XBRL taxonomies

EFRAG ESRS Set 1 (2024-08-30)*

*For better readability, the term "ESRS taxonomy" is used consistently below.

Developed by
EFRAG

Materiality concept
Double materiality

Future distribution
Mainly EU

The RTS adopted by the EU Commission are central to the application of the ESRS taxonomy. They concretize requirements and stipulate, among other things, disclosure in ESEF. As there are no comparable requirements in Switzerland, companies can use the EU RTS as a direct guide. This improves comparability with companies that follow the EU guidelines.

IFRS Sustainability Disclosure Taxonomy (2024)*

*For better readability, the term "ISSB taxonomy" is used consistently below.

Developed by
IFRS Foundation

Materiality concept
Financial materiality

Future distribution
Mainly outside the EU

The recommendations of the TCFD have been incorporated into the IFRS Sustainability Disclosure Standards S1/S2 developed by the ISSB and will be continued there. Reference is therefore made below to IFRS S1/S2; TCFD no longer serves as an independent reference framework.

GRI Sustainability Taxonomy (2025-06- 23)*

*For better readability, the term "GRI Taxonomy" is used consistently below.

Developed by
GRI

Materiality concept
Double materiality

Future distribution
Mainly outside the EU

Globally recognized standard for voluntary sustainability reports.

Our recommendation for selection
The decision for a specific XBRL taxonomy should be made strategically – based on the company's objectives and environment.

It is worth considering the following questions, among others:

- Which markets and investors are relevant for our company?
- How is the principle of dual materiality mapped?

And finally:

- What regulatory developments are emerging that could be relevant for a future-oriented choice of XBRL taxonomy?

Practical tip
Switching to a different XBRL taxonomy than the one already implemented in the company involves additional effort – especially when converting for the first time or if the new XBRL taxonomy differs significantly from the previous one in terms of structure and content.

3. Practical challenges when using available XBRL taxonomies

ESRS taxonomy

Status and context
The XBRL taxonomy is currently being adapted as part of the EU omnibus package. The technical implementation guidelines (Regulatory Technical Standards, RTS) of the European Commission are also subject to change.

Obstacles to implementation and risks
Future regulatory developments at national level (Switzerland) may require additional adjustments.

Practical advice
Companies should closely monitor developments and plan for adjustments at an early stage.

ISSB taxonomy and GRI taxonomy

Status and context
Swiss companies often pursue an integrative approach by combining IFRS S1/S2 and GRI in order to meet the legal requirements.

Obstacles to implementation and risks
The combination of several reporting standards can be associated with additional effort and risks with regard to machine-readable implementation – due to the parallel use of different XBRL taxonomies.

The lack of binding technical specifications and guidelines – comparable to the EU RTS – means that machine-readable implementation is not regulated.

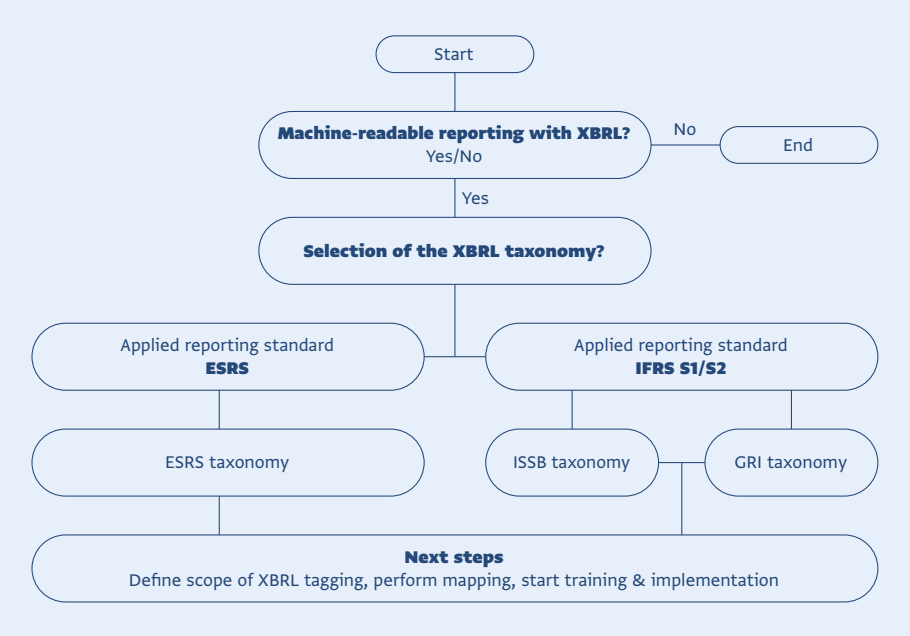
The lack of such specifications and guidelines makes consistent application difficult and impairs the comparability of the reports.

Furthermore, future regulatory developments at national level (Switzerland) may make additional adjustments necessary.

Practical tip
If you combine two reporting standards, in practice only one XBRL taxonomy is usually used for the machine-readable version.

Why?
The parallel use of different, overlapping XBRL taxonomies can be associated with additional work and potential risks. This increases the susceptibility to errors, which can impair the comparability of the data. For consistent and future-proof machine-readable reporting, it is therefore recommended to opt for one of the two XBRL taxonomies.

4.
Step-by-step to XBRL implementation



① Decision: XBRL yes or no?

We recommend discussing the decision with the Board of Directors and, if necessary, having it approved by them.

② Choice of XBRL taxonomy

- ESRS taxonomy
- ISSB taxonomy
- GRI taxonomy

Practical tip
For Swiss companies, the early use of the ESRS taxonomy can be a forward-looking and strategically sensible decision – especially if a medium-term alignment with the ESRS or its implementation is already foreseeable.

In such cases, it is advisable to use the ESRS taxonomy for the machine-readable version of the report – even if the current report is not yet fully in accordance with ESRS.

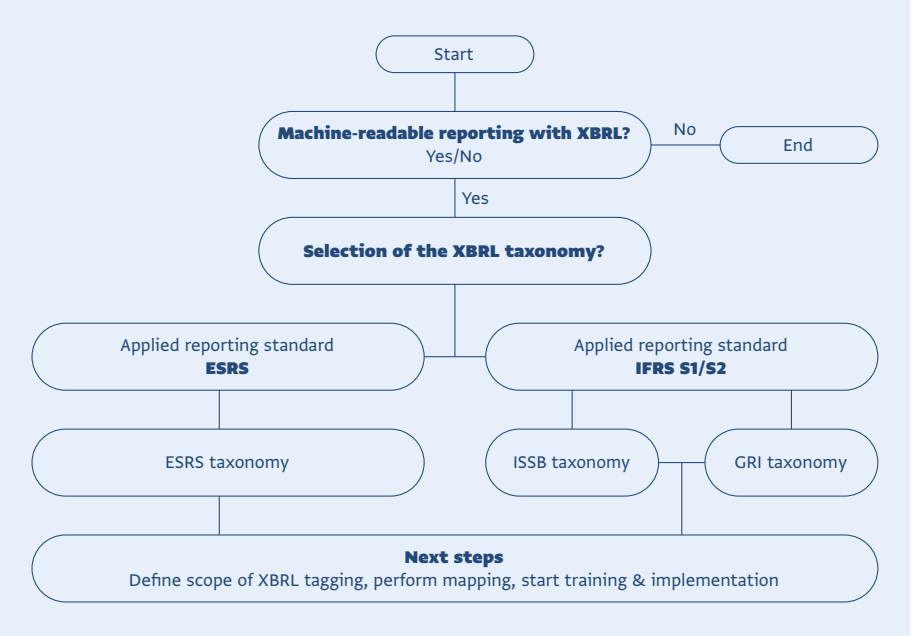
Important
This procedure should be understood as a temporary transitional solution and – if necessary – explained openly and comprehensibly in the report. The XBRL tags used must be selected with professional care and their content must be precisely matched to the respective report content.

③ Targeted provision of the climate report in machine-readable form

According to current legislation, it is generally possible to publish only the climate-related disclosures in machine-readable form as part of the report on non-financial matters.
→ Art. 4 of the Ordinance on Climate Disclosures on Art. 964c para. 2 no. 1 CO

Requirement
The climate-related disclosures must be clearly delineated in the report on non-financial matters and extractable without further processing.

4.
Step-by-step to XBRL implementation (continued)



④ XBRL tagging

Consider what content is relevant for XBRL tagging – and define the appropriate scope.

Practical tip
Choose a pragmatic approach to limit potential additional costs in the course of regulatory adjustments.

Public availability
All XBRL standard taxonomies are publicly available via the Bigfoot Taxonomy Library and provide valuable guidance.

⑤ Implementation of the mapping

Create a mapping between the content of your report and the available XBRL tags of the selected standard taxonomy. XBRL tags, which may be mandatory are mapped to the corresponding report content.

⑥ Provision of a company-specific XBRL taxonomy

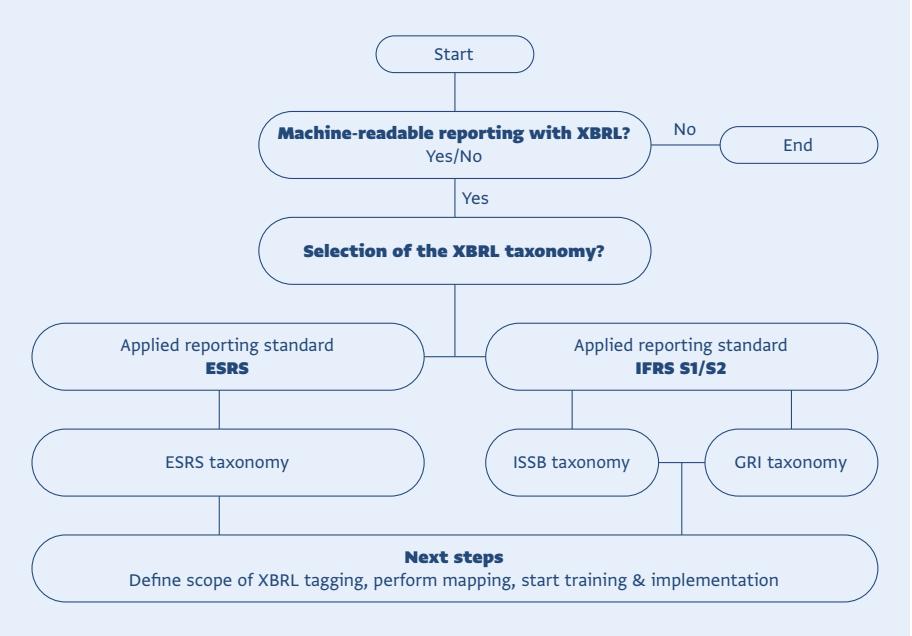
Based on the mapping created, we provide you with a company-specific XBRL taxonomy that focuses specifically on the disclosure obligations relevant to your company and is based on the previously selected XBRL standard taxonomy.

Practical tip
The provision usually takes place within four weeks and also includes the technical roll-out of the MDD Add-in. Ideally, XBRL implementation should take place before completion of the first draft version of the 2025 annual report.

⑦ Training on XBRL tagging

We provide individual training and prepare you specifically for practical XBRL tagging – including the generation of the XBRL ZIP file.

4.
Step-by-step to XBRL implementation (continued)



⑧ Implementation of XBRL tagging

XBRL tagging is carried out directly in the Word and Excel files via the MDD Platform – based on the previously created mapping. We are happy to support you with this process.

Practical tip
Cross-references within the report are generally not tagged as they do not contain any independent, analyzable information. Instead, the referenced content is tagged at its point of origin in the report and provided in machine-readable form. This can involve additional effort. It is therefore advisable to define at an early stage how such cross-references are to be handled.

⑨ Creation and validation of the XBRL zip file (reporting package)

A validated XBRL zip file (reporting package) is generated directly via the MDD Platform.

Practical tip
As a reporting company, we recommend that you install and use the open source tool "Arelle" or other XBRL-certified validation software on your own responsibility and use it yourself. This guarantees an independent check and ensures that the content of your XBRL zip file is correct.

5.
Publication & use

Website publication
The final XBRL zip file (report package) is published on your website and is freely accessible.

Contents of the XBRL zip file
- Report in XHTML format
- Associated XML taxonomy files

Sources & further links

Swiss Code of Obligations (CO), Transparency on Non-Financial Matters Art. 964a ff.
→ Fedlex

Ordinance on Climate Disclosures
→ Fedlex

Ordinance on Climate Disclosures – Explanatory notes (PDF)
→ Explanatory notes – Ordinance on Climate Disclosures

Press release: Federal Council decides on next steps with regard to companies' climate disclosures
→ news.admin.ch

EFRAG: ESRS taxonomy, including XBRL tagged sample report from EFRAG
→ ESRS XBRL Taxonomy, Concluded

IFRS Foundation: ISSB Taxonomy
→ IFRS – IFRS Sustainability Disclosure Taxonomy 2024

GRI Taxonomy
→ GRI – GRI Sustainability Taxonomy

Bigfoot Taxonomy Library
→ Sign in to True North Platform

Arelle®
→ Arelle®

Glossary

Arelle
An open source, XBRL certified validation software.

Double materiality
Concept that takes into account both the impact of a company on the environment and society (inside-out) and the financial impact of sustainability issues on the company (outside-in). Central basis of the ESRS and GRI.

CSV (Comma-Separated Values)
A simple file format for storing tabular data in text form, with in which columns are separated by commas (or other separators). CSV files are machine-readable, but do not contain any information about the semantic meaning of the content. This format is not to be confused with XBRL-CSV.

EFRAG (European Financial Reporting Advisory Group)
Advisory body of the EU Commission for accounting and sustainability reporting. Responsible for the development of the ESRS Taxonomy.

ESRS (European Sustainability Reporting Standards)
Binding EU standards for sustainability sustainability reporting of large companies. Developed by EFRAG on behalf of the EU Commission. Basis for the ESRS taxonomy.

ESRS XBRL Taxonomy (ESRS Taxonomy)
Machine-readable XBRL taxonomy based on the ESRS. Used in the ESEF as part of the Corporate Sustainability Reporting Directive (CSRD) for the inclusion of sustainability information. Based on the concept of double materiality.

ESEF (European Single Electronic Format)
EU-wide standardized electronic reporting format for annual financial reports. In future, sustainability reporting in accordance with the CSRD must also be in ESEF using the XBRL taxonomy.

Financial materiality
Concept that focuses exclusively on the financial impact of sustainability factors on the company's financial position. company (outside-in). Basis of the IFRS Sustainability Disclosure Standards.

GRI (Global Reporting Initiative)
International organization that develops standards for voluntary sustainability voluntary sustainability reporting. Pursues the concept of dual materiality.

GRI Sustainability Taxonomy (GRI Taxonomy)
Machine-readable XBRL taxonomy based on the GRI Standards. Frequently used internationally for voluntary sustainability reports – also in combination with other frameworks.

IFRS Foundation
International organization that develops global accounting standards. Founded the International Sustainability Standards Board (ISSB) in 2021, which is responsible for developing the IFRS Sustainability Disclosure Standards.

IFRS Sustainability Disclosure Standards (IFRS S1/S2)
International standards of the ISSB for sustainability reporting.
- IFRS S1: General disclosure requirements on sustainability
- IFRS S2: Specific disclosures on climate-related risks and opportunities.

IFRS Sustainability Disclosure Taxonomy (ISSB taxonomy)
XBRL taxonomy based on the IFRS S1/S2 standards. Developed by the IFRS Foundation. Pursues the concept of financial materiality.

Glossary (continued)

iXBRL (Inline XBRL)
Enables structured, machine-readable XBRL data directly into a human-readable HTML document that can be read by humans. This creates a standardized document that can be processed both visually by humans and by automated systems.

In contrast to pure XBRL, which is usually available in separate XML files, iXBRL combines the advantages of HTML with the precise data structure of XBRL.

ISSB (International Sustainability Standards Board)
Committee of the IFRS Foundation that international standards for sustainability reporting – in particular IFRS S1 and S2.

JSON (JavaScript Object Notation)
A text-based, machine-readable data format for the structured transfer of data. transfer of data. JSON is compact, widely used in web APIs and easily processed by machines – but without semantic linking as with XBRL. This format is not to be confused with XBRL-JSON.

Mapping
Assignment of content from the sustainability report to the corresponding XBRL tags, which must be used, are assigned to the corresponding report content.

EU Omnibus Package
EU-wide coordinated legislative amendment which, among other things, provides for changes to the ESRS and the associated technical standards (RTS). Has a direct impact on XBRL implementation.

RTS (Regulatory Technical Standards)
Technical implementation rules issued by the EU Commission for the specific implementation of legal requirements. Binding for the XBRL implementation of the ESRS.

XBRL-Tagging
Process of marking report content with standardized XBRL tags for machine-readable evaluation.

TCFD (Task Force on Climate-related Financial Disclosures)
An expert committee initiated by the G20 committee of experts that developed a framework for the disclosure of climate-related financial risks. The TCFD recommendations set global standards for reporting on climate risks.

The content of the TCFD was fully incorporated into IFRS S1 and S2 of the ISSB. The TCFD ceased its activities in 2023 and has since referred to the IFRS Sustainability Standards.

XBRL (eXtensible Business Reporting Language)
Open standard for machine-readable reporting. XBRL makes it possible to structure information in such a way that it can not only be transmitted, read and processed by machine, but also correctly understood in terms of content.

XHTML
A stricter, XML-based variant of HTML. XHTML combines the structural rules of XML with the display functionality of HTML. It is used to display iXBRL documents and enables a readable view with embedded XBRL tags for humans and machines.

List of abbreviations

CSV
Comma-Separated Values

EFRAG
European Financial Reporting Advisory Group

ESRS
European Sustainability Reporting Standards

ESEF
European Single Electronic Format

GRI
Global Reporting Initiative

HTML
HyperText Markup Language

IFRS
International Financial Reporting Standards

ISSB
International Sustainability Standards Board

iXBRL
Inline eXtensible Business Reporting Language

JSON
JavaScript Object Notation

CO
Swiss Code of Obligations

RTS
Regulatory Technical Standards (EU)

TCFD
Task Force on Climate-related Financial Disclosures

XBRL
eXtensible Business Reporting Language

XHTML
Extensible HyperText Markup Language

XML
Extensible Markup Language