# USE OF DIGITAL TECHNOLOGIES FOR SUSTAINABILITY REPORTING

**Valeria Radosavljevic, MSc**

**Sustainability and circularity
Business development and
CSRD reporting strategies**

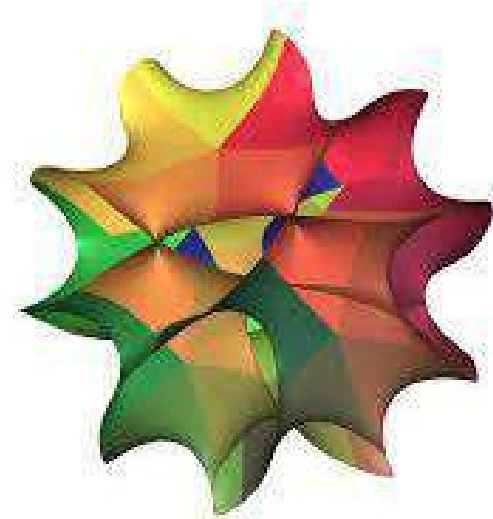**Webinar, 29 January 2025, 9:00-11:00**

# Content

I.   **CSRD and ESRS Standards.**

II.  **Using digital technologies for effective reporting and  examples.**

III. **Conclusion: how to approach it?**

IV. **Q&A**

# I. ESG reporting: the CSRD and ESRS standards.

# ESG reporting

1. **CSRD.**

2. **ESRS standards.**

3. **Link to other Green legislation.**

4. **Opportunities and challenges.**

# ESG and CSRD

- **ESG is the collective name for a set of standards used to assess companies on their relationship with the environment, society and governance.**

- **The CSRD is an EU legislative act that sets reporting requirements for companies on the environmental (E), social (S) and governance (G) aspects of their business.**

- **The CSRD aims to improve the accessibility, trust and transparency of ESG reports and to better demonstrate the financial value of information on sustainability.**

- **The CSRD establishes a common starting point for businesses in the EU.**

# What does the introduction of ESG in reflect?

- ➢ **Awareness.**

- ➢ **Knowle dge.**
- ➢ **Values.**

- ➢ **Choice.**

- ➢ **Consciousness of choices.**
- ➢ **Spectrum: from nothing to everything.**
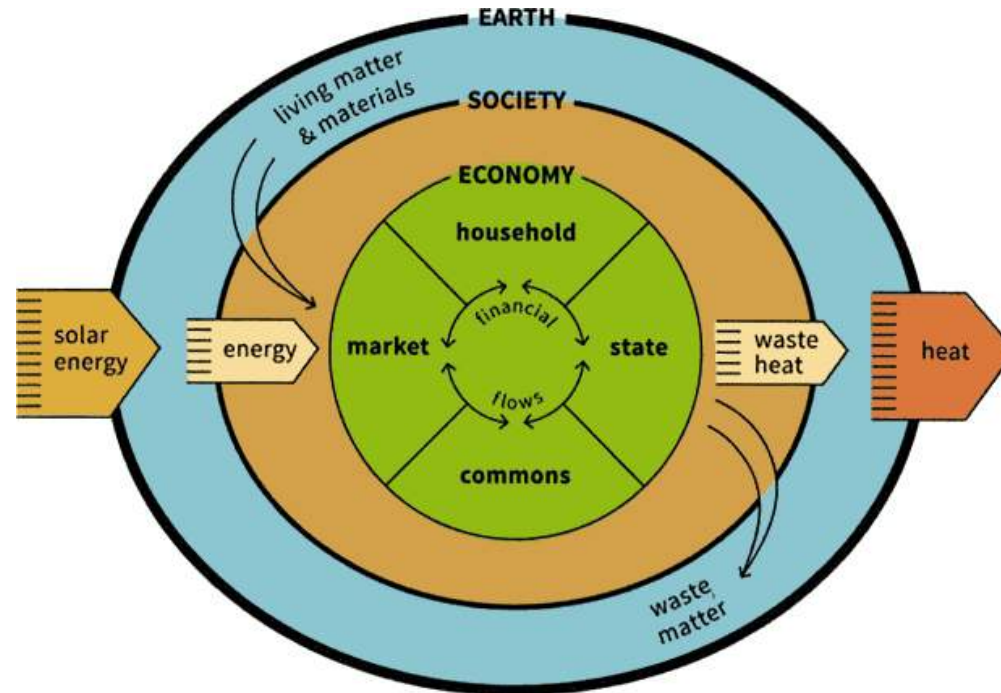
# The European Green Deal and the "green wave" of legislation

The European Green Deal is a package of policy initiatives to put the EU on a green transition path, with the ultimate goal of achieving climate neutrality by 2050. It supports the EU's transformation into a fair and prosperous society with a modern and competitive economy.
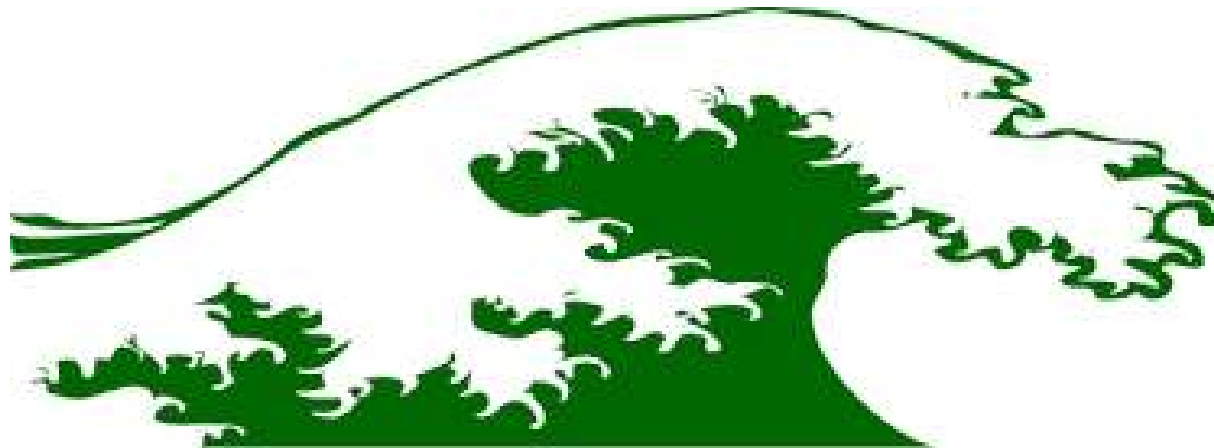
Circular economy

Consumers    Biodiversity

Branches    Green claims    Climate

Packaging    Waste    Products    CO2

Energy    Natural environment

Financing Forests

Information    Reporting
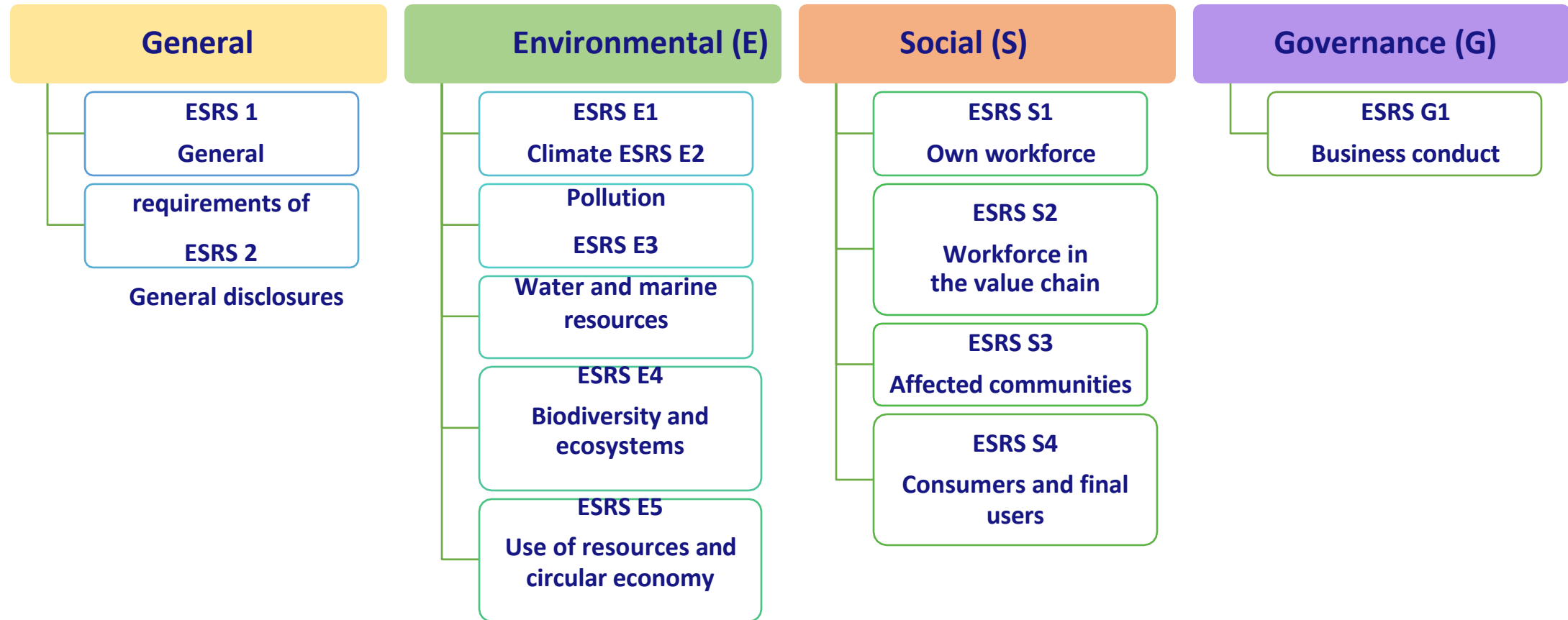
# Corporate Sustainability Reporting Directive: CSRD

➢ **A complete change in the way information is produced and disclosed on sustainability:**

- **Mandatory and subject to external assurance.**

- **Equal importance of reporting non-financial and financial information.**

- **The principle of double relevance.**

➢ **Reporting compliance with the new European Reporting Standards on Sustainability (ESRS).**

➢ **The amendment to the Companies Act (ZGD-1M), which started effective from 18 2024, implements the CSRD into the Slovenian legal order.**

➢ **Companies will be obliged to report in phases, depending on their size and status: from 2025 to 2024.**
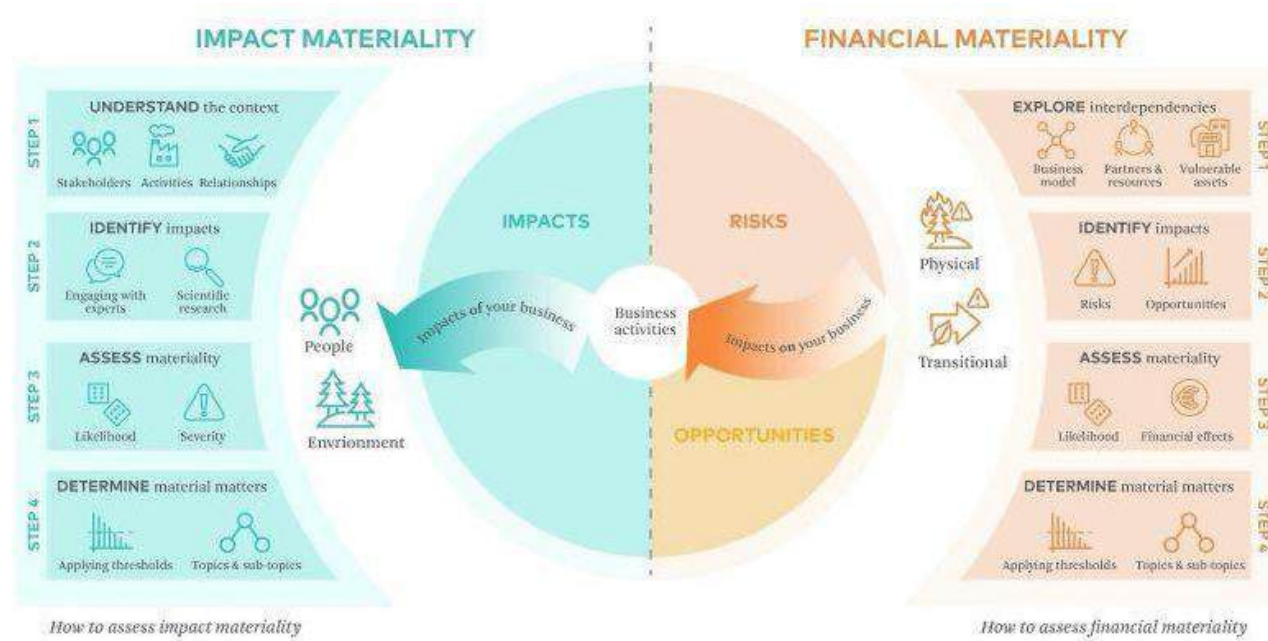
**Scope of reporting:**

- **The entire value chain.**

- **Restrospective and oriented towards the future.**

- **Short, medium and long term.**

- **Qualitative and quantitative.**

# 12 ESRS sustainability reporting standards

| General | Environmental (E) | Social (S) | Governance (G) |
|---|---|---|---|
| **ESRS 1** General requirements of | **ESRS E1** Climate ESRS E2 | **ESRS S1** Own workforce | **ESRS G1** Business conduct |
| **ESRS 2** General disclosures | **Pollution ESRS E3** Water and marine resources | **ESRS S2** Workforce in the value chain | |
| | **ESRS E4** Biodiversity and ecosystems | **ESRS S3** Affected communities | |
| | **ESRS E5** Use of resources and circular economy | **ESRS S4** Consumers and final users | |

# The principle of dual relevance at the heart of reporting

# ESRS Overview E5: Resource use and the circular economy

➢ **ESRS 2: General Disclosures.**

➢ **ESRS 2 IRO-1: Description of the procedures for identifying and assessing significant impacts, risks and opportunities related to the use of important resources and the circular economy.**

➢ **E5-1: Policies related to resource use and the circular economy.**

➢ **E5-2: Actions and resources related to resource use and the circular economy.**
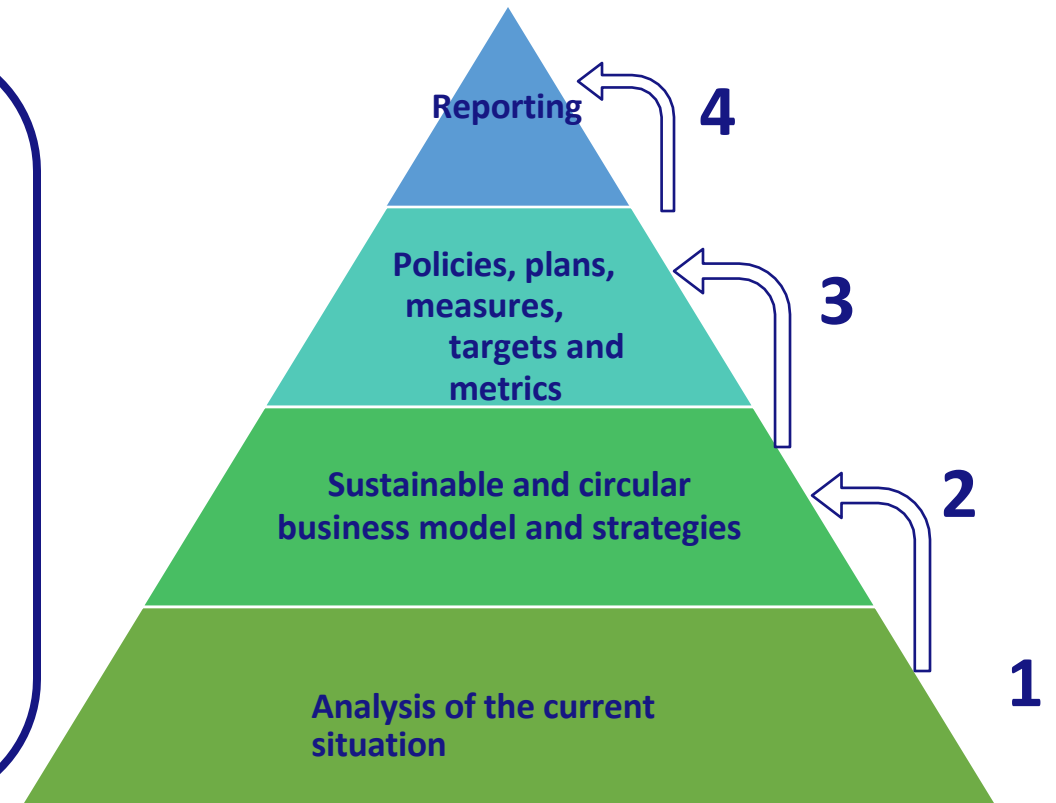
**Managing impacts,**

**risks and opportunities**

➢ **E5-3: Targets related to resource use and circular economy (ESRS 2 DC-T).**

➢ **E5-4: Resource inflows.**

➢ **E5-5: Resource outflows.**

   • **Products and materials.**

   • **Waste**

trics and targets

➢ **E5-6: Potential financial impacts arising from impacts, risks and opportunities, related to the use of important resources and the circular economy.**

# The relevance of ESRS E5 for companies in the case of materiality

➤ **Rethinking the business model and strategies in line with aspects of sustainability and the circular economy and their possible redesign.**

➤ **New types of information and data required for reporting.**

➤ **Keeping new records.**

➤ **New internal processes and controls.**

➤ **Ensuring the integrity and credibility of data is crucial importance.**

**Reporting** 4

**Policies, plans, measures, targets and metrics** 3

**Sustainable and circular business model and strategies** 2

**Analysis of the current situation** 1

# Example: the Fairphone company

| KPI Name | Result 2022 |
|---|---|
| **Outcome KPI** | |
| **KPI 1: Fairphones sold** | 115,681 |
| **KPI 2: Longevity score** | 5.5 |
| **KPI 3: E-waste neutrality** | 100% |
| **KPI 4: Fair materials** | 40% |
| **KPI 5: Fair factories** | 63% |
| **KPI 6: Industry influence score** | 19 (60) |
| **KPI 7: Net financial results** | 44 |
| **Impact KPI** | |
| **E-waste avoided** | 15 |
| **CO2 avoided** | 999 |
| **People benefiting** | 28,926 (83,803) |

**KPI 7: NET FINANCIAL RESULTS**

## Our results

| Fairphone Financials | | |
|---|---|---|
| Financials (€ '000) | 2021 | 2022 |
| Revenue | 36,962 | 58,998 |
| EBITDA | 5,687 | 4,484 |
| Normalized EBITDA | 2,190 | 4,484 |
| Net result (€ '000) | 3,876 | 44 |

Ultimately, our industry peers will be wondering what this all translates to in terms of money. It's our mission to establish and demonstrate a market for fair and sustainable consumer electronics. This also entails showing that a mission-driven company can achieve a profit through purpose. And that's what we have been doing since achieving profitability in 2020.

# Relationship with other Green Deal legislation

- **European Deforestation Regulation (EUDR).**

- **Corporate Sustainability Due Diligence Directive (CSDDD).**

- **The Ecodesign of Sustainable Products Regulation (ESPR).**

- **EU taxonomy.**

- **Sustainable financing.**

- **Waste.**

- **…**

# Benefits and opportunities

**Benefits and opportunities:**

✓ A comprehensive knowledge and understanding of the company's activities as part of the environment in which the company wants to be successful and of

on which depends.

✓ Adapt effectively to changing external conditions.

✓ Creating an "intelligent" business model.

✓ The company's position in the sustainable and circular value chain of European producers is secured.

✓ Access to critical resources and materials.

✓ Access to sustainable finance.

✓ Promoting long-term cooperation and stability in stakeholder relations.

# Challenges

**Challenges:**

✓ **The scale, complexity and**

**.**

✓ **Oversimplification.**

✓ **Change.**

✓ **Extra work.**

✓ **Time.**

✓ **Costs.**

✓ **Education.**

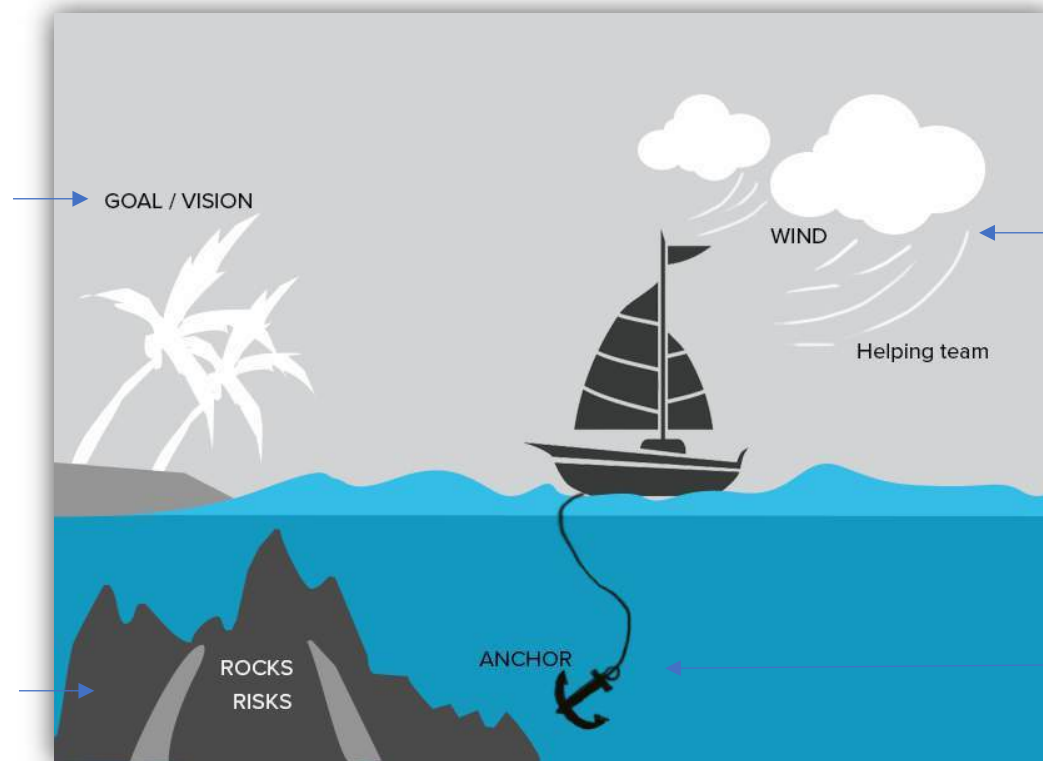✓ **Report as the sole objective/outcome.**





Carbon tunnel vision
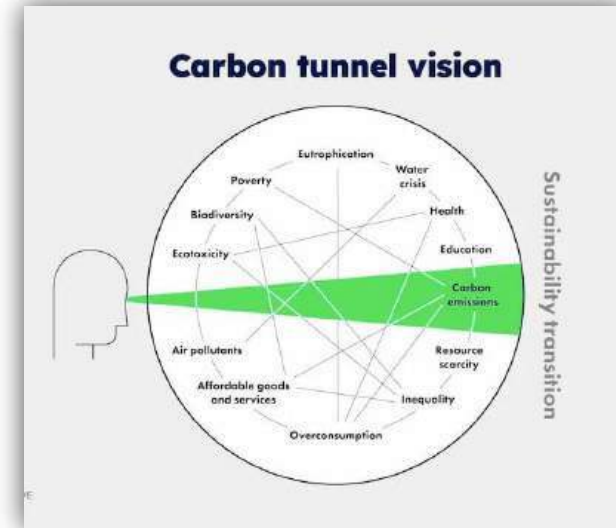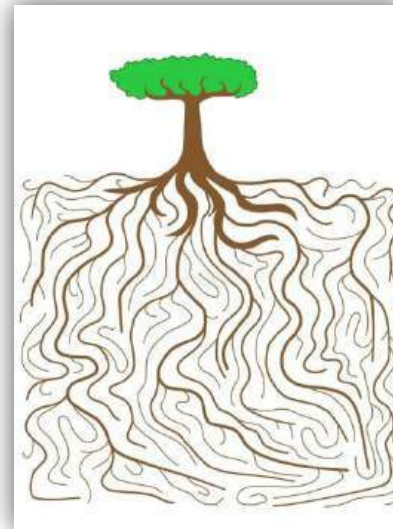
# Report as the only result

# Ensuring compliance with the CSRD is as …



**CSRD Sustainability Report** → GOAL / VISION

**Digital technologies** → WIND

Helping team

ANCHOR ← **Management support, lead person**

**Supply chain, data** → ROCKS RISKS

# II. Using digital technologies for reporting on sustainability

# Using digital technologies for sustainability reporting

1.  **The double gateway: 'Green and Digital Europe'.**

2.  **The role of digital technologies and tools.**

3.  **Big Data, Analytics and Artificial Intelligence.**

4.  **Blockchain.**

5.  **Specialised .**

ECOLIBRIUM
SUSTAINABILITY AND CIRCULARITY CONSULTING

Co-funded by
the European Union

Digital4
Sustainability
Skills for Europe's Twin Transition

# The double transition: a green and digital Europe

**Digitalisation is key to achieving the Sustainable Development Goals because:**

➢ **It enables.**

➢ **Support s.**

➢ **It simplifies.**

➢ **It offers new solutions.**

# The role of digital technologies and tools for CSRD reporting

- **The CSRD requires a digital approach from the outset.**

- **Achieving the CSRD requirements without specialised software would be very difficult, if not impossible.**

- **Digitising sustainability reporting can make the process more efficient and cost-effective.**

- **Digital systems can ensure the accuracy and consistency of the data underlying reporting.**

- **Data analysis, automation, blockchain and artificial intelligence offer innovative solutions to the complex challenges of CSRD compliance.**

# Scope of reporting

**Scope of reporting:**

- **The entire value chain.**

- **Retrospective and forward-looking.**

- **Short, medium and long term.**

- **Qualitative and quantitative.**

# The challenge: data

- **Large amount of data needed.**
- **Complexity of collection.**
- **Many different sources and types.**
- **Credibility, transparency and verification.**
- **The complexity of the analysis.**
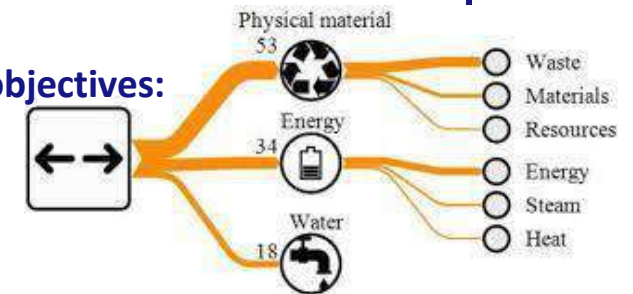- **Complexity of interpretation.**
- **…**

# Big data, analytics and artificial intelligence

- **advanced data analysis tools, companies can extract valuable insights from their sustainability data to provide a solid basis for their reports.**

- **AI can analyse patterns and trends in large  sets, companies to predict future sustainable results and adjust their strategies accordingly.**

- **Predictive analytics can help companies identify potential areas of risk, enabling them to proactive action.**

- **Project management tools help manage the data collection process with features including descriptions of data points and data extraction formats.**
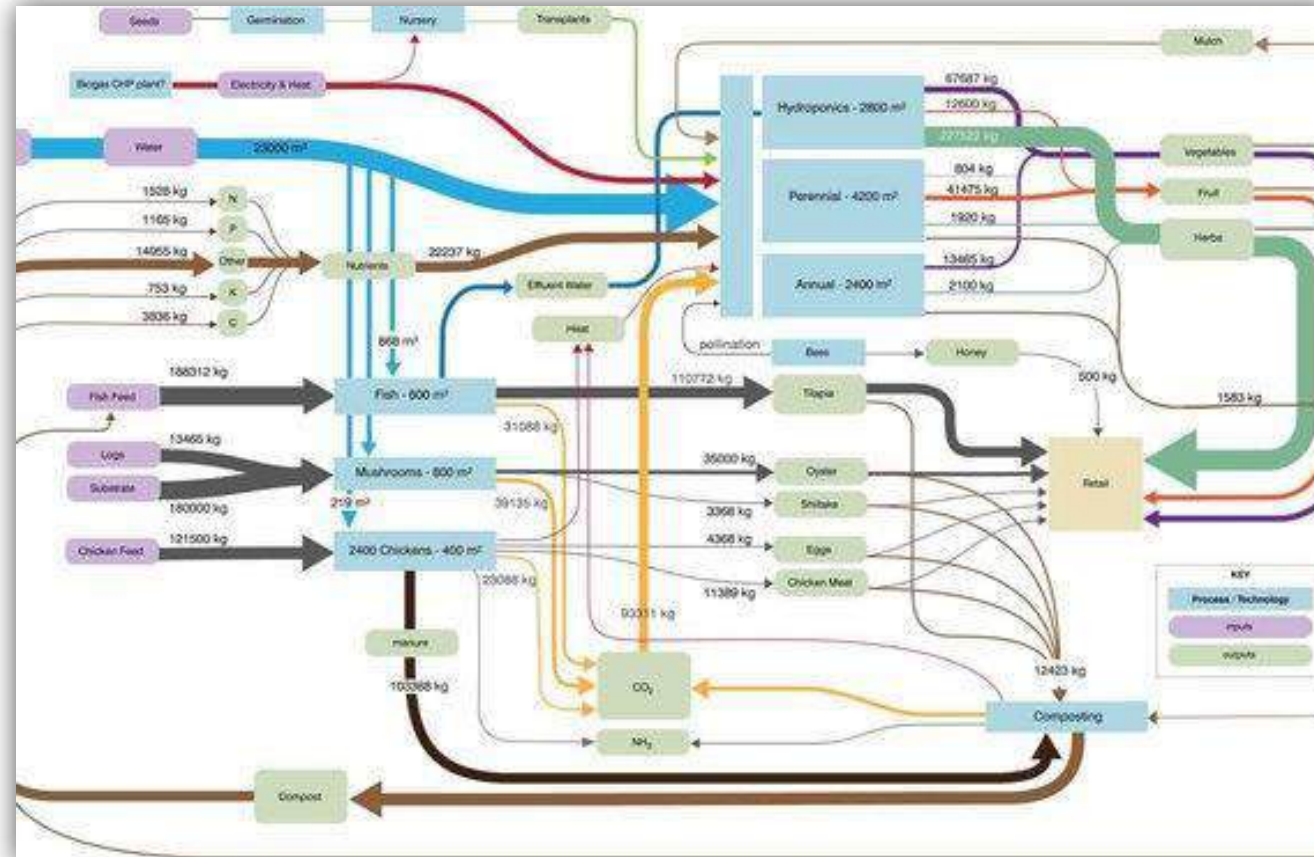
# ESRS E5 Material Flow Analysis (1)

- **MFA is a data-driven tool for managing the flow of resources, materials and energy.**

- **It involves a detailed study of the flows of input, processing and output of materials in different production systems.**

- **This tool is widely used in supply chains and management.**

- **Analysis of the flow of resources, materials and energy supports the achievement of the objectives:**

  - **Reduce waste and pollution.**

  - **Increasing resource, material and energy efficiency.**

  - **Using by-products and waste from one process as a source for another process.**

- **BASF, Bayer, Novo Nordisk.**

# Biodiversity measurement and monitoring ESRS E4 (1)

- **All living things leave traces of their DNA in the environment (eDNA).**

- **Naturemetrics uses eDNA to identify individual species from small samples of soil, sediment, water and air.**

- **eDNA gives an accurate picture of the biodiversity in a given area. It provides the most comprehensive overview of the whole spectrum of life, no how difficult it is to detect.**

- **Monitoring eDNA quickly reveals changes in the environment, allowing adaptive measures to be taken.**

- **Use for impact reporting.**

- **Cargill, Purina, WWF, EDF Renewables, Tesco.**

# Biodiversity measurement and monitoring ESRS E4 (2)
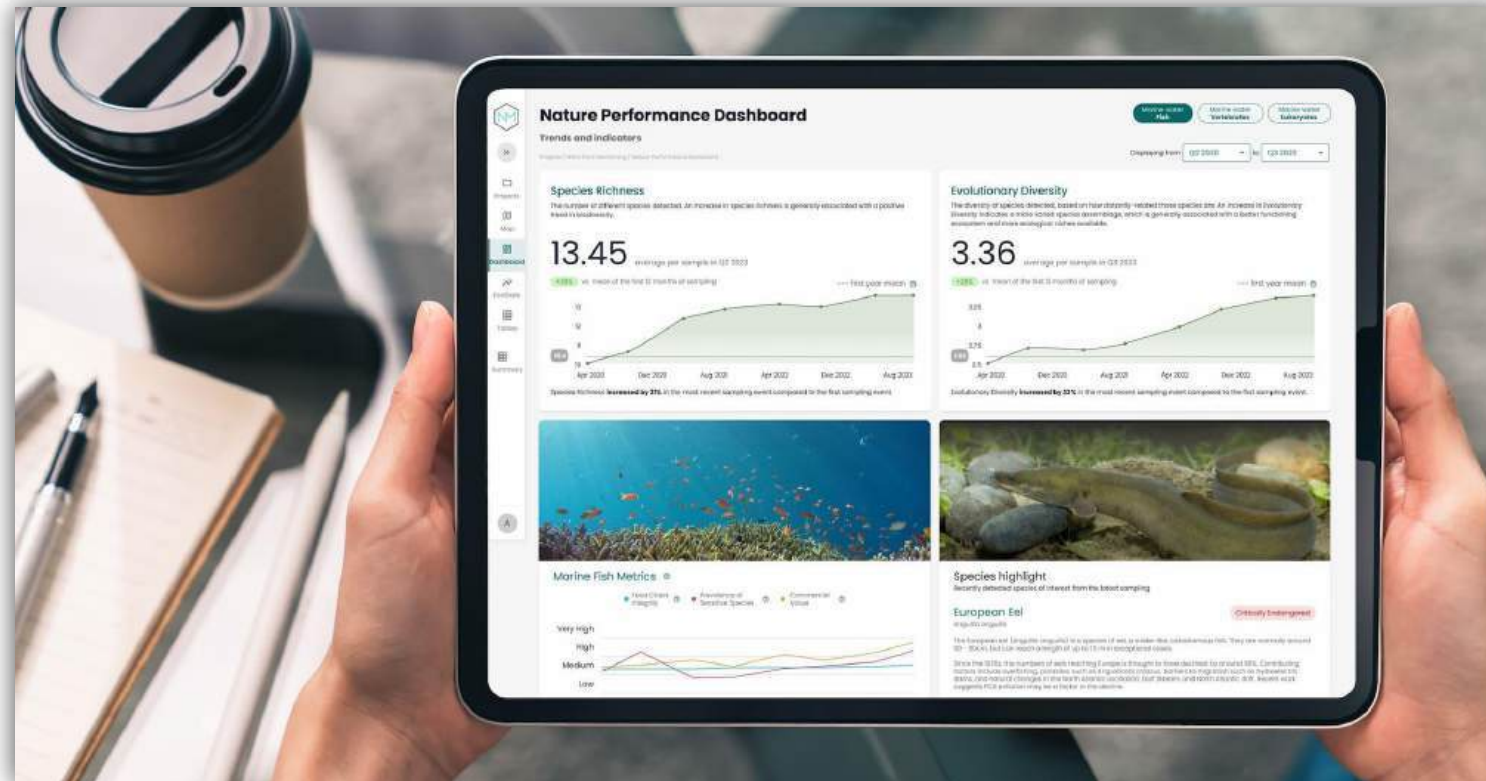
# Automation (of repetitive tasks)

- Given the volume and complexity of data management for CSRD reporting, automation is .

- Software solutions equipped with automatic data collection and reporting can significantly simplify procedure.

- Automated systems can collect data from multiple sources, consolidate it and generate reports in formats that comply with ESRS standards.

- This approach reduces the risk of human error and improves overall efficiency.

- Automation also enables monitoring and reporting on sustainability indicators, which promotes timely decision-making and continuous improvement.

- By automating repetitive tasks, companies can allocate resources to strategic aspects of CSRD compliance, such as improving sustainable practices and promoting innovation.

# Blockchain for transparency and credibility (1)

- **A blockchain is a distributed database or ledger shared by nodes in a computer network.**

- **Maintain a secure and decentralised record of events/transactions.**

- **It has enormous potential to create trust, transparency and accountability.**

- **Blockchain's development is multi-directional: it is best known for its key role in cryptocurrency systems, but it is also of great importance for**

  **sustainable and circular business.**

- **By implementing systems, it is possible to ensure an untouchable trace of all transactions and actions,**

  **related to sustainability, which greatly increases the credibility and reliability of the reported data.**

- **smart contracts, companies can automate processes such as checking the sustainability credentials of suppliers.**



BLOCK CHAIN

# Blockchain for transparency and credibility (2)

- **Blockchain can provide transparency and traceability in supply chains: from sourcing to distribution, maintenance, after-sales and end-of-life.**

- **It offers strong support against fraud, counterfeiting and contamination.**

- **Enables credible communication of information to customers/buyers on how companies respect social and ethical codes of conduct, how they implement their values in their processes and the environmental impact of their products.**

- **This allows companies to strengthen their brand and build long-term relationships with their customers.**

- **It enables transparent reporting on sourcing and supply chains.**

# Traceability, transparency, trust

**ESRS E1**

**ESRS E4**

**ESRS E5**

**ESRS S2**

**ESRS S3**

**ESRS S4**

# Transparency in the supply chain: seafood

- **For seafood supply chains, Blockchain enables:**

  - **Product authentication.**

  - **Validation of claims and the existence of climate-smart practices.**

  - **Digitising and optimising supply chains.**

  - **Granular monitoring and asset tracking.**

  - **Traceability, which includes verification of legal,  and sustainability risks.**

  - **Turning challenges into competitive advantage.**



A full seafood product journey traced via GoTrace on ProNatura's website

# Transparency in the supply chain: Fairphone (1)



- **Conflict minerals and destructive mining practices in the electronics industry.**
- **Conflict minerals are a source of significant revenue during wars and military conflicts in a given area and therefore contribute to violence and exploitation.**

# Transparency in the supply chain: Fairphone (2)



Fairphone Supply Chain Fairphone 4

Legend:
- Supplier
- Manufacturer

| KPI 4: Fair materials | 40% |
|---|---|
| KPI 5: Fair factories | 63% |

https://www.fairphone.com/en/impact/source-map-transparency/
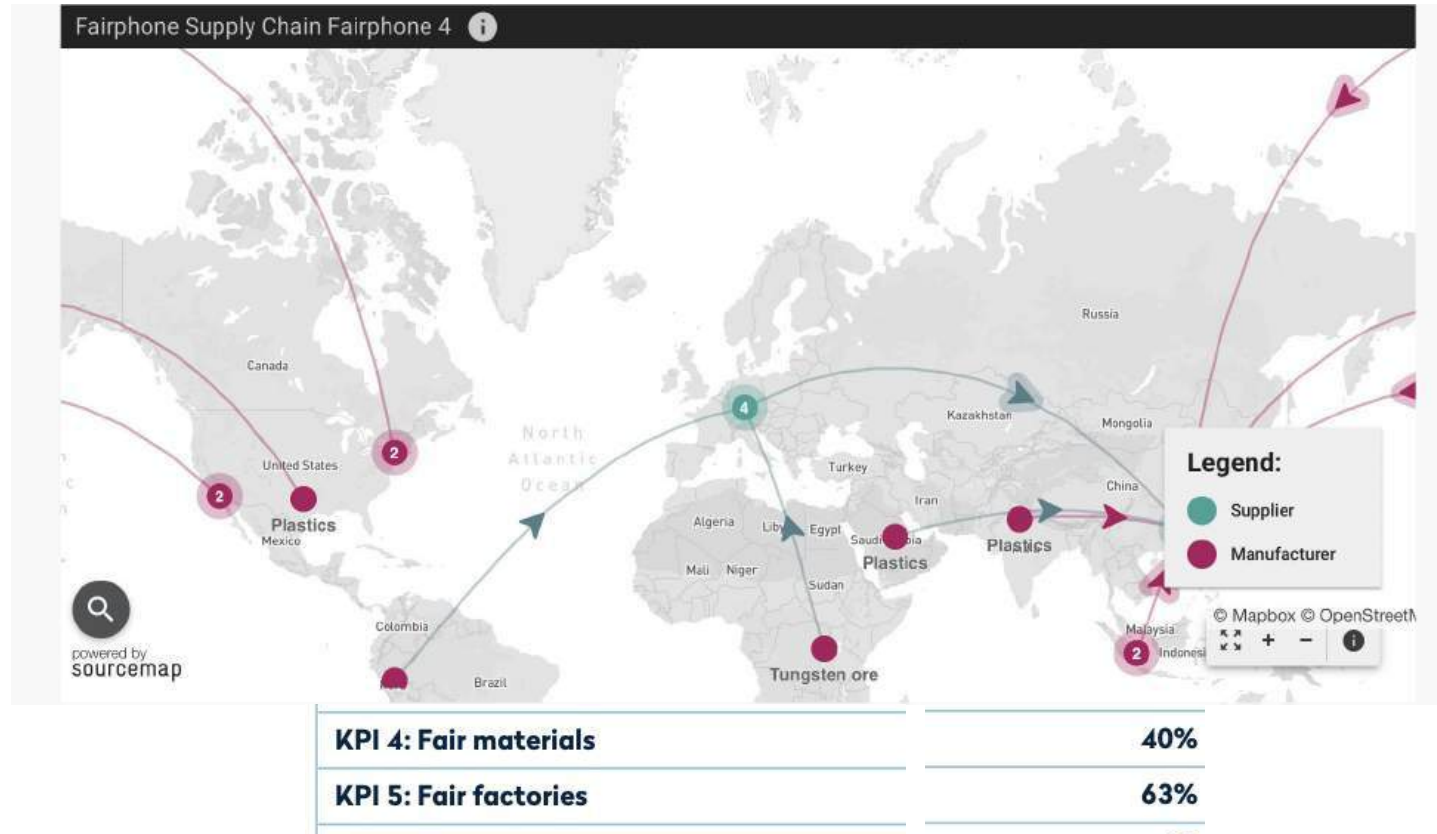
# Transparency of origin: the MudJeans Digital Passport

# Digital passport for sustainable products in the EU

- **The Eco-design Regulation for Sustainable Products (ESPR) entered into force on 18.07.2024.**

- **The EMFF Regulation is part of a package of measures under the CEAP  Circular Economy Action Plan.**

- **The aim is to make sustainable products the norm in the EU single market.**

- **A digital passport for sustainable products is among the possible requirements for certain  groups.**
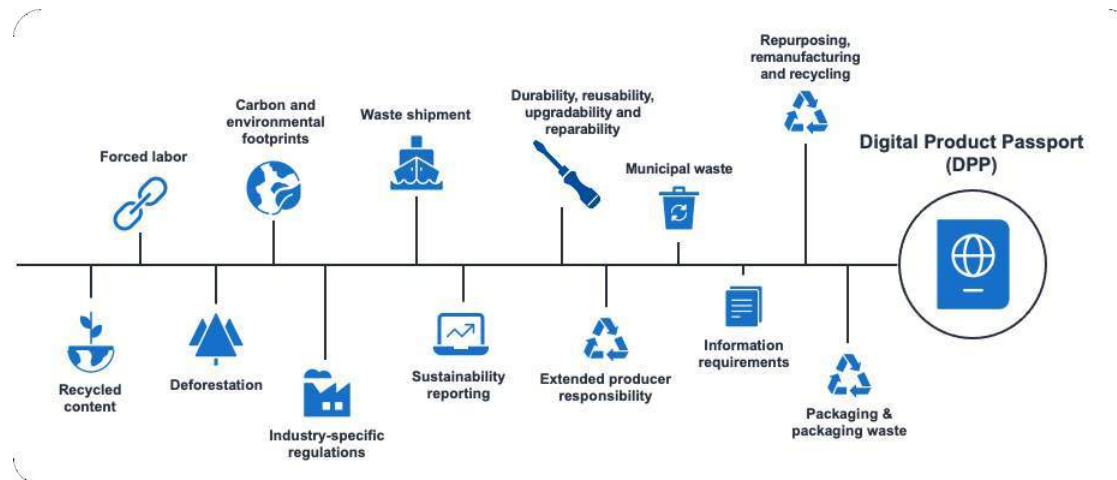
# Data types: primary and secondary data for the CSRD Reporting
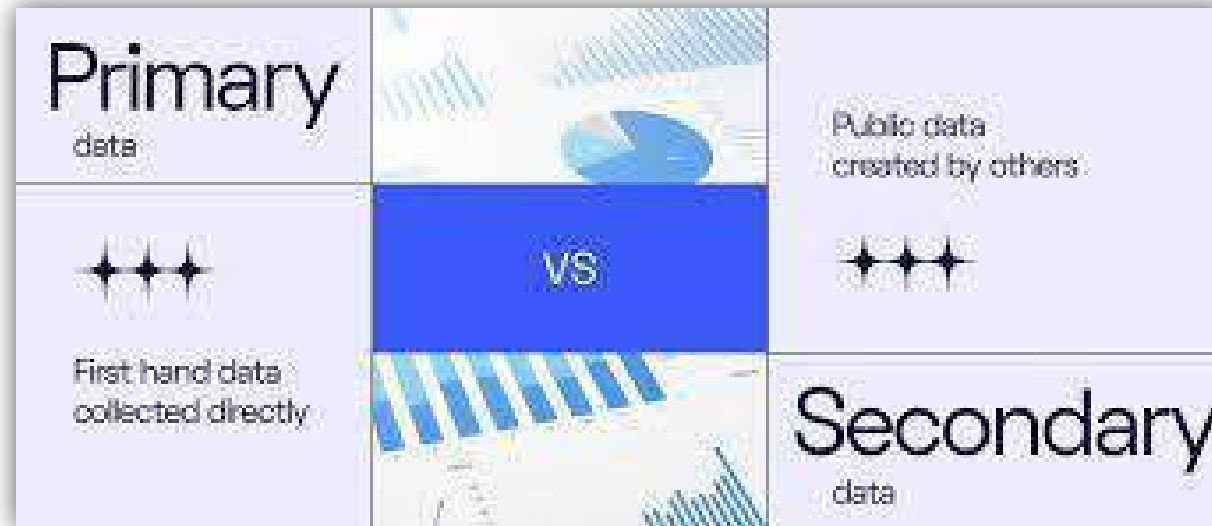
# Specialised software for CSRD reporting
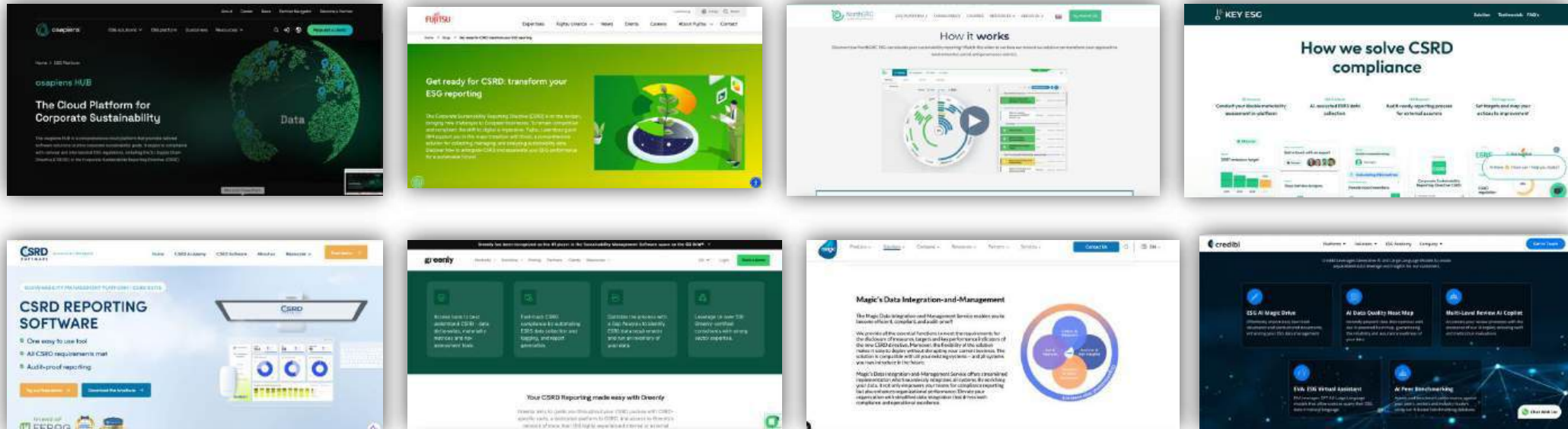


**Dual relevance assessment, collection, gap identification, project management,**

**ESRS-specific calculations (CO2, LCA), supply chain, readiness,...**

# Specialised software for specific tasks

- CO2 calculation.

- LCA analyses.

- MFA analysis.

- Measuring .

- Confirmation of origin.

- Sensors for measurement and IoT.

- Integration of data from different .

- Data management systems.

- Advanced analytics to streamline data collection and ensure accuracy across the entire value chain.

- Managing the questionnaire process.

- …

# Global Sustainability Reporting Database
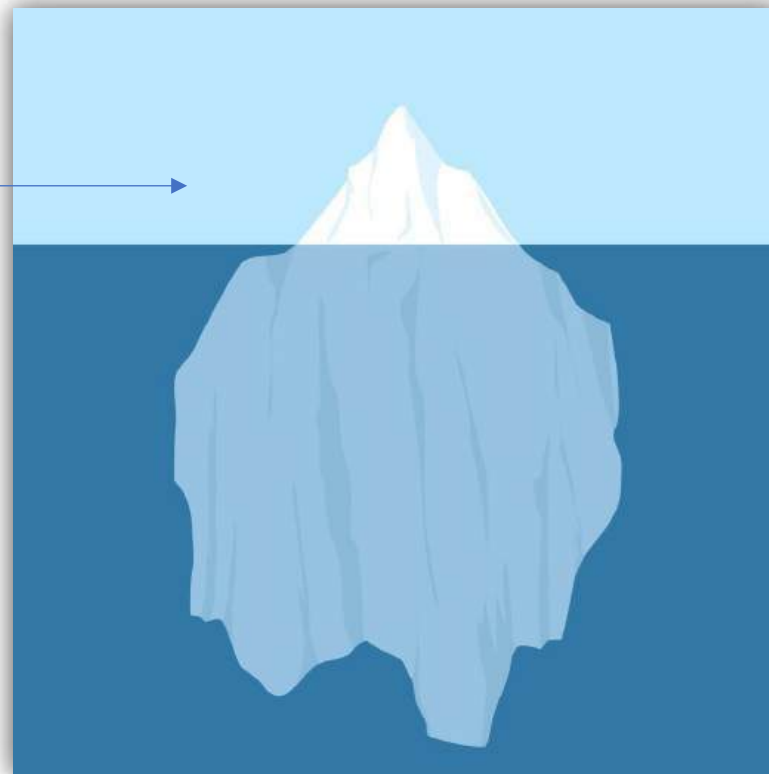


**https://etoso.io**

# III. Conclusion: how to approach it?

# CRSD Sustainability Report



CSRD report

Groundwork

# Business and Sustainability (1)
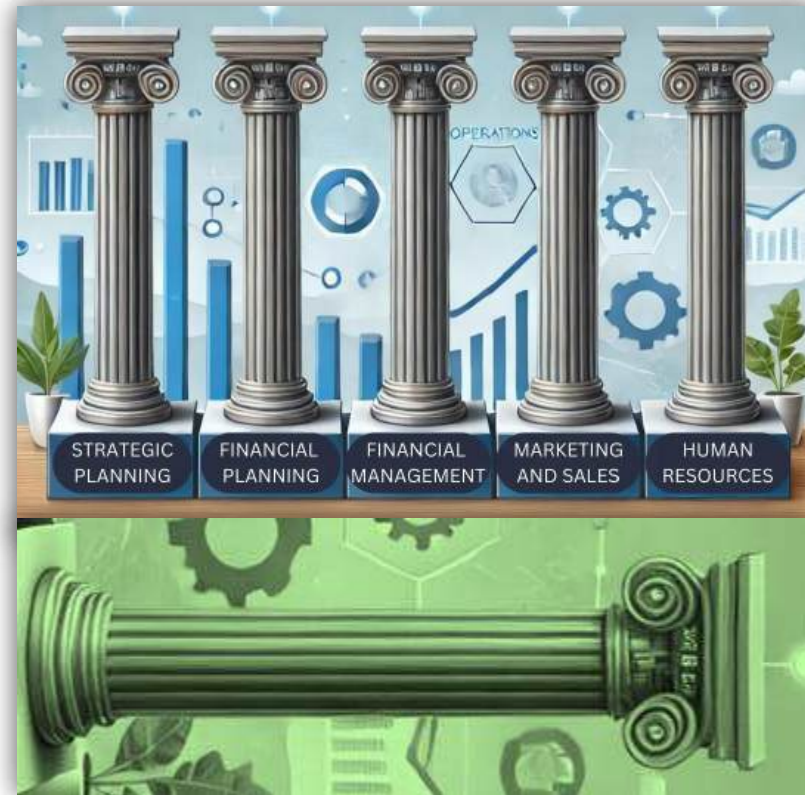


**+**

Sustainability

# Business and Sustainability (2)



**Sustainabilit
y**

# How to approach CSRD reporting (1)

➢ **To become familiar with the content of the CSRD and ESRS.**

➢ **Identify a lead person, possibly an external expert, to introduce sustainability reporting.**

➢ **Determine the relevance of the issue of sustainability in the company's business.**

➢ **Review the entire value chain and identify all stakeholders.**

➢ **Assess the relevance of each category in terms of the impact on the company and the impact on the company (double relevance and health check).**

➢ **Check data availability.**

➢ **Judging the use of digital technologies: need/benefit.**

➢ **Prepare a draft sustainability report: from general to detailed.**

# How to approach CSRD reporting (2)

- ➢ **Fully consider the problem to be solved: what is the objective/purpose?**
- ➢ **Find the least complex solution that addresses both the surface and deeper aspects of the "problem".**

- ➢ **Existing tools can be used initially.**

- ➢ **Cross-functional cooperation and management support is essential.**

# Conclusion (1)

- **Increasingly stringent sustainability reporting requirements such as the CSRD make technology a powerful ally for companies to measure,**

  **reporting and monitoring their sustainability performance.**

- **Data analysis, automation, blockchain, artificial intelligence and specialised software offer innovative solutions to CSRD**

  **compliance challenges.**

- **These technologies can also help companies use the same data to meet other requirements, their use beyond CSRD .**

- **Centralised data collection and analytical processes will make the audit of sustainability reports more efficient.**

- **By adopting these technologies, companies can not only meet regulatory requirements more efficiently, but also**

  **drive their sustainability , turning compliance from a daunting task into a strategic priority.**

# Conclusion (2)

- **However, it is crucial to recognise that while technology is a powerful tool, its effectiveness depends on strategic vision, commitment to sustainability and the implementation skills of the s human resources.**

- **Successful use of technology to ensure compliance with the CSRD therefore requires a balance between technical capabilities and human judgement and ingenuity.**

# IV. Q&A     Thank you for your attention!

# Valeria Radosavljevic

- ➢ **Business development expert with more than 15 years of international experience.**

- ➢ **Consultant on sustainability, circularity and CSRD reporting.**

- ➢ **Certified Circular Economy Specialist - High Mastery, Circular Economy Alliance & Ecole des Ponts Business School.**

- ➢ **Mentor on the START:UP Slovenia platform.**

- ➢ **Leader of lectures, workshops and training on sustainability, circularity and regeneration.**

- ➢ **Doughnut Tool for Business workshop facilitator.**

# About Ecolibrium

**Ecolibrium offers expert advice on sustainability, circularity and regeneration,**

**their importance, the opportunities involved and their practical implementation in  operations.**

**It helps companies to shape their business models and strategies in line with sustainability principles; and**

**offers support for the introduction of sustainability reporting under the CSRD.**

# Thank you for your participation!

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