

TEKenable

CSRD Data Digital Best Practice

Digital  4
Sustainability
Skills for Europe's Twin Transition

 Co-funded by
the European Union



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Digital4Sustainability

Empowering the European Workforce
for the Sustainable Digital Transition

Funded under the Erasmus+ programme as an Alliance
for Sectoral Cooperation on Skills



Co-funded by
the European Union



Digital4Sustainability

Empowering the European Workforce for the sustainable digital transition



Shaping a Sustainable Digital Future



Driving innovation
in digital & sustainability
practices to boost Europe's
skills for the sustainable
digital transition



4-year EU funded project
(2024-2028)



29 members of the
Digital Large-Scale
Partnership under
the Pact for Skills
from 13 EU countries



Digital4Sustainability is dedicated to **accelerating the digital and green transitions** within the ICT sector and across European industries. Our mission is to develop and implement **innovative training programmes** that provide professionals and businesses with the skills and knowledge needed to thrive in a rapidly evolving landscape where digital technology and sustainability intersect.



Why this project?

Green and digital transitions, also referred to as **Twin Transition** (as they are closely linked and have the capacity to reinforce each other), are **top priorities of the EU agenda**.

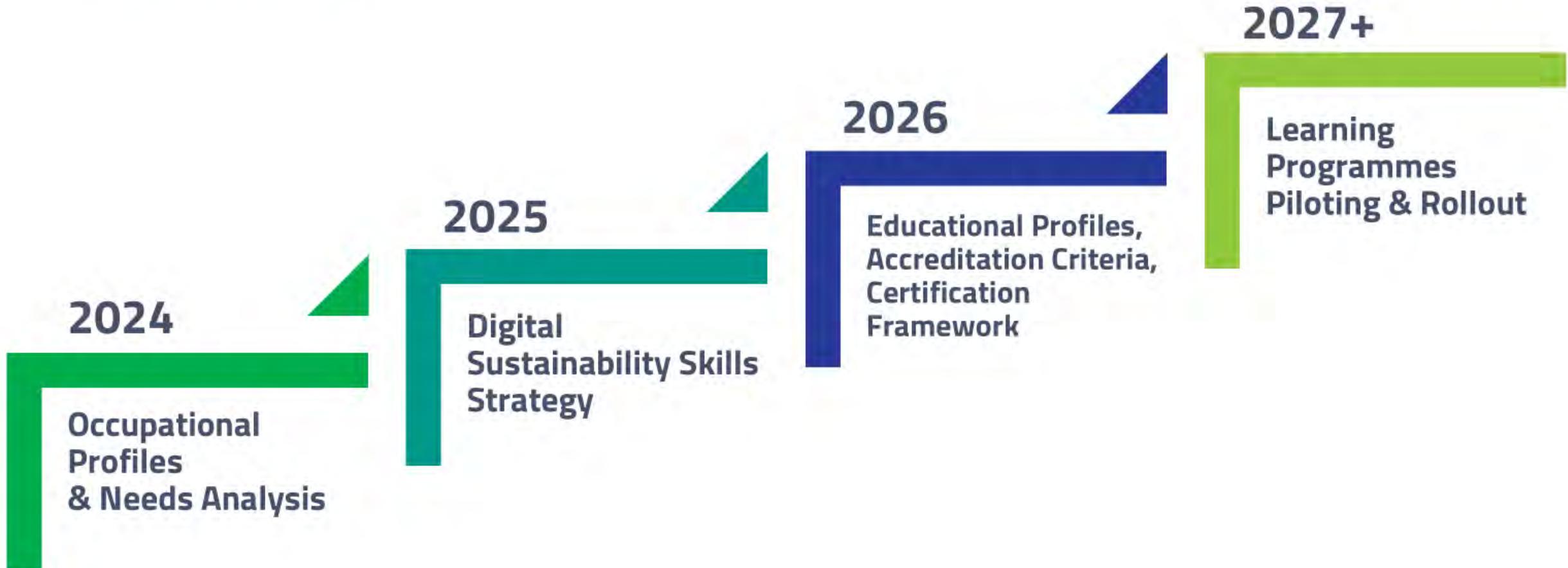
The Twin Transition will transform the EU labour market and accelerate changes in **skills demand** as it is estimated to have the potential to **create around 1 million jobs by 2030**.¹

Digital4Sustainability will contribute to the **EU Digital Decade goal** of having **20 million employed ICT specialists by 2030** by training more than 1000 new ICT & Sustainability professionals.

Digital4Sustainability is fully aligned with the vision of **the European Education Area** and contributes to its objectives, especially the ones regarding the **development of digital skills**.



Project Roadmap



Current key markets include:

Ireland and the UK



Founded in 2002 in Dublin Ireland



Certifications

ISO9001, ISO13485 (SaMD) and ISO27001





Deloitte

Technology Fast 50 Winner "5 Years running"



Best Place to Work

Nov 23 – Nov 24 Ireland



IT Europa Channel Awards Winner



2022 WINNER
Application Developer & ISV'S
Innovating Technology Solution of the Year

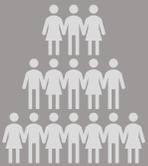
Partner

Microsoft Solutions
Azure Advanced Specialist, Data & AI and Business Applications






220+ employees.



Multiple business verticals and formidable client base.





Sustainability Digital Transformation Best Practice

Ashleigh Connors
ESG Consultant
TEKENABLE



Sustainability : A data challenge

1000 +

Data entities



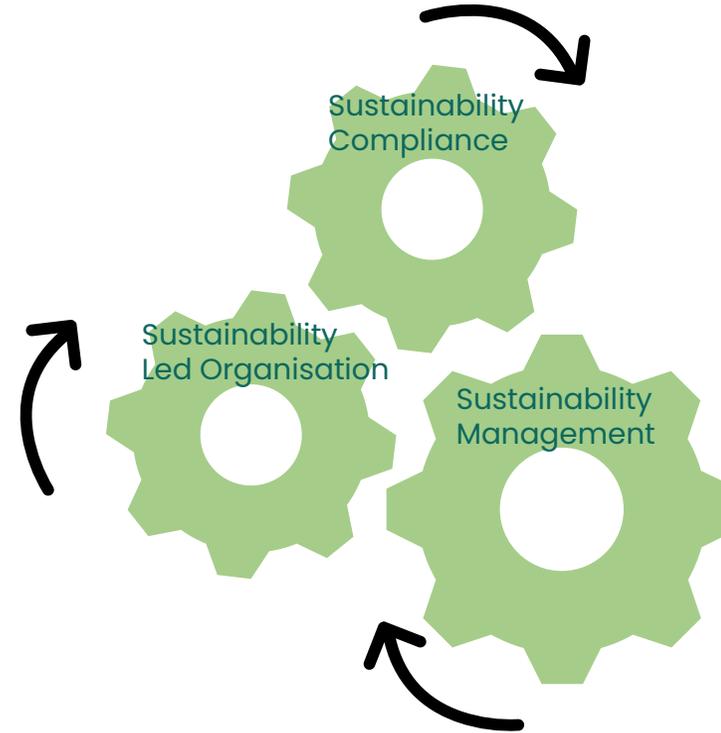
10+

Global Standards



50+

Business needs



What is Sustainability Digital Transformation?

"The future of Sustainability is not just about reporting, it's about **using data to drive business decisions.**"

- Mark Tulay, GreenBiz Group

"Sustainability data is not just about compliance, it's about **creating value for your stakeholders.**"

- Andrew Kassooy, B Labs

What Does Good Look Like?

Continuous improvement

Not an Event but a Journey

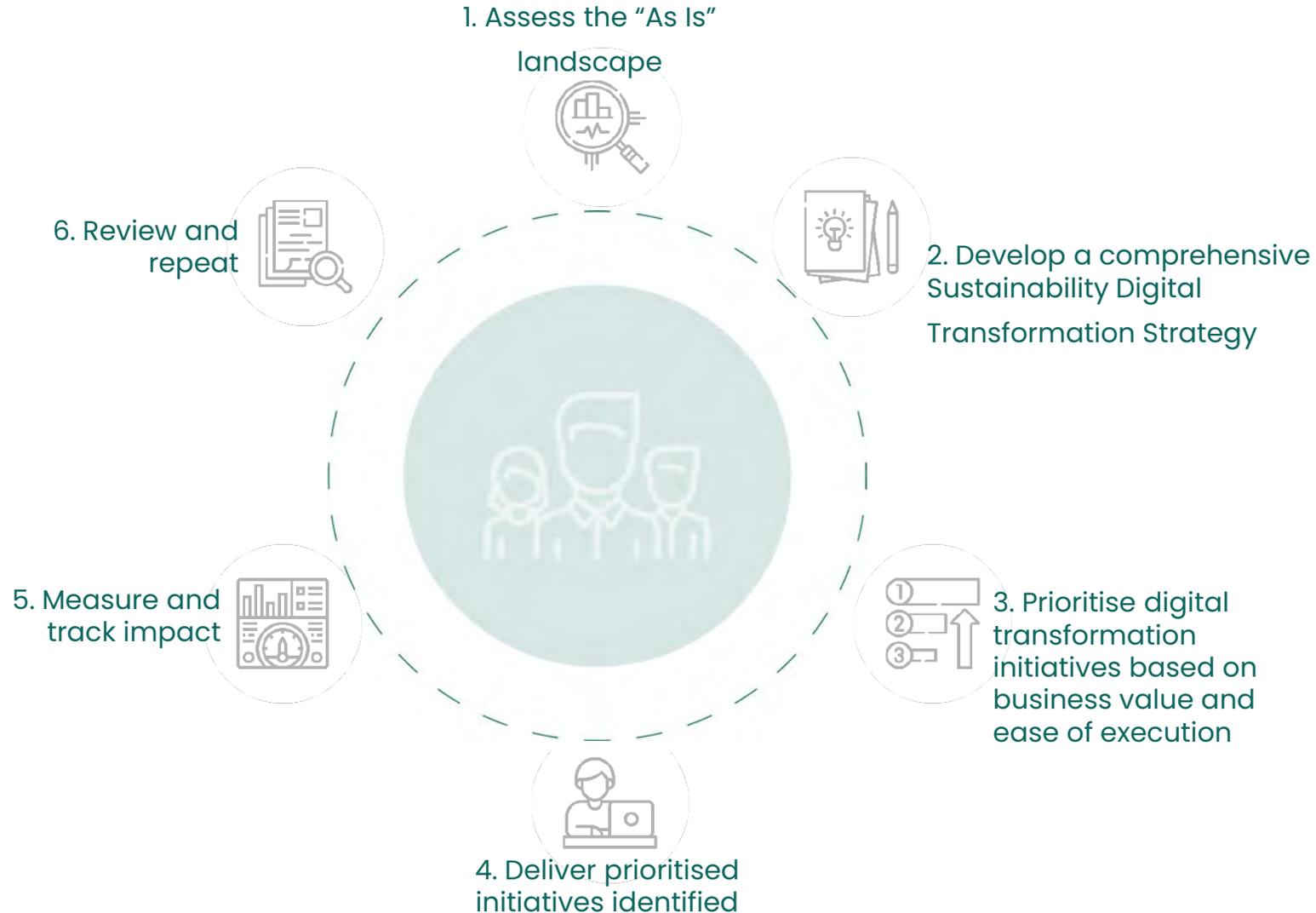
Not Linear but Circular

Drives Innovation and Differentiation

Customer, Context and Business Driven,
NOT Tech Driven, Tech supported

Sustainability Digital Transformation Approach

Measure, Record, Report and Repeat



Digital Transformation Approach

Data Gaps & Silos



Transform disparate data into
a **standards-driven**, cohesive, **analysis-ready data set** to power **ESG use cases**

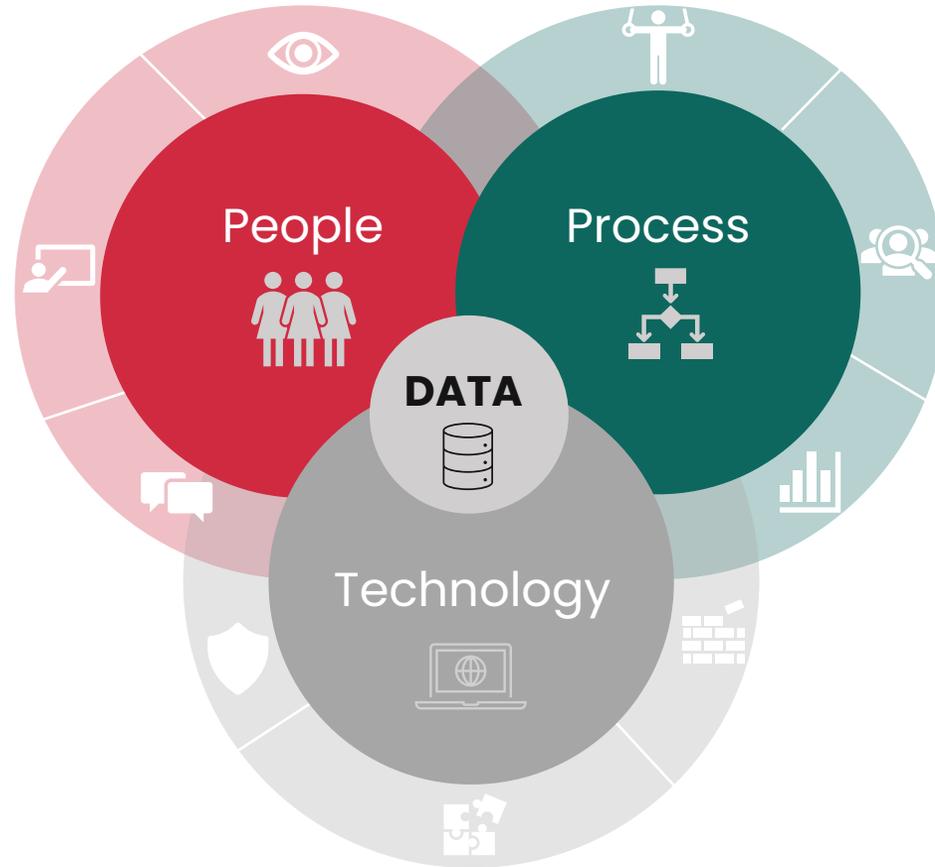


Calculated Emissions & Reporting



Sustainability Digital Transformation Enablers

The essential components of sustainable transformation.





Short Exercise – 20 minutes

Ashleigh Connors
ESG Consultant
TEKENABLE



Step 1

Read the questions and answer yes or no for your organisation

Step 2

Now all the boxes you ticked as a 'yes' have a score. Count your total score.

Exercise: Sustainable Digital Transformation



of yes

>3	Aware
4-6	Reactive
7-10	Proactive
11 - 12	Sustainably driven



CSRD Scope and Categories

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TEKenable



What led us to CSRD?

The Race to Net Zero

Government Action

Regulatory Drivers

The European Green Deal was the catalyst that started the race to net zero, aiming to attain climate neutrality by 2050. The number of FTSE 100 companies vowing to achieve net zero emissions by 2050 grew by 37 percent (2021) to 82 percent (2022). Those that can't demonstrate tangible progress towards their net zero goals will be left behind.

Public and blended finance commitments mobilising 80 billion of climate finance for developing countries since 2019.

Regulators across the globe have been increasingly mandating ESG disclosures for publicly traded and large organizations. This impacts the whole value-chain

Mandatory reporting

- EU Taxonomy
- **Corporate Sustainability Reporting Directive (CSRD)**
- **Voluntary reporting**
- Task Force on Climate-Related Financial Disclosures (TCFD)

Global Standards

Mobilising Capital

Socially Conscious Investors

Disclosure and reporting increasingly in focus, with momentum growing for a global climate disclosure standard

Companies/banks and governments have begun to take steps in their approach to financing green initiatives. This means that larger entities are leveraging their market position to encourage organisations down the value-chain to make positive choices. Rewarding and providing cheaper capital for green spending.

Socially responsible investing (SRI) is an investing strategy that aims to generate both social change and financial returns for an investor.

CSRD Regulation

Almost half of the companies surveyed in Ireland were unaware that they will be independently audited as a requirement of the CSRD – Irish times

- When is CSRD applicable?
- Which companies are in scope for CSRD?
- Where should companies be reporting to?
- In what format should companies be reporting?

CSRD (Corporate Sustainability Reporting Directive)

FY 2024 (Listed)
FY2025 (Non-Listed)
FY2027 (SME)

Large companies

- ✓ >250 employees and/or
- ✓ >50M Turnover and/or
- ✓ >25M Total Assets

Listed companies

Note: Small and medium listed companies get an extra 3 years to comply
In addition, non-EU companies that have a turnover of above €150 million in the EU will also have to comply.

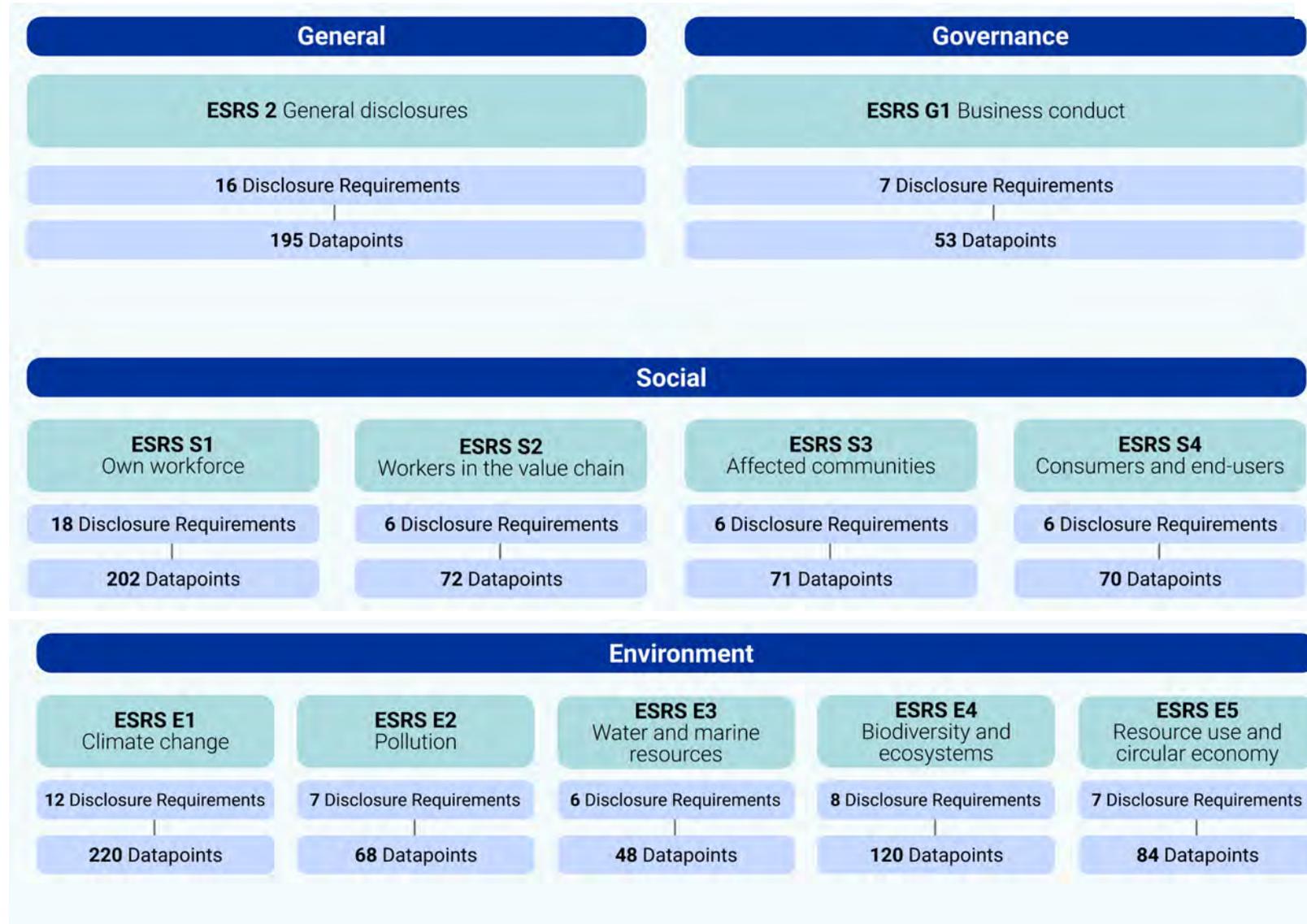
Inclusion in the annual management report

To be submitted in **electronic format** (in XHTML format in accordance with ESEF regulation) "limited third-party assurance," (auditor will need to evaluate the data). Overseen by **the Irish Auditing and Accounting Supervisory Authority. The Companies Registration Office** is responsible for enforcement and summary prosecution of filing Offences. Sustainability reporting information will fall within the ambit of the directors report inclusive of the penalties associated.

Cross-Cutting	ESRS 1	General Requirements: Framework for overall sustainability reporting across all ESRS categories.	Social	ESRS S1	Own Workforce: Reporting on working conditions, diversity, health, safety, and well-being.
	ESRS 2	General Disclosures: Core sustainability disclosures applicable to all organizations.		ESRS S2	Workers in the Value Chain: Reporting on fair treatment of contractors and workers across the supply chain.
Environmental	ESRS E1	Climate Change: Reporting on greenhouse gas emissions, mitigation, adaptation, and energy usage.	Governance	ESRS S3	Affected Communities: Reporting on community engagement, social impacts, and benefit-sharing practices.
	ESRS E2	Pollution: Reporting on pollutants affecting air, water, and soil, including measures to mitigate harm.		ESRS S4	Consumers and End-Users: Reporting on product/service safety, privacy, and consumer rights.
	ESRS E3	Water and Marine Resources: Reporting on water usage, marine ecosystem impact, and sustainable practices.		ESRS G1	Business Conduct: Reporting on governance practices, ethical conduct, anti-corruption, and transparency.
	ESRS E4	Biodiversity and Ecosystems: Reporting on biodiversity protection, deforestation, and land use impacts.			
	ESRS E5	Resource Use and Circular Economy: Reporting on raw material efficiency, recycling, and waste management.			

~1,200 Datapoints

- Not all relevant to everyone
- **Double materiality** test done to see which are relevant (~500-600 estimated)
- ~20% Quantitative Data Points (Numerical, Percent, Monetary)
- ~80% Qualitative Data Points (Narrative, policies)



- Types:
- *Mandatory*
 - *Material (Depends on Double Materiality Assessment outcome)*
 - *Non/Omittable*
 - *Minimum Disclosure Requirement*

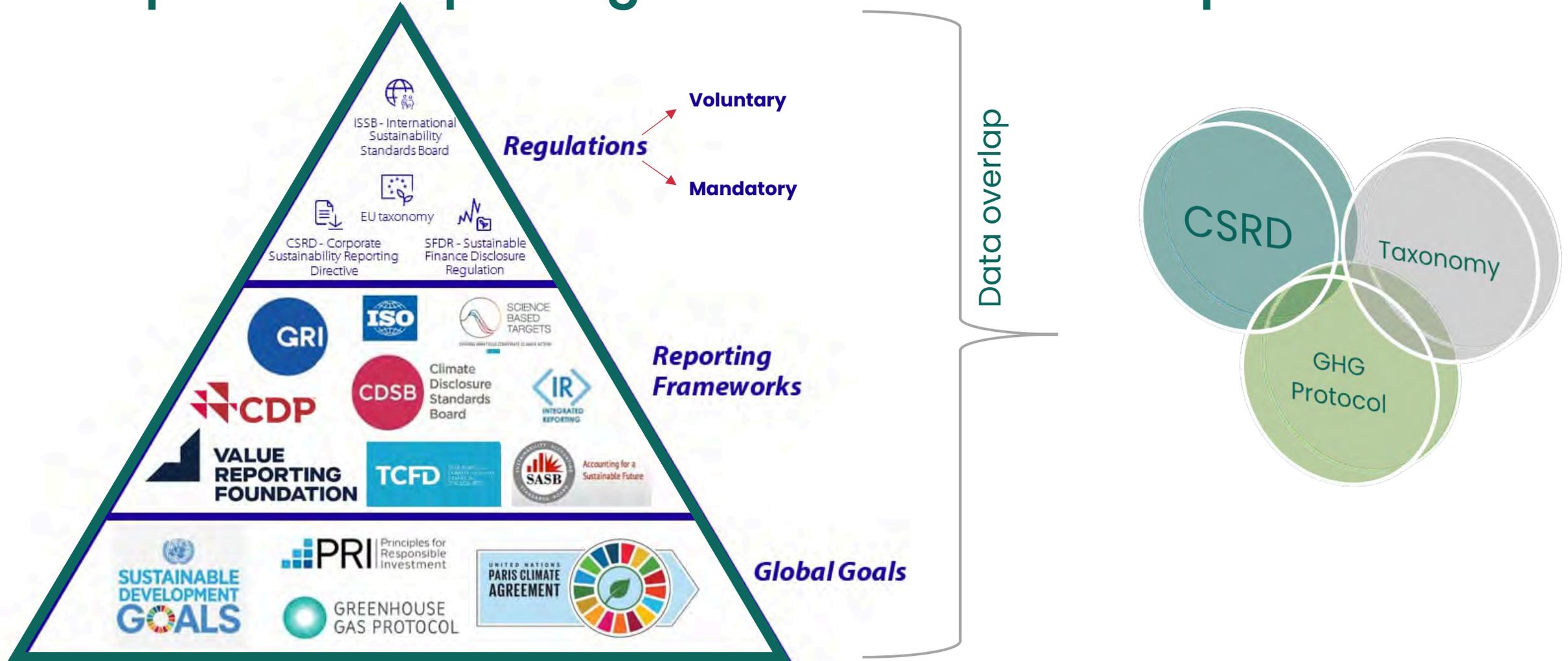


There are several key reporting requirements within the Standards, including interdependencies.

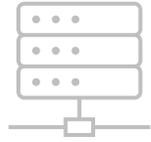
The CSRD standard require enhances reporting on ESG governance and risk. They expand beyond reporting on certain KPIs, and require detail on policies, actions, metrics and targets surrounding ESG topics.

- Policies
- Actions
- Targets
- Metrics

Alphabet soup of regulation – Data Overlap



CSRD Reporting Challenges, Risks and Opportunities



Data Sources / Types	Taxonomies	Security	Governance
<ul style="list-style-type: none"> Raw data : eg carbon emissions, gender, board members Scores/ratings: Provide ESG metrics for thousands of companies Big Data Aggregators: ESG sentiment analysis Risk assessment providers: ESG Risk modelling/scores 	<ul style="list-style-type: none"> Bringing together datasets never previously integrated Aligning taxonomies, classifications and measurements Lack of harmonization across jurisdiction 	<ul style="list-style-type: none"> In addition to perennial concerns like anticorruption, clean water and climate change, cyber security is rising to the top of the ESG agenda. 	<ul style="list-style-type: none"> Significant business risks from misreporting ESG and classification of funds ESG data governance and data quality critical A key challenge will be how to evidence transparency
<p>Risks</p>		<p>Opportunities</p>	

Cost	Control	Compliance	Competitive Advantage
<ul style="list-style-type: none"> Duplication: Current data needs are dealt with in silos, leading to duplicated costs Manual processes: common Market Data: Not fully disseminated across the firm leading to loss in value 	<ul style="list-style-type: none"> Inconsistency: Approaching data management and reporting in silos Data gaps 	<ul style="list-style-type: none"> Transparency: Regulators demand timely and transparent disclosure Taking an ESG approach to your cyber security reporting can promote digital trust in your organization. 	<ul style="list-style-type: none"> ESG leaders will gain market share: investors needs are changing and those leading in ESG space will have a competitive advantage





CSRD Digital Reporting

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Emissions Tracked in Excel

Scope 2 Emissions from Purchase of Electricity

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

Guidance

The Indirect Emissions from Purchased Electricity Guidance document provides guidance for quantifying two scope 2 emissions totals, using a **location-based method** and a **market-based method**. The organization should quantify and report both totals in its GHG inventory. The location-based method considers average emission factors for the electricity grids that provide electricity. The market-based method considers contractual arrangements under which the organization procures electricity from specific sources, such as renewable energy.

- (A) Enter total annual electricity purchased in kWh and each eGRID subregion for each facility or site in ORANGE cells of **Table 1**.
- (B) If electricity consumption data are not available for a facility, an estimate should be made for completeness. See the "Items to Note" section of the Help sheet for suggested estimation approaches.
- (C) Select "eGRID subregion" from drop box and enter "Electricity Purchased."
- Use map (Figure 1) at bottom of sheet to determine appropriate eGRID subregion. If subregion cannot be determined from the map, find the correct subregion by entering the location's zip code into EPA's Power Profiler:
<https://www.epa.gov/eGRID/power-profiler/>
- (D) See the market-based emission factor hierarchy on the market-based method Help sheet. If any of the first four types of emission factors are applicable, enter the factors in the yellow cells marked as "<enter factor>". If not, leave the yellow cells as is, and eGRID subregion factors will be used for market-based emissions.

Example entry is shown in first row (*GREEN Italics*) for a facility that purchases RECs for 100% of its consumption, and therefore has a market-based emission factor of 0.

Tips: Enter electricity usage by location and then look up the eGRID subregion for each location. If you purchase renewable energy that is less than 100% of your site's electricity, see the example in the market-based method Help sheet.

Table 1. Total Amount of Electricity Purchased by eGRID Subregion

Source ID	Source Description	Source Area (sq ft)	eGRID Subregion where electricity is consumed	Electricity Purchased (kWh)	Market-Based						Location-Based		
					Emission Factors			Emissions			Emissions		
					CO ₂ Emissions (lb/MWh)	CH ₄ Emissions (lb/MWh)	N ₂ O Emissions (lb/MWh)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)	CO ₂ Emissions (lb)	CH ₄ Emissions (lb)	N ₂ O Emissions (lb)
<i>Bldg-012</i>	<i>East Power Plant</i>	<i>12,517</i>	<i>HICC Miscellaneous</i>	<i>200,000</i>	0	0	0	0.0	0.0	0.0	231,097.2	24.8	3.8
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						
					<enter factor>	<enter factor>	<enter factor>						



Emissions Tracked in Sustainability Manager

Power Apps Sustainability Manager **SANDBOX** Copy Last refreshed 11/17/2024 10:16:01 PM

Emissions overview | Scope 1 | Scope 2 | Scope 3 | Renewable energy | Deep analysis | Custom dimensions | Key influencers | Forecasting

Emissions

Reporting period: January 1 - December 31

Filters

Reporting year: All

Accounting method: Location based

Alternate result basis (preview): (unassigned)

Product category: All

Organizational hierarchy: (unassigned), Contoso Corp, Unspecified

Emissions (mtCO2e)

2,504,982

Scope type:

- Scope 1: 1,047,683.55
- Scope 2: 739,835.51
- Scope 3: 717,462.88

All emissions | By month (comparison) | By source (line chart)

Show comparison by year: Off

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	69007	27821	110329	49894	31449	69806	87664	65754	13683	61644	83458	58780
2019	67396	39824	54869	107621	65169	46797	63041	67678	88919	61447	82754	47636
2020	39378	14562	20697	20697	20697	20697	20697	20697	20697	20697	20697	20697
2021	14562	20697	20697	20697	20697	20697	20697	20697	20697	20697	20697	20697

By source and scope | By org level and emissions source | **By country / region** | By organization unit | By facility | By product category

Scope / Source	Emissions	Country	Scope 1	Scope 2	Scope 3
Scope 1	1,047,683.55	AUS	337.86	35,457.97	12,046.97
Fugitive emissions	696.89	BRA		41,586.08	13,104.87
Industrial process	37.72	CHE		35,148.49	14,569.38
Mobile combustion	1,046,430.06	CRI	132.13	26,755.53	11,087.52
Stationary combustion	518.89	DNK	119,798.00		44,222.72
Scope 2	739,835.51	ETH	101.03	49,442.51	5,245.26
Purchased Cooling	312.97	GBR	93,928.93	21,884.05	72,041.60
Purchased electricity	739,392.86	IND		24,671.79	7,897.53
Purchased heat	129.68	JPN		24,184.61	7,277.30
Scope 3	717,462.88	KEN	244,860.00	21,124.91	158,565.45

Disclaimer: Today's presentation focuses on Microsoft's solutions among many available options.



Emissions Tracked in Sustainability Manager

← + New Delete Refresh Excel Templates Export to Excel Import from Excel Share

All factor libraries Edit columns Edit filters Filter by keyword

<input type="checkbox"/>	Name ↑	Type	Library type	Version	Date published	Module	Description	Origin correlation ID
<input type="checkbox"/>	(Preview) Demo factor library for water...	Demo	Estimation fact...			Water	Demo data or ot...	
<input type="checkbox"/>	(Preview) Demo water intensity factor li...	Demo	Estimation fact...			Water	Demo data or ot...	
<input type="checkbox"/>	Defra 2022 - Bioenergy	Standard	Emission factor ...		2022	Carbon activities	Factors for the co...	
<input type="checkbox"/>	Defra 2022 - Business travel - air	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Business travel - land	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Business travel - sea	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Freightng goods	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Fuels	Standard	Emission factor ...		2022	Carbon activities	Factors to be use...	
<input type="checkbox"/>	Defra 2022 - Homeworking	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Hotel stay	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Outside of scopes	Standard	Emission factor ...		2022	Carbon activities		
<input type="checkbox"/>	Defra 2022 - Passenger Vehicles	Standard	Emission factor ...		2022	Carbon activities	Factors for travel ...	

Rows: 61

Example of a CSRD Report – Excel

INSTRUCTIONS

- 1) The DPs reported in ESRS E2 are subject to Materiality Assessment.
- 2) With the exception of DPs in IRO1 (E2.IRO-1_01-03) that are to be disclosed irrespective of the outcome of its materiality assessment [ESRS 1 par. 29], none of these DPs is applicable if the topic is not material.
- 3) Not all DPs are to be reported if the undertaking has not adopted the respective policies, implemented the respective actions or set the respective targets in relation to a sustainability matter that has been assessed to be material [see ESRS 1 par. 33].
- 4) Column L identifies DPs subject to phased-in [see Appendix C of ESRS 1].
- 5) Metrics to be disclosed, in addition to the ones explicitly required by ESRS, also include entity-specific ones, as well as those arising from other legislation or standard.

ID	ESRS	DR	Paragraph	Related AR	Name	Data Type	Conditional or alternative DP	May [V]	Appendix B - ESRS 2 (SFDR + PILLAR 3 + Benchmark + CL)	Appendix C - ESRS 1 DPs subject to phasing-in provisions applicable to undertaking with less than 750 employees	Appendix C - ESRS 1 DPs subject to phasing-in provisions applicable to all undertakings
E2.IRO-1_01	E2	E2.IRO-1	11 a	AR 8	Information about the process to identify actual and potential pollution-related impacts, risks and opportunities	narrative					
E2.IRO-1_02	E2	E2.IRO-1	11 b		Disclosure of whether and how consultations have been conducted (pollution)	narrative					
E2.IRO-1_03	E2	E2.IRO-1	AR 9		Disclosure of results of materiality assessment (pollution)	narrative					
E2-1_01	E2	E2-1	15 a	AR 11	Disclosure of whether and how policy addresses mitigating negative impacts related to pollution of air, water and soil	narrative					
E2-1_02	E2	E2-1	15 b	AR 11	Disclosure of whether and how policy addresses substituting and minimising use of substances of concern	narrative					
E2-1_03	E2	E2-1	15 c		Disclosure of whether and how policy addresses avoiding incidents and emergency situations, and if and how	narrative					
E2-1_04	E2	E2-1	AR 12		Disclosure of contextual information on relations between policies implemented and how policies contribute to the achievement of the targets	narrative		V			
E2-2_01	E2	E2-2	19		Layer in mitigation hierarchy to which action can be allocated to (pollution)	semi-narrative		V			
E2-2_02	E2	E2-2	AR 13		Action related to pollution extends to upstream/downstream value chain engagements	semi-narrative		V			
E2-2_03	E2	E2-2	19	AR 14	Layer in mitigation hierarchy to which resources can be allocated to (pollution)	semi-narrative		V			
E2-2_04	E2	E2-2	AR 15		Information about action plans that have been implemented at site-level (pollution)	narrative	Conditional	V			
E2-3_01	E2	E2-3	23 a		Disclosure of whether and how target relates to prevention and control of air pollutants and respective substances of concern	narrative					
E2-3_02	E2	E2-3	23 b		Disclosure of whether and how target relates to prevention and control of emissions to water and respective substances of concern	narrative					
E2-3_03	E2	E2-3	23 c		Disclosure of whether and how target relates to prevention and control of pollution to soil and respective substances of concern	narrative					
E2-3_04	E2	E2-3	23 d		Disclosure of whether and how target relates to prevention and control of substances of concern and substances of concern	narrative					
E2-3_05	E2	E2-3	24	AR 16	Ecological thresholds and entity-specific allocations were taken into consideration when setting pollution-related targets	semi-narrative		V			
E2-3_06	E2	E2-3	24 a	AR 16	Disclosure of ecological thresholds identified and methodology used to identify ecological thresholds (pollution)	narrative	Conditional	V			
E2-3_07	E2	E2-3	24 b	AR 16	Disclosure of how ecological entity-specific thresholds were determined (pollution)	narrative	Conditional	V			
E2-3_08	E2	E2-3	24 c	AR 16	Disclosure of how responsibility for respecting identified ecological thresholds is allocated (pollution)	narrative	Conditional	V			
E2-3_09	E2	E2-3	25		Pollution-related target is mandatory (required by legislation)/voluntary	semi-narrative					
E2-3_10	E2	E2-3	AR 17		Pollution-related target addresses short-term risks related to Ecological Contribution criteria for Pollution, Emissions and Resources	semi-narrative		V			

The Power of Digital CSRD Reporting: A Clear Advantage

The screenshot displays the Microsoft Purview interface for managing CSRD reporting. The left sidebar contains navigation options like Home, Compliance Manager, Data classification, and Solutions. The main content area shows the 'Corporate Sustainability Reporting Directive (CSRD)' configuration page. It includes a search bar, a 'Service' dropdown set to 'Corporate Sus...', and a table of controls. The table is filtered to show 128 items under the 'E1 Climate change' category.

Control title	Control ID	Achievable points	Improvement actions	Microsoft actions
E1 Climate change (15)				
Actions and resources in relation to climate chang...	E1-3	25	9	0
Actions and resources in relation to material sustai...	E1.MDR-A	3	1	0
Anticipated financial effects from material physical...	E1-9	112	44	0
Description of the processes to identify and assess...	E1.IRO-1	48	16	0
Energy consumption and mix	E1-5	65	23	0

Disclaimer: Today's presentation focuses on Microsoft's solutions among many available options.

Example of a Digital CSRD Report

The screenshot shows the Microsoft Purview interface for a CSRD report. The breadcrumb trail is: Compliance Manager > Assessments > CSRD_1March_test > Gross Scopes 1, 2, 3 and Total GHG emissions > E1-6-41-d. The report title is E1-6-41-d. The owner is Assign owner, implementation status is Not Implemented, test status is None, service is Corporate Sustainability, testing type is Manual, and testing source is User verified. The 'About this section' text states: 'The undertaking shall disclose its: (d) total GHG emissions. Total GHG emissions as required by paragraph 41(d) is to provide an overall understanding of the undertaking's GHG emissions and whether they occur from its own operations or the value chain. This disclosure is a prerequisite for measuring progress towards reducing GHG emissions in accordance with the undertaking's climate-related targets and EU policy goals.' The 'Disclosure data' table shows the last updated date as 01/03/2024 07:14 AM, current reporting year as 2023, and organizational unit as Contoso EUR. The 'Data' table shows 3 items with columns for Reporting year, Total GHG emissions location-based (mtCO2e), and Total GHG emissions market-based (mtCO2e).

Reporting year	Total GHG emissions location-based (mtCO2e)	Total GHG emissions market-based (mtCO2e)
2023	3022.0403363600008	3022.0403363600008
2022	30414.330215979993	30405.566928499993
2021	18708.456192080008	18686.593931900006

Disclaimer: Today's presentation focuses on Microsoft's solutions among many available options.

Example of a Digital CSRD Report

The screenshot displays the Microsoft Purview interface for a CSRD report. The breadcrumb trail is: Compliance Manager > Regulations > Corporate Sustainability Reporting Directive (CSRD) > Gross Scopes 1, 2, 3 and Total GHG emissions > E1-6_07. The main content area is titled 'E1-6_07' and has two tabs: 'Implementation' (selected) and 'Related controls'. Under the 'Implementation' tab, there is a section 'How to implement' with the following details:

- Name:** Gross Scope 1 greenhouse gas emissions
- Description:** The disclosure on gross Scope 1 GHG emissions required by paragraph 44 (a) shall include: (a) the gross Scope 1 GHG emissions in metric tonnes of CO2eq;

The left sidebar contains the following navigation items:

- Home
- Compliance Manager
- Data classification
- Data connectors
- AI Hub (preview)
- Alerts
- Policies
- Roles & scopes
- Trials
- Solutions**
 - Catalog
 - App governance
 - Audit
 - Content search
 - Communication compliance
 - Data loss prevention



CSRD Tools and Architecture Best Practice

Mohammad Zeeshan Khan
CTO Microsoft Services
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TEKenable



CSRD Tools and Architecture Best Practice

- The Importance of Architecture in CSRD Compliance.
- Tools available in the Microsoft ecosystem to help deliver CSRD compliance
 - Microsoft Cloud for Sustainability
 - Fabric Sustainability Accelerator
 - Dynamics 365 Business Central – Sustainability features
 - Purview Compliance – Sustainability features

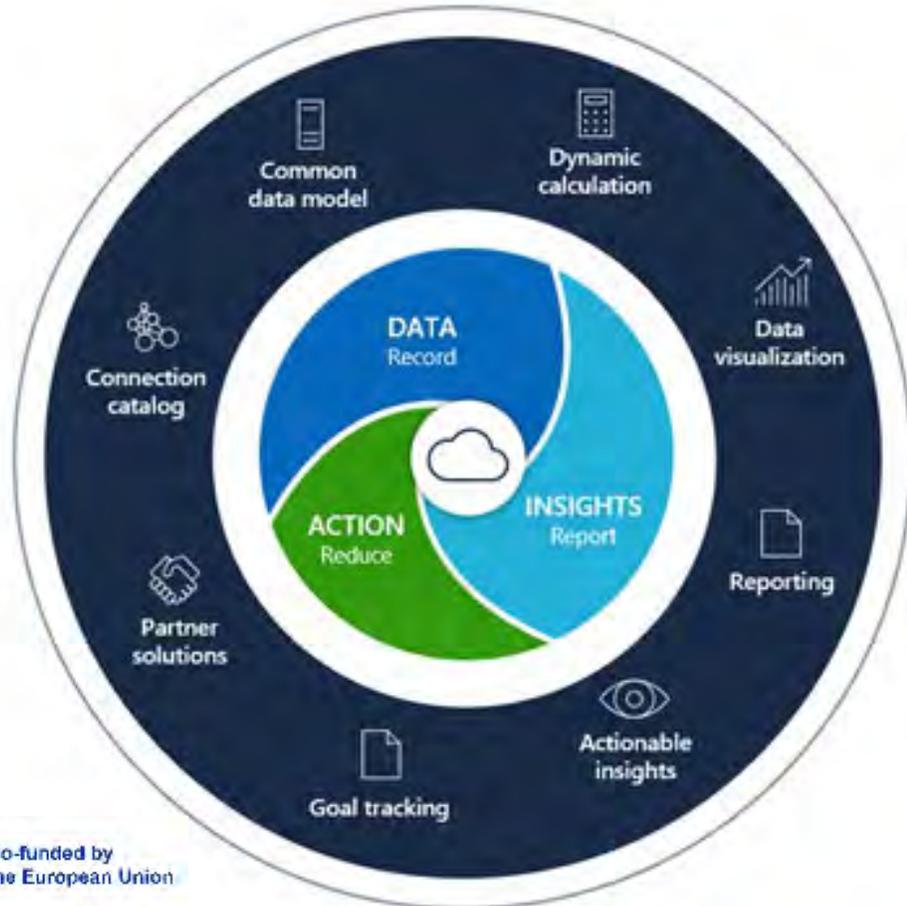
The Importance of Architecture in CSRD Compliance

- **Challenge:** Many organizations struggle with disconnected systems, manual reporting processes, and meeting CSRD's stringent requirements.
- **Solution:** Microsoft's integrated solutions provide comprehensive tools to streamline reporting and compliance.

Key Pillars of CSRD Architecture

- **Data Integration Layer:** Tools that unify data from various sources, such as IoT devices, ERP systems, and ESG platforms.
- **Analytics and Reporting Layer:** Platforms that provide dashboards, visualizations, and insights for financial and sustainability reporting.
- **Automation and Workflow:** Tools that streamline repetitive compliance tasks, such as data validation and report generation.
- **Governance and Security:** Systems that ensure compliance through robust data governance, audit trails, and secure data management.

Microsoft's Sustainability Digital Transformation Tools



Microsoft Sustainability Manager

Record/Calculate & Report Emissions, Water & Waste

Microsoft Fabric Sustainability

Ingest, harmonize, and process disparate data for specific sustainability scenarios.

Responsible Sourcing ERP

Track and report carbon emissions directly within Business Central

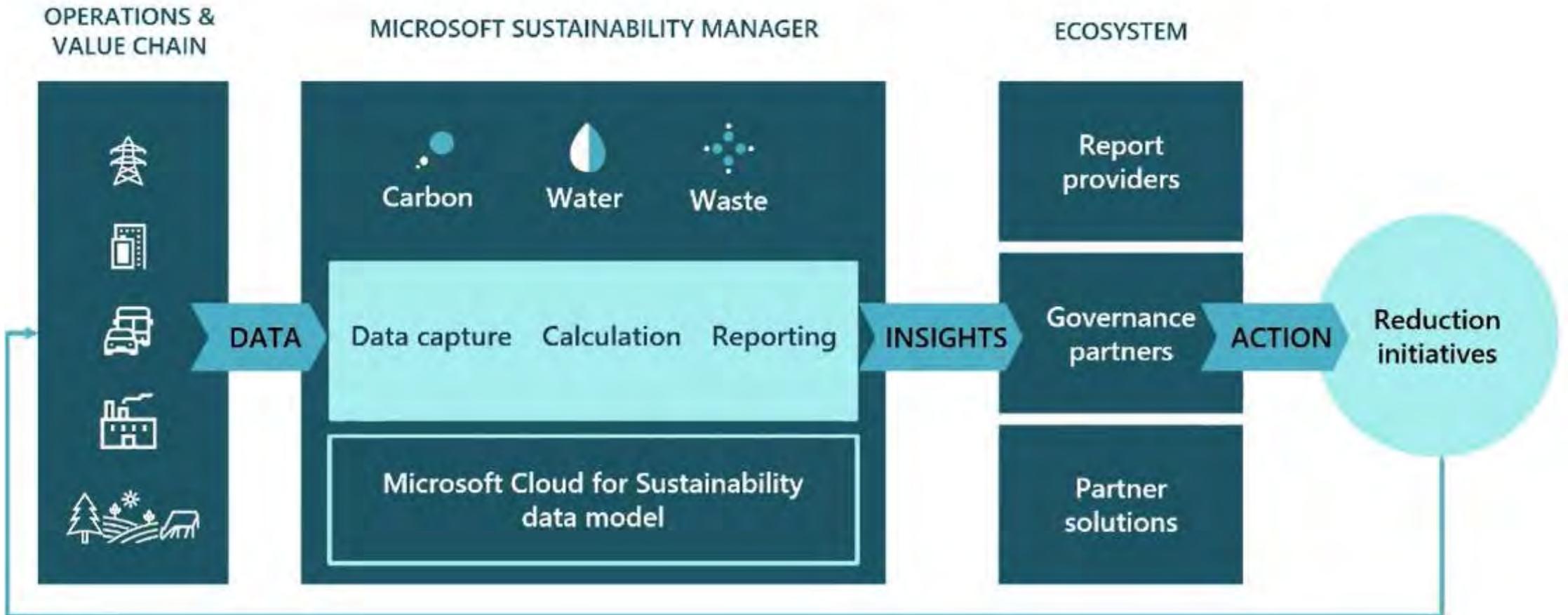
Purview Compliance Manager

CSRD Template

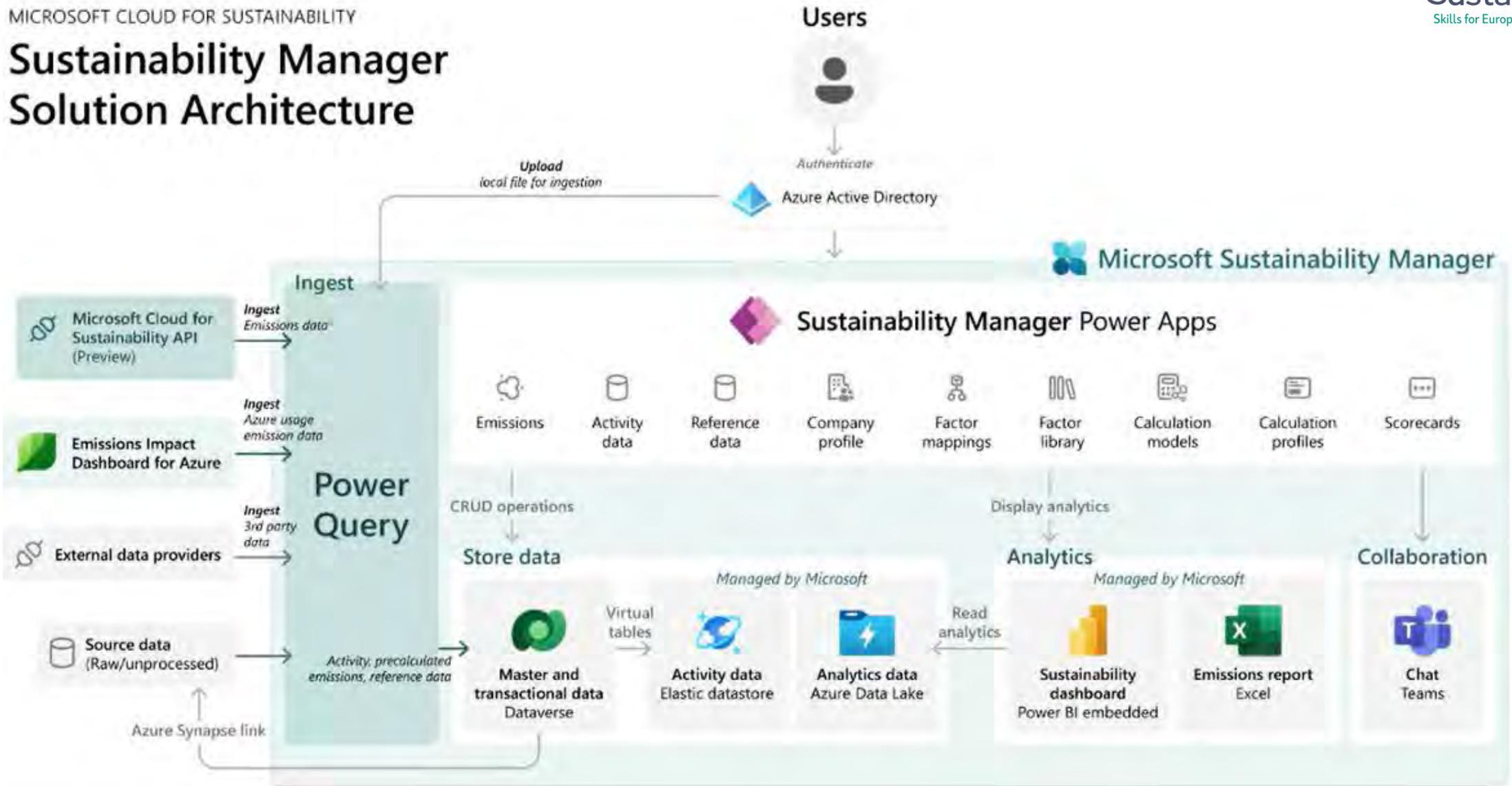
Microsoft Cloud for Sustainability

- **Centralized platform** for tracking and reporting on sustainability goals.
- **Key Features:** Tracks energy, water, emissions, and waste management.
- **Pre-built templates** for CSRD-compliant reporting.
- **Customizable dashboards** for real-time monitoring.

Microsoft Sustainability Manager empowers organizations to turn data insights into action and reduce environmental impact



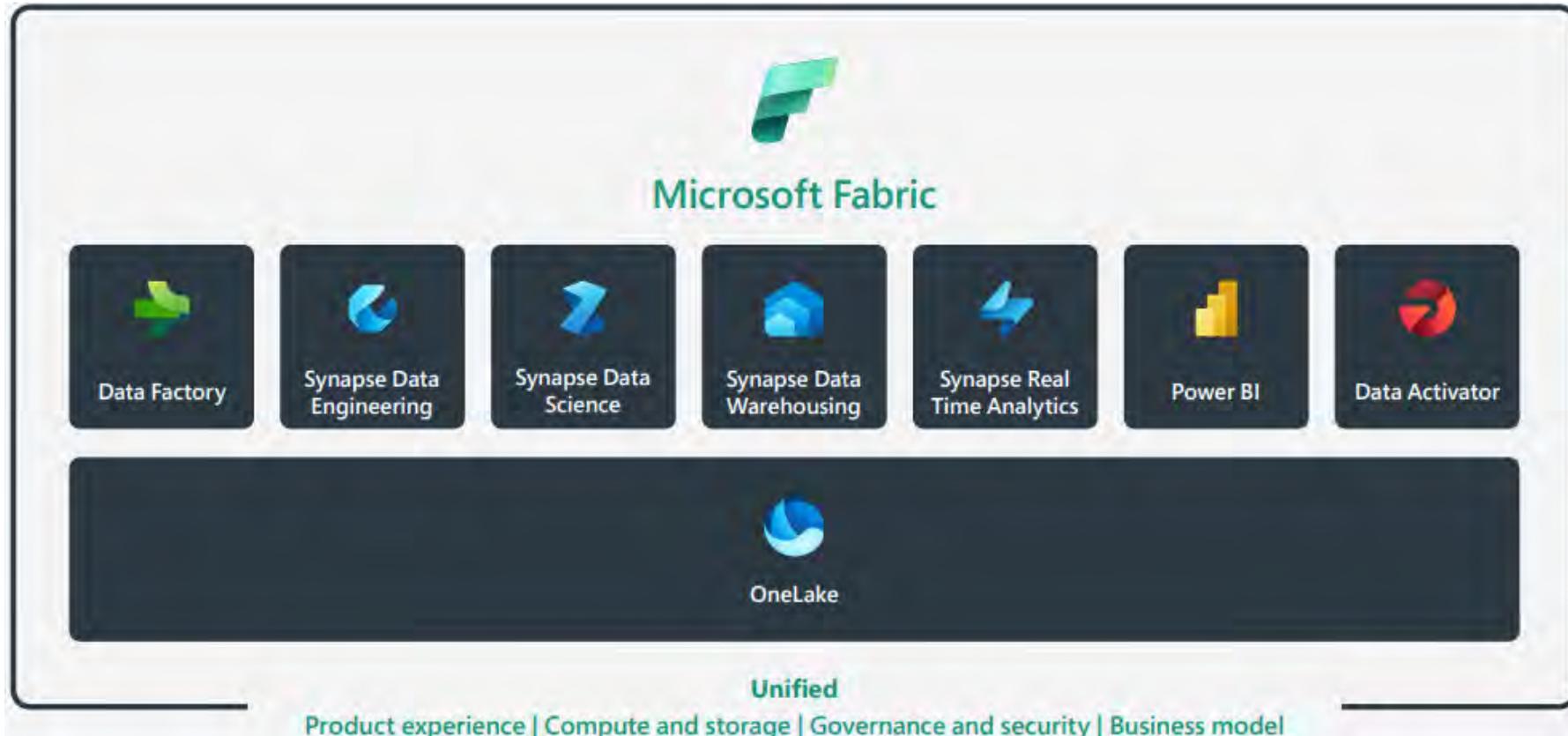
Sustainability Manager Solution Architecture



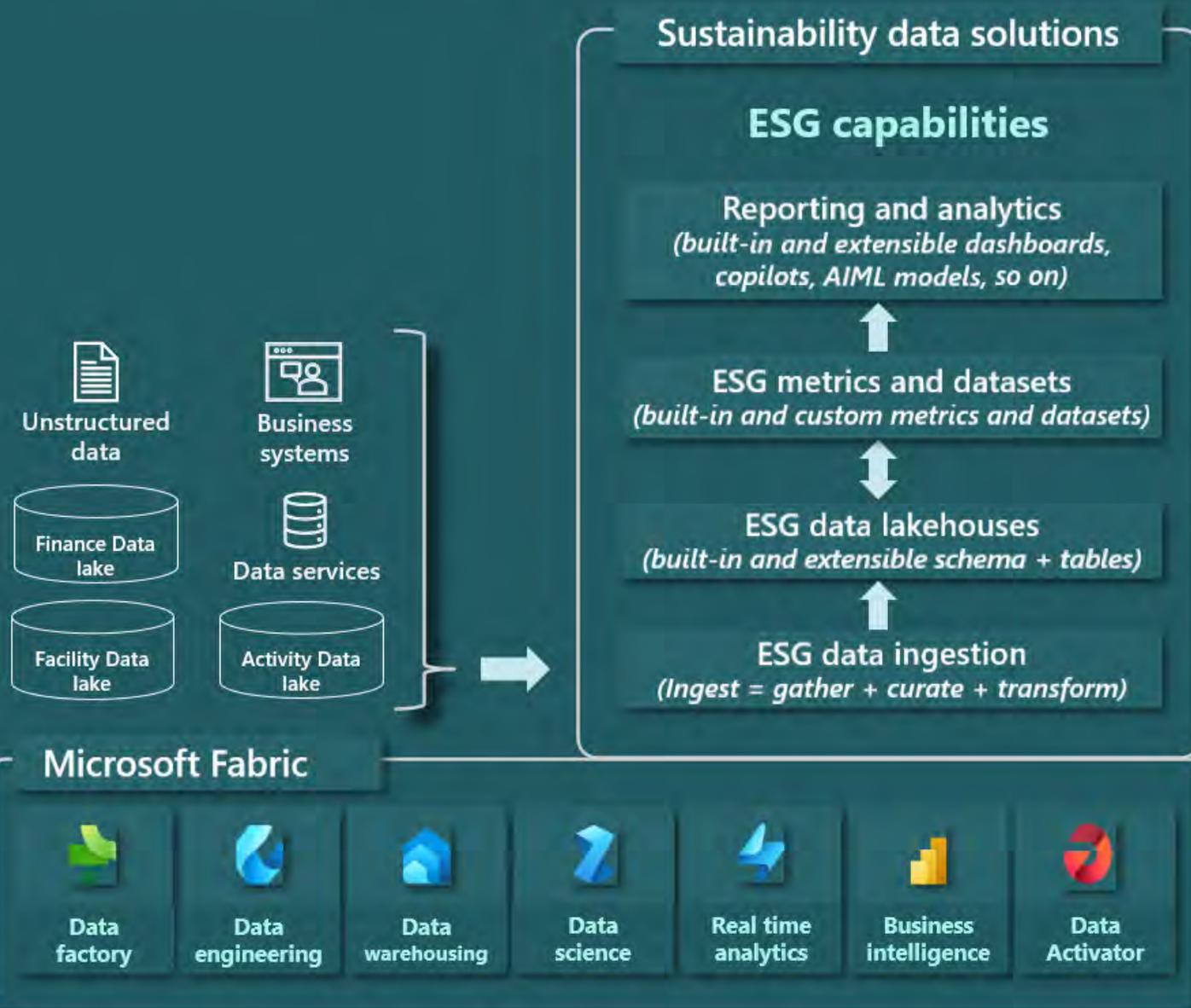
Fabric Sustainability Accelerator

- **Unified data model** for sustainability metrics.
- **Real-time integration** with IoT and ERP systems for dynamic reporting.
- Enables **data scalability** for larger enterprises.

A unified SaaS-based solution that stores all organisational data where analytics workloads operate



Sustainability data solutions in Microsoft Fabric



Sustainability data platform harmonizes disparate enterprise data into ESG metrics, datasets, and functions.

Purpose-built capabilities for ESG scenarios
Pre-built, open and extensible lakehouses, notebooks, dashboards, Copilots, AI/ML models, so on.

ESG metrics, datasets, and functions
Built-in and open and customizable ESG metric, datasets, and functions for data enrichment, quality checks, so on.

Native deployment and operations
Microsoft Fabric resources for ingestion, transformation, data and asset governance, data sharing, so on.

Dynamics 365 Business Central: Sustainability for SMEs

- Business Central's Sustainability Features
 - **Greenhouse Gas (GHG) Emissions Tracking:** Track and report GHG emissions across three scopes defined by ESG standards.
 - **Sustainability Journals:** Record sustainability-related activities and metrics with ease.
 - **Chart of Sustainability Accounts:** Organize and analyse emission data transparently.
- Key Functionalities
 - **Manual and Automated Data Entry:** Input emissions manually or use built-in formulas for accurate calculations.
 - **Sustainability Ledger:** Centralized recording of all emission data.
 - **Reporting and Compliance:** Generate reports for internal analysis and regulatory submission.
- Benefits for Organizations:
 - **Compliance:** Meet the latest CSRD standards and best practices.
 - **Transparency:** Clear and organized sustainability data
 - **Efficiency:** Streamlined processes for sustainability reporting.

Microsoft Purview – Sustainability Features

- **Purpose:** Enhance governance, compliance, and traceability for sustainability data.
- **Key Features:**
 - Robust data governance for sustainability metrics, ensuring accuracy and consistency.
 - Automated compliance checks for CSRD reporting.
 - Comprehensive audit trails for data transparency.
- **Use Case:** Ensures CSRD compliance by validating and monitoring data across the organization

Best Practice Guidelines Using Microsoft Tools

- 1. Integrated Architecture:** Use Fabric for data unification, Business Central for operational tracking, and Sustainability Manager for analytics.
- 2. Automation:** Streamline workflows with Power Automate.
- 3. Scalability:** Azure-based solutions support growth and evolving regulatory requirements.
- 4. Governance:** Purview ensures data validation and regulatory compliance.

Case Study: Södra's Sustainability Journey with Microsoft Cloud for Sustainability

Challenges:

Collecting and interpreting climate impact data across the value chain was time-consuming and complex.

Solution:

Södra deployed Microsoft Sustainability Manager within Microsoft Cloud for Sustainability.

Benefits:

Enhanced visibility and speed of analysis for sustainability data.

Improved decision-making on resource allocation, maximizing the value of every tree.

Enabled timely and accurate sustainability reporting across the organization.



Södra plants a seed for climate neutrality with Microsoft Sustainability Manager

International forest industry group Södra has set itself ambitious sustainability goals. A collection of more than 50,000 family foresters in southern Sweden with an encompassing range of products, the association estimates that its positive climate impact is roughly equal to one-fifth of Sweden's emissions. Södra became the industry giant it is today through its forward-thinking, innovative approach. The association's intent focus on sustainability—not just for its industry or even its nation, but the planet—led it to its current drive to collect and interpret climate impact data for every part of the value chain. That's why Södra is setting the pace for sustainability in its industry with Microsoft Sustainability Manager, a solution within Microsoft Cloud for Sustainability.



Demo – Fabric Sustainability

Mukesh Yadav
Senior Data Engineer
TEKENABLE

TEKenable



TEKenable

Discussion / Questions


Digital 4
Sustainability
Skills for Europe's Twin Transition



Participants Survey

https://ec.europa.eu/eusurvey/runner/Evaluation_Pilots_participants_TEKenable



THANK YOU !

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