

Development of the ESG score: in-depth analysis of relevant metrics for SMEs

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2nd Workshop on Sustainable Finance Spoke 4 – GRINS
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Few words about modefinance

Rating agency Fintech (o Techfin?)



modefinance

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RATING AGENCY

modefinance è un'agenzia di rating del credito registrata presso l'Autorità Europea degli Strumenti Finanziari e dei Mercati (ESMA) dal 10 luglio 2015, in conformità al Regolamento (CE) N. 1060/2009 del Parlamento Europeo e del Consiglio del 16 settembre 2009.



mfi involvement in European Projects

2021 - 2024

TranspArEEnS

Mainstream Transparent Assessment of Energy Efficiency In Environmental Social Governance Ratings

Horizon 2020 project led by Ca' Foscari University in Venice, in partnership with modefinance, the EMF-ECBC, the Leibniz Institute for Financial Research SAFE of Frankfurt and CRIF, which has as its aim the mainstreaming of a quali-quantitative framework for standardized collection and analysis of firms' EE and ESG information and the development of a standardized EE-ESG rating for SME

2024 - 2026

GRINS

Growing Resilient,
Inclusive and Sustainable

The GRINS project was created with the aim of creating an open-data platform capable of collecting data, providing analysis tools and disseminating information for the benefit of the main players in the Italian economic system. All this in order to identify appropriate socio-economic strategies and policies needed to move toward sustainable development.

2024 - 2026

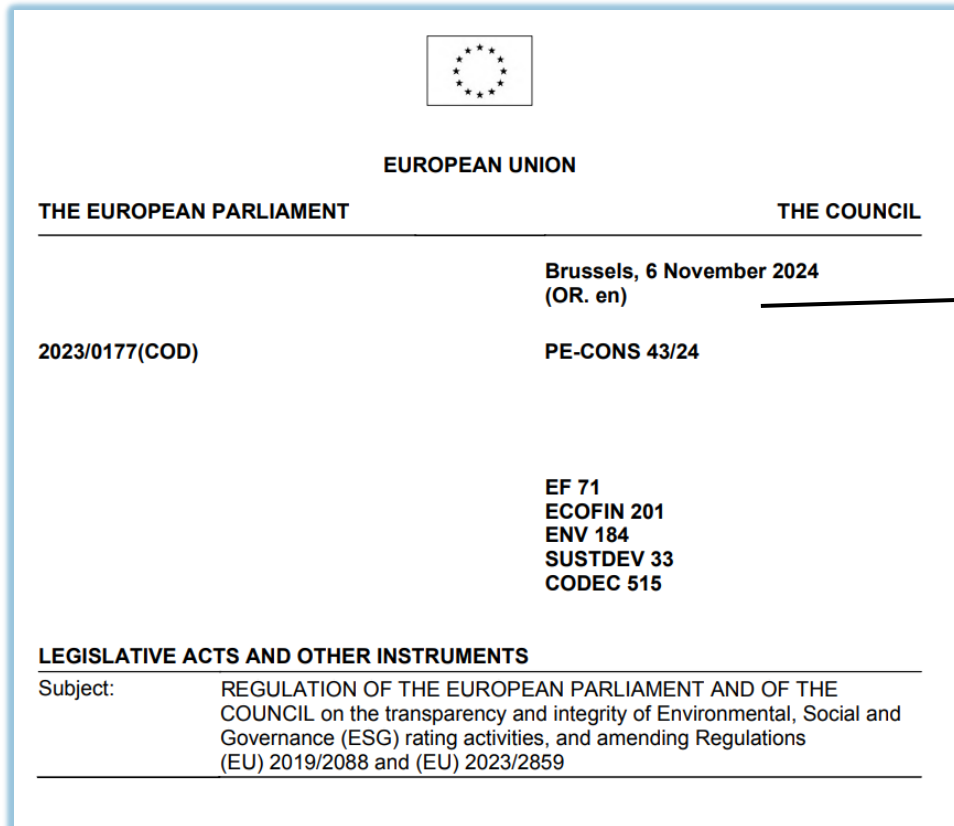
DeliverEEm 2025

Delivering the Energy Efficient Mortgages Ecosystem

DeliverEEM aims at scaling up and accelerating the allocation of private finance to energy efficiency investment through an innovative, integrated Energy Efficient Mortgage (EEM) ecosystem, the foundations of which were laid down under the EU-funded Energy Efficient Mortgages Initiative (EEMI). It is a project funded by the European Union under "Programme for the Environment and Climate Action (LIFE)" LIFE23-CET-DeliverEEM.

WP4 - TASK 4.1.2

*"Contribute to the creation of a comprehensive ESG and climate risks database, and **construction of ESG scores** through dedicated surveys and public information"*



EUROPEAN UNION

THE EUROPEAN PARLIAMENT THE COUNCIL

Brussels, 6 November 2024
(OR. en)

2023/0177(COD) PE-CONS 43/24

EF 71
ECOFIN 201
ENV 184
SUSTDEV 33
CODEC 515

LEGISLATIVE ACTS AND OTHER INSTRUMENTS

Subject: REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the transparency and integrity of Environmental, Social and Governance (ESG) rating activities, and amending Regulations (EU) 2019/2088 and (EU) 2023/2859

**Brussels, 6 November 2024
(OR. en)**

Article 3 - Definitions

‘ESG score’ means an ESG measure derived from data, using a rule-based methodology, and based only on a pre-established statistical or algorithmic system or model, without any additional substantial analytical input from a rating analyst;

WP4 - TASK 4.1.2

Overview of the design model process

- The *universe of the ESG metrics* that contribute to the model their can be collected by questionnaire or using public or internal sources.
- The ESG metrics are classified for pillar area and *thematic area*
- Each metrics will be *assessed individually* and eventually *aggregated* to obtain the overall ESG score
- *Correction for controversies* can be applied
- The score is converted to a **risk class**

FOCUS ON DATA SELECTION
AND COLLECTION



Data selection and collection



Criteria for selecting sustainability information used in ESG score evaluation

- Meet the requirements of the **different stakeholders** (EU regulations, banks and financial institution)
- Find a **trade-off in the number of informations**, ensuring it is as comprehensive as possible while avoiding an excessive number of questions. → maximize the use of public information.
- Develop a **dynamic structure of the questionnaire** in order to include what it is material for the company based on its endogenous and exogenous specificity.

Relevant ESG indicators for SME

- December 2022 : CSRD Directive (Corporate Sustainability Reporting Directive) has required companies to produce a sustainability report based on environmental, social and governance criteria.
- Large companies and listed SME are in the scope of CSRD → ESRS reporting standard (EFRAG *)



- Non-listed SMEs are not legally required to comply with the CSRD, but they still need to provide sustainability-related information because larger companies they work with (customers or investors) are required to report under the CSRD

- January 2024: ['Exposure Draft for the voluntary reporting standard for non-listed SME'](#)

It is a common point of reference to be used by SMEs to face growing sustainability data requests from business counterparties and lowering entry barriers for non-listed SMEs to sustainability reporting

*European Financial Reporting Advisory Group

45 sustainability indicator from MEF

Structure of the Reporting Standard



IL DIALOGO DI SOSTENIBILITÀ TRA PMI E BANCHE

Documento di consultazione

At the end of 2022 the Ministry of Economics and Finance (MEF) defines a “**Coordination Table on sustainable finance**”, including:

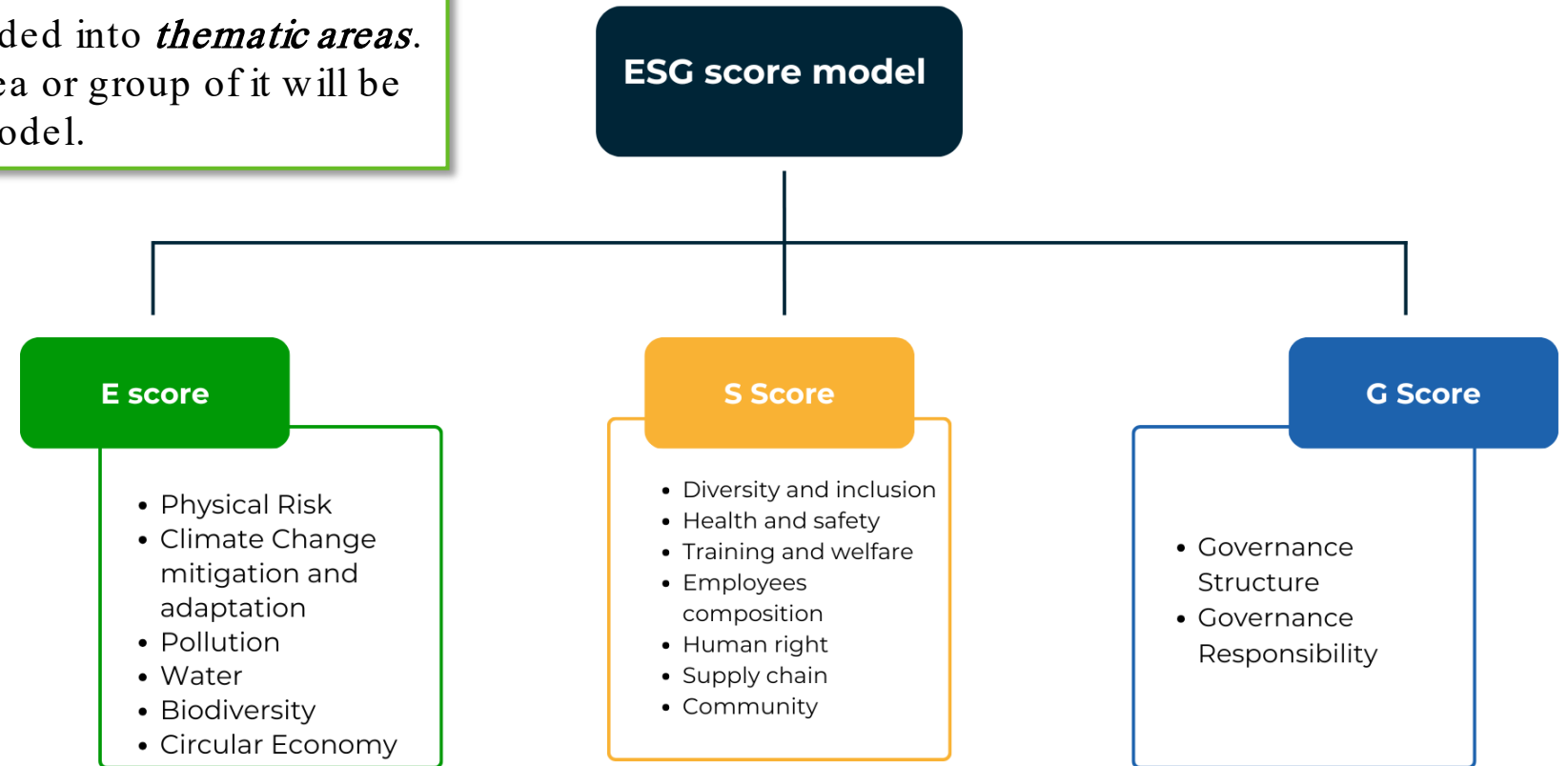
- Ministero dell’Ambiente e della Sicurezza Energetica,
- Ministero delle Imprese e del Made in Italy
- Banca d’Italia
- Commissione Nazionale per le Società e la Borsa (CONSOB)
- l’Istituto per la vigilanza sulle Assicurazioni (IVASS)
Commissione di Vigilanza sui Fondi Pensione (COVIP).

	n. of information requests	n. of information higher priority for micro
1. General information		
General information	4	3
2. Climate change mitigation and adaptation (E1)		
General information	2	1
Energy and greenhouse gas emission transition risk and physical risk	5	4
EU Taxonomy alignment	3	2
		0
3. Environmental		
(E2) Pollution of air, water and soil	4	0
(E3) Water	2	1
(E4) Biodiversity and ecosystems	2	2
(E5) Resource use and circular economy	4	1
4. Social and workforce		
Human rights	3	0
Collective Bargaining and Freedom of Association	1	0
Diversity and inclusion	3	1
Training and education	1	0
Health and safety	3	0
Composition of Employees	2	1
5. Governance and corporate conduct		
Corporate conduct	3	0

KPI dictionary and classification settings

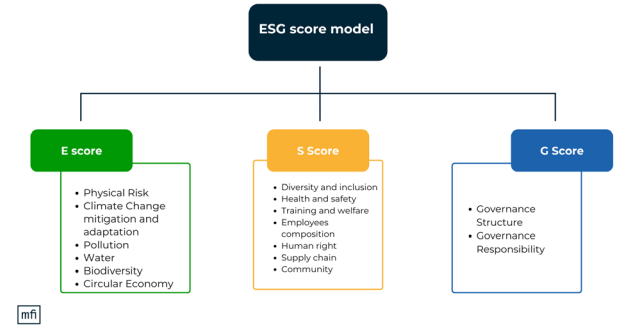
All the KPI are divided into *three categories*: Environmental, Social and Governance in order to have a macro area-score for each model.

These groups of KPIs are further divided into *thematic areas*. Partial score for specific thematic area or group of it will be provided by the model.



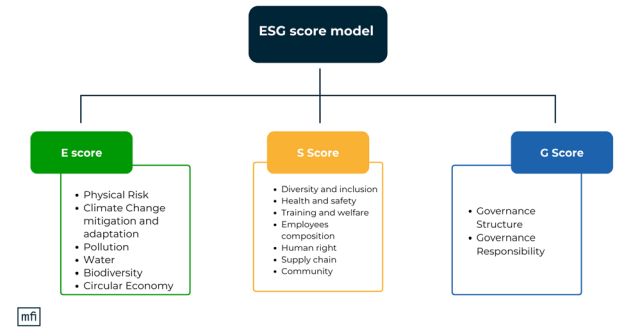
Environmental thematic areas

Thematic Area	Description
Climate Change Mitigation and Adaptation [ESRS E1]	Evaluate a company's commitment to adopting solutions to reduce its impact on climate change and the implementation of any adaptation policies. This includes investments in energy efficiency; monitoring emissions and utilizing energy from renewable sources, both external and internal to the company; and managing physical and transition risks.
Pollution [ESRS E2]	It is related to the emission of pollution in air, water and soil
Water [ESRS E3]	Company's commitment in the optimization of water resources
Biodiversity [ESRS E4]	Assess the potential impact of the company's activities on sites and areas protected for their high biodiversity value..
Circular Economy [ESRS E5]	Assess the impact in terms of: hazardous waste produced; use of recycled materials and reuse of materials; product durability and recyclability.

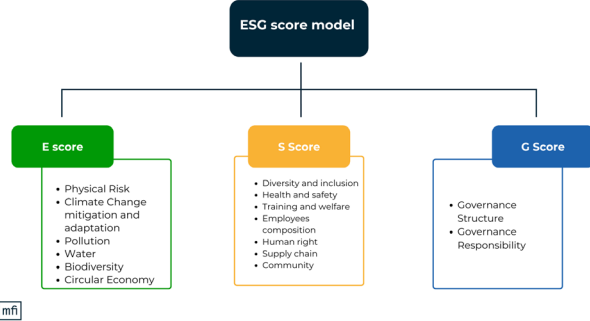


Social thematic areas

Thematic Area	Description
Workforce organization	Composition of the workforce in terms of contract type; assessment of the presence of policies for inclusion and gender equality.
Welfare and training	Training hours and employee support initiatives.
Health and safety	Injuries Incidents
Human right	Assessment of the presence of policies for respecting human and workers' rights
Supply chain	Assessment of the implementation of sustainability policies in supplier selection and customer care
Community	Evaluation of the impact towards the local community in terms of donation and social initiatives.

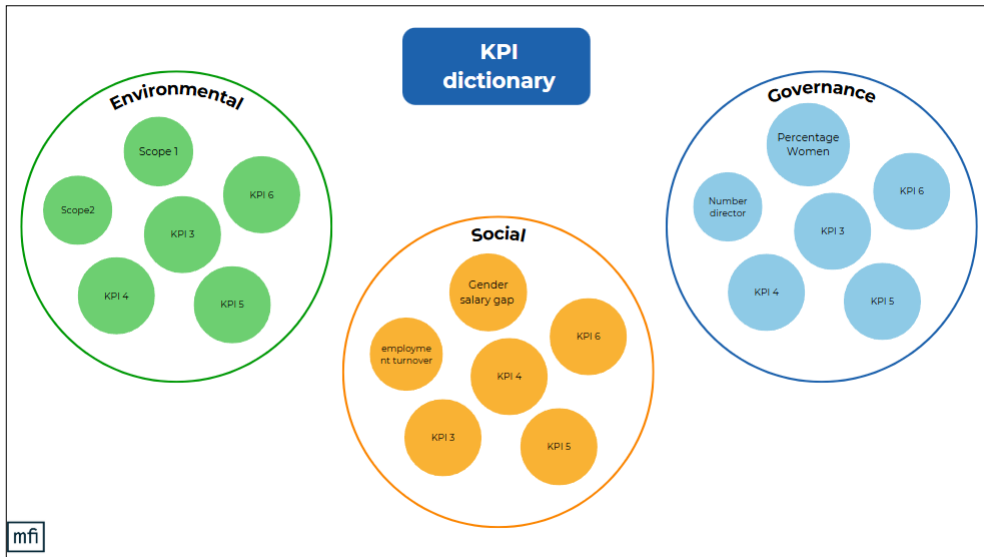


Governance thematic areas



Thematic Area	Description
Governance Structure	Assessment of the company structure based on its size and legal form, it evaluates how the company includes the sustainability issues.
Governance responsibility	Assessment of the application of appropriate regulations to promote a healthy and legally compliant work environment.

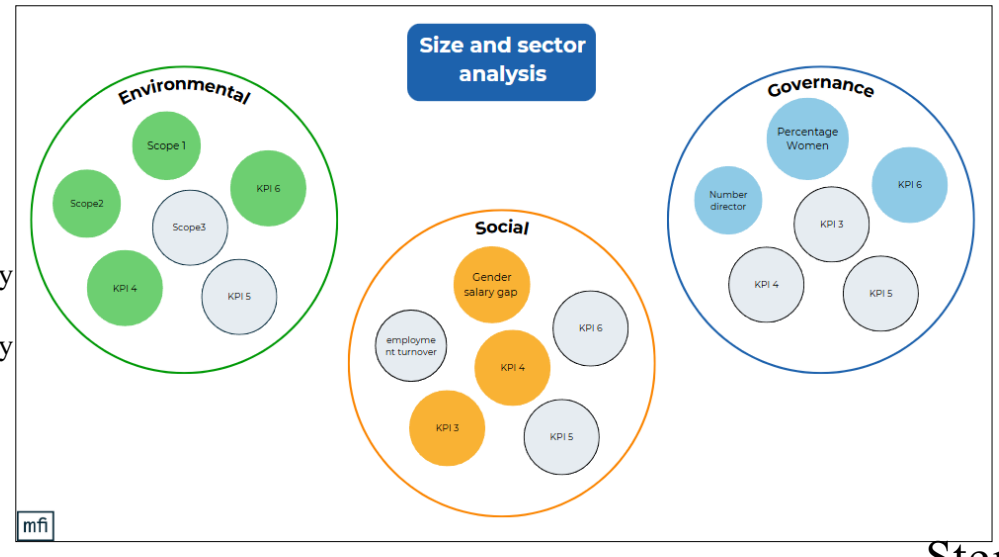
Dynamic KPIs



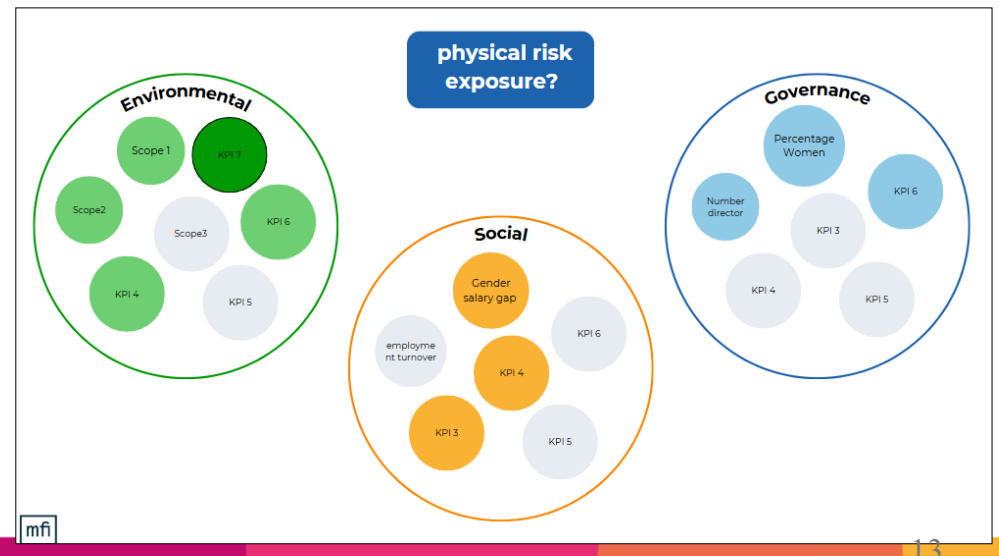
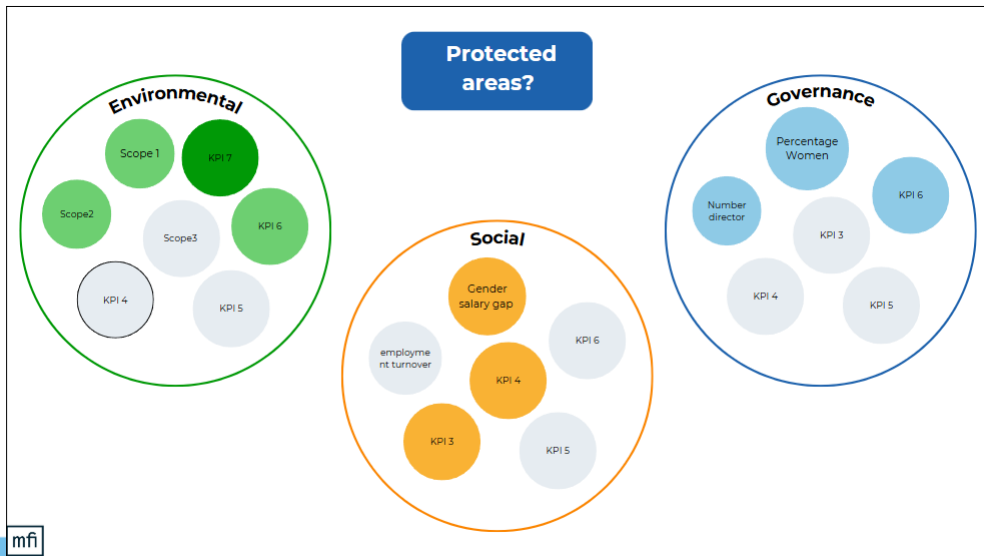
Step 1



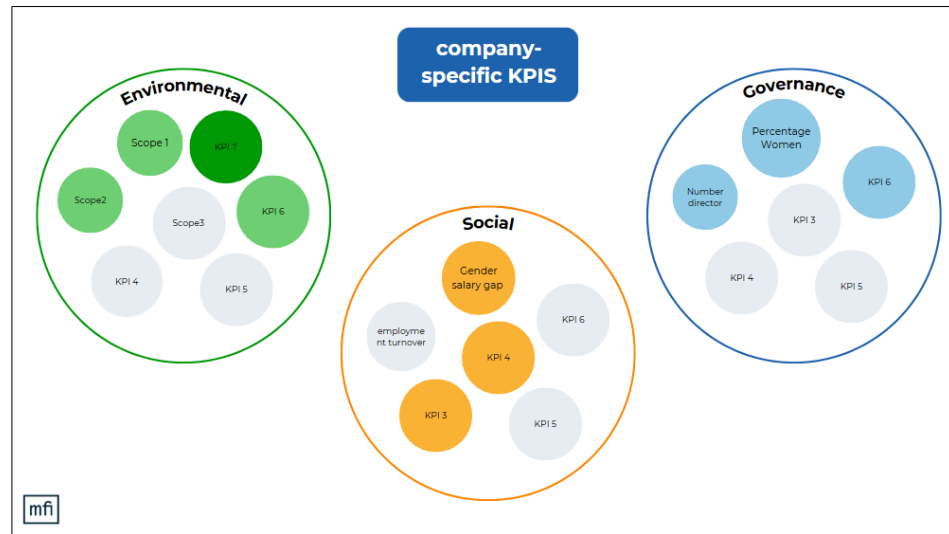
- What's the company size ?
- What's the company sector?



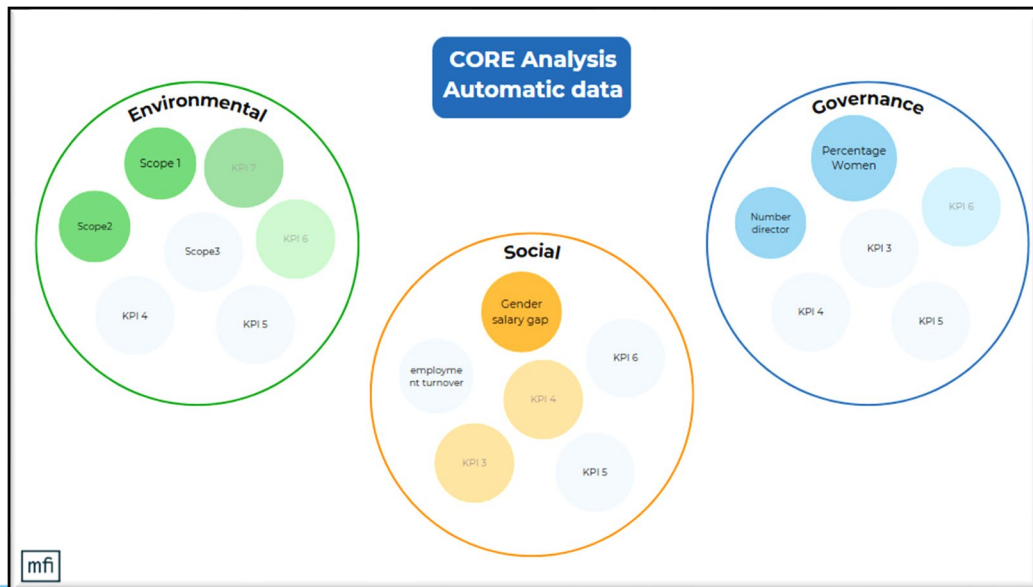
Step 2



Is there any data that can be obtained automatically?








YES



- **Visura camerale:** is a document providing several information of any company registered at Camera di Commercio
- **Digital Invoices:** TeamSystem manages the 40% of the italian digital invoices

Environmental KPIs

Scoring area	thematic area mfi	thematic area MEF	KPI code	Description
Physical Risk		Physical and transition risk	9 extreme events	The indicators monitor the vulnerability of company assets, such as storage or production sites (considering all individual operational units), to specific physical hazards like hail, earthquakes, tornadoes, tsunamis, volcanic eruptions, fires, and others
			extreme events management	Q: Does the company taken initiatives for risk mitigation for those areas\ assets exposed to any physical extreme events?
			transition risk investments	Q: Does the company implemented or planned investments to reduce climate and transition risk events? If so, please specify.
Climate Change mitigation and Adaptation - ESRS E1	Climate change mitigation	Energy and GHG emission	 Annual Scope 1 emission intensity	Q: Total greenhouse gas emissions (t CO2-eq) for Scope 1: direct emissions
			 Annual Scope 2 emission intensity	Q: Total greenhouse gas emissions (t CO2-eq) for Scope 2: indirect emissions
			Energy intensity	Q: Electricity consumed expressed in MWh (megawatt-hours)
			Percentage renewable energy use	Q: Percentage (%) of electricity consumed from renewable sources (including both purchased and generated energy)
			Percentage renewable energy produced	Q: Of which, self-produced renewable energy
			 Certification iso 14001	Q: Does the company, with the aim of respecting the environment and improving its environmental performance, have UNIEN ISO 14001 certification?
			energy efficiency bulding	Q: Energy efficiency level of the properties under guarantee
			 certification ISO 50001	Q: Does the company have ISO 50001 energy management system certification?
		energy efficiency target	Q: Has the company taken any offsetting actions to reduce emissions? If so, please specify.:	

GHG Nowcasting
modelfine tool

Info available in
visura camerale

Automated KPIs:

- ISO 50001: International standard for an energy management system aimed at improving energy efficiency and reducing energy consumption.
- ISO 14001: International standard for an environmental management system, aimed at improving environmental performance and ensuring regulatory compliance.

Physical risk tool

The exposure to extreme weather events is evaluated for each asset of a company based on its geographical location, the model also considers the vulnerability of assets, which depends on the type of activity carried out by the company. Consequently, the final physical risk is recalibrated taking into account a materiality factor



Sector Commerce

Materiality Analysis

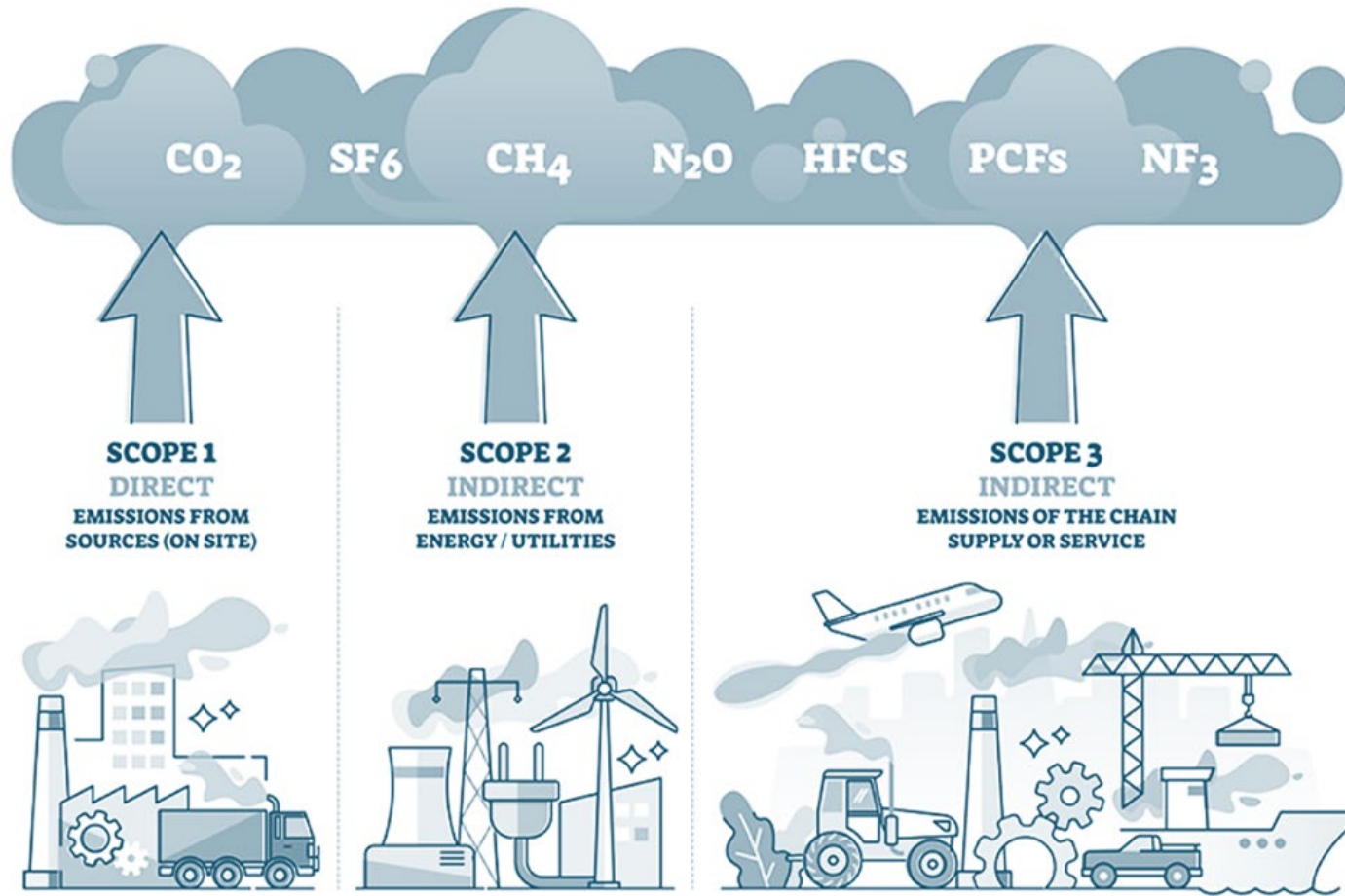


		Flood	Earthquake	Tsunami	Volcanoes	Hail	Lightning	Tornadoes	Fires	Tornado
Address assets 1	S2	S1	S3	S1	S1	S3	S3	S1	S1	S1
Address assets 2	S2	S1	S3	S1	S1	S3	S3	S1	S1	S1
Address assets 3	S2	S1	S3	S1	S1	S3	S3	S1	S1	S1

9 types of physical risk

GHG Nowcasting

Estimation of greenhouse gas emission (GHG) based on sector, size and geographic location of a company



Scope 1

Direct greenhouse gas emissions from sources owned or controlled by an organization (e.g., emissions from fuel combustion).

Scope 2

Indirect emissions associated with the purchase of electricity, steam, heat, or cooling.

Scope 3

All other indirect emissions (not included in Scope 2) that occur throughout the value chain of the company, including both upstream and downstream emissions.

From invoices to emission

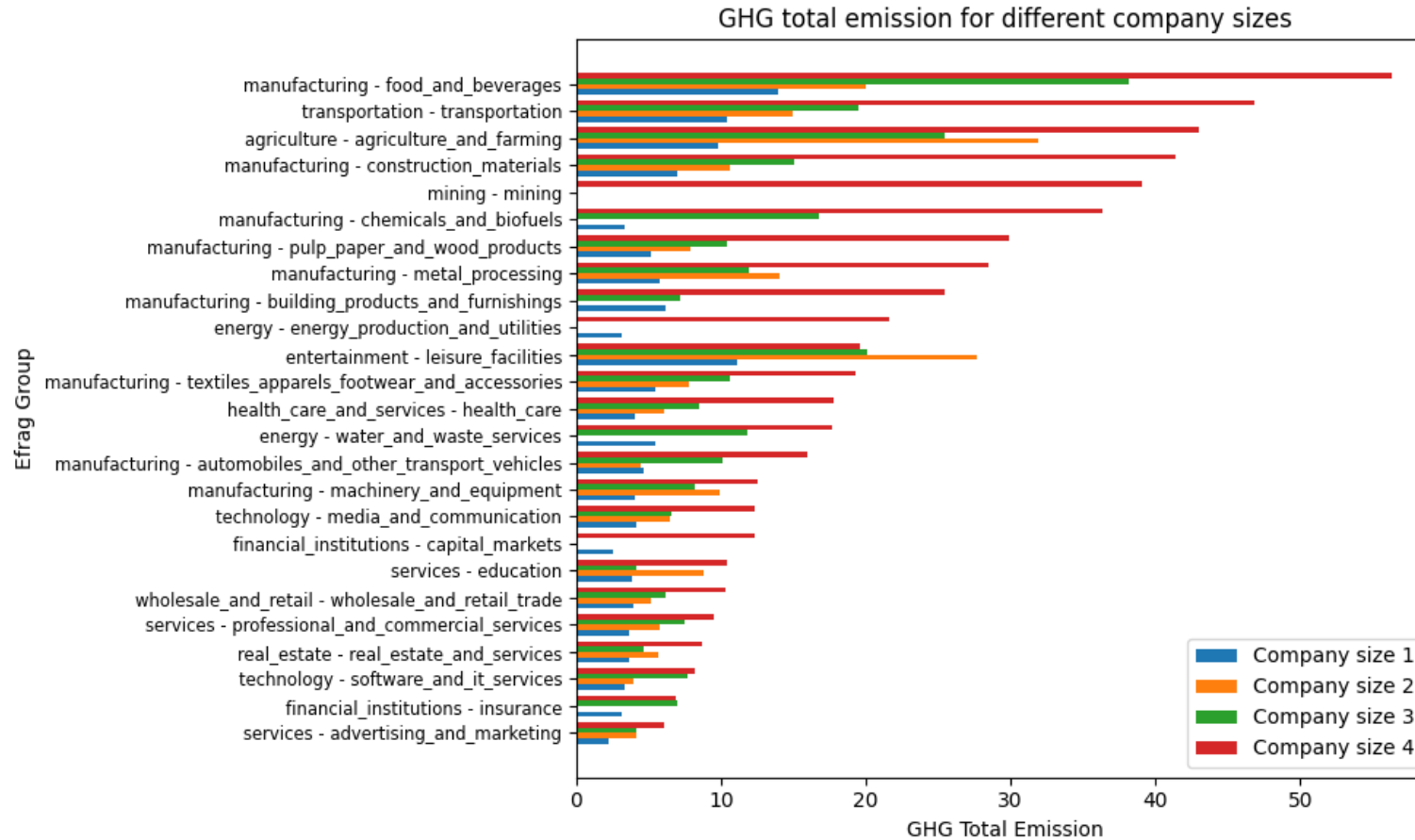
The model processes invoices data from a representative dataset of the universe of the Italian companies. For each company, purchase invoices are selected, categorized, and the amounts are filtered and converted into CO2 equivalent using appropriate emission factor. An emission factor quantifies the amount of GHG emitted per unit of activity, energy consumed, or material used. It represents the average emission rate for a specific source or process.

Distinct values for the three scopes are obtained.



Median value for GHG emission

The calculated emissions data are clustered based on NACE code, company size and geographic location, delivering monthly updated emissions statistics.



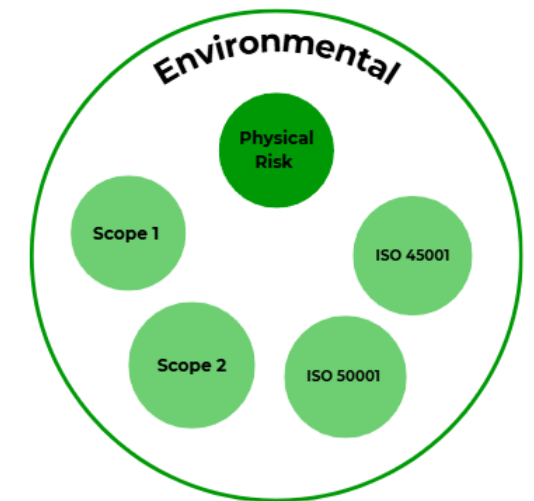
Size	Range fatturato	Size eu
1	< 200 keuro	Micro
2	< 300 keuro	
3	< 500 keuro	
4	< 2 Mln euro	Small
5	< 5 Mln euro	
6	< 10 Mln euro	Medium + large
7	< 50 Mln euro	
8	>= 50 Mln euro	

Estimated data by size and sector (Efrag group classification)

Environmental KPIs

Scoring area	thematic area mfi	thematic area MEF	KPI code	Description
Pollution - ESRS E2		Pollution	Pollution monitoring	Q: Does the company measures its own pollution emissions in air, soil and water?
Water - ESRS E3		Water	Water intensity	Analytical kpi: Water consumption divided by turnover
			Water efficiency policy	Q: Has the company implemented water efficiency policy?
			Water efficiency targets	Q: Has the company defined water efficiency targets?
			Certification ISO 46001	Q: Does the company have ISO 46001 - water efficiency management certification?
Biodiversity - ESRS E4		Biodiversity	Protected area	Q: Land or marine area of sites owned, leased, or managed in (or adjacent to) protected areas and areas of high biodiversity value
Circular Economy - ESRS E5		circular economy	Waste intensity	Total waste produced divided by turnover
			Recycle	Q: Does the company recycle any material?
			Waste recycling ratio	Q: Does the company monitor the amount of recycled waste? If yes, give the percentage (%):
			Recycled materials usage	Indicate the percentage (%) of input materials from recycling used to make the organization's products and/or services (last fiscal year)
			Hazard waste	Q: Tonnes of hazardous waste produced by the company in the year

Automated KPIs:



Social KPIs

Automated KPIs:

- Average costs of employees
- Employment turnover
- ISO 125 2022
- ISO 45001

The company can find sustainability information in

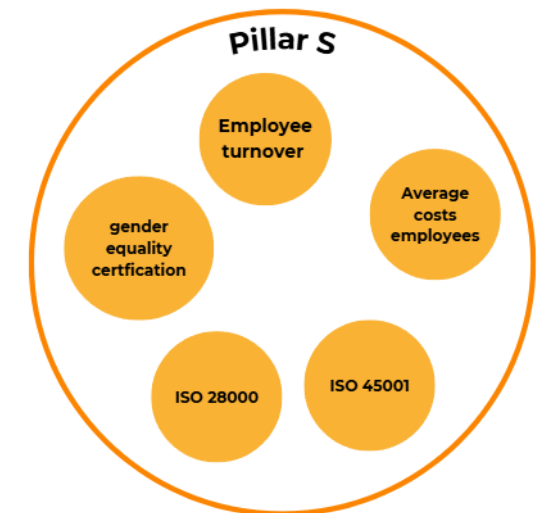
- **Payslip –gender gap analysis**
- **Bank account transaction – salary analysis**

Scoring area	Thematic area mfi	thematic area MEF	KPI code	Description	
Employment - ESRS S1	Balance sheet	Workforce organization	Gender diversity total	Analytical kpi: ratio between the total number of women and the total number of men employed by the company	
			Gender distribution	Analytical kpi: standard deviation of the gender structure differences between two group of employees: management and line-level employees. Management (quadri e directors) and line-level employees (operai e impiegato)	
			Average costs of employees	Average costs of employees	
			Employment turnover	Numero di dipendenti che hanno lasciato l'azienda nell'ultimo anno espresso come percentuale (%) sul totale medio dei dipendenti.	
			Composition of employees	Fixed term contract percentage	Q: Percentage of total employees with fixed-term contracts.
	Info available in visura camerale	Diversity and inclusion	Diversity and inclusion	Part time contract	Analytical KPI: Percentage of total employees with part-time contracts in relation to percentage of fixed-term contracts
				Gender salary gap	Analytical kpi: difference between the average salary for men and women
				Protected category percentage	Q: Percentage of total employees belonging to protected categories (Law 68/99) or disadvantaged individuals (ex Law 381/91)
				Certificate gender equality 125 2022	Q:L'azienda è in possesso della certificazione Parità di genere Uni/PdR 125:2022?
				Company welfare	Q: specify the company welfare applied
	Welfare e training	Training and education	Training policy	Analytical kpi: The comany organizes training for the employees	
			Type training	Q: To select the main topics covered in the training provided during the year	
			Health and safety	Q: Indicare l'indice di sinistrosità aziendale (ISA) INAIL?	
	Health and safety	Health and safety	health and safety management	Q: È stato introdotto in azienda un sistema di gestione della salute e sicurezza sul lavoro?	
			Certificate safety ISO 45001	Q: Does the company have UNI EN ISO 45001 standard relating to worker health and safety management?	
Human right	Human right	worker right policy	Q: L'impresa ha politiche in materia di diritti umani, compresi i diritti dei propri lavoratori?		
		human right due diligence	Q: L'impresa ha una procedura di dovuta diligenza per individuare, prevenire e affrontare effetti negativi sui diritti umani?		
Certifications		Guideline corporate social responsibility ISO 26000	Q: Does the company comply with the dictates deriving from ISO 26000 on corporate social responsibility? (tematiche legate a : Diritti umani, Coinvolgimento della comunità, Aspetti relativi ai consumatori, Corrette prassi gestionali, L'ambiente		
		Certificate ethics SA8000	Q: L'azienda è in possesso della certificazione Certificazione Etica SA 8000		

Social KPIs

Automated KPIs:

- Average costs of employees
- Employment turnover
- Certificate gender equality ISO 125 2022
- Certificate safety ISO 45001
- ISO 28001



Scoring area	Thematic area mfi	thematic area MEF	KPI code	Description
Supply Chain — ESRS S2	Supplier		Suppliers evaluation	Q: Does the company adopt a supplier evaluation system? (ad esempio considero che i fornitori abbiano certificazioni ambientali o sociali)
			Percentage local expenses	Q: Percentage of total expenses towards local supplier in the last fiscal year?
	Customers		Product traceability	È garantita la tracciabilità dei vostri prodotti o servizi lungo tutta la catena di valore, con identificazione dei vari intermedi, fino alle materie prime utilizzate?
			Consumer compliant channels	Sono stati predisposti canali/strumenti a disposizione dei clienti/consumatori allo scopo di invio commenti o quesiti, e segnalazione reclami? Quali?
Community - ESRS S3			Supply chain certification ISO 28001	Q: Does the company have the ISO 28000 certification for supply chain security?
			Civic engagement	Q: Sono state intraprese, nell'ultimo anno fiscale, azioni, iniziative, progettualità che presuppongono il coinvolgimento attivo della comunità locale o supporti di altro genere? Se sì quali.
			Percentage local manager	Q: Qual è la percentuale (%) di dirigenti dell'organizzazione provenienti dalla comunità locale?*
Controversies			Privacy violation last year	Q: Nell'ultimo anno fiscale l'azienda ha ricevuto reclami fondati relativi alla violazione della privacy dei clienti?
			Impactful episodes long term	Q: Negli ultimi tre anni si sono registrati episodi accertati relativi a prodotti e/o servizi aziendali che hanno generato impatti negativi sulla salute e/o sicurezza del consumatore?
			human right violation long term	Q: Negli ultimi tre anni si sono registrati incidenti in materia di diritti umani?

Info available in visura camerale



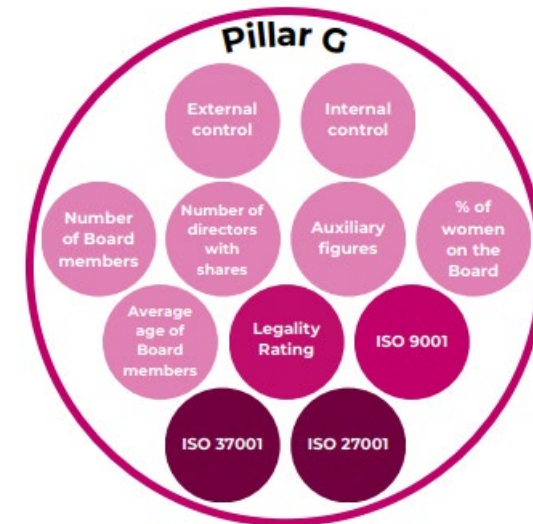
Governance KPIs

Scoring / Thematic area	thematic area MEF	KPI code	Description
Governance Structure		External audit	Q: Is there an auditing company?
		Internal audit	Q: is there an internal audit?
		Percentage woman	Q: Percentage of female directors
		Number directors	Q: Total number of directors
		Directors with shares fraction	Analytical KPI: Percentage of directors with shares
		Number auxiliaries	Q: Total number of auxiliaries
		Directors age	Q: Average age of the board
Governance responsibility	Corporate conduct; info 43	Sustainability ethics code	Q: Does the company consider socio-environmental impacts among corporate risk factors?
		Certification ISO 231	Q:L'azienda ha predisposto un modello organizzativo conforme al d.lgs. 231/2001
		Rating legalità	Q: Does the company have the legality Rating?
		Anticorruption certification ISO 37001	Q: Does the company have ISO 37001 anti-bribery management certification?
	Anticorruption policy	Q:L'azienda dispone di politiche per prevenire i rischi di corruzione attiva e passiva, concussione, frode e per la promozione di valori di integrità aziendale tra i suoi dipendenti, funzionari e amministratori?	
		ISO 9001	Q: Does the company comply with the regulatory requirements deriving from ISO 9001 (Quality Management System)?
		Indipendent director	Q: Number of independent director in the board
		Risk management board committee	Q: L'azienda presenta un comitato di gestione dei rischi/una policy relativa alla gestione dei rischi?
		Remuneration board committee	Q: L'azienda presenta un comitato di remunerazione/una policy relativa alle tematiche di remunerazione?
		Nomination board committee	Q: L'azienda presenta un comitato di nomina/una policy di nomina (del Consiglio di amministrazione)
Controversies		Corporate conduct; info 45	Corruption inside company
	Discrimination inside company		Negli ultimi tre anni si sono registrati episodi di discriminazione accertati in azienda?
	No compliance communication		Negli ultimi tre anni si sono registrati episodi accertati di non conformità riferiti alle comunicazioni di marketing realizzate dall'azienda?

Info available in visura camerale

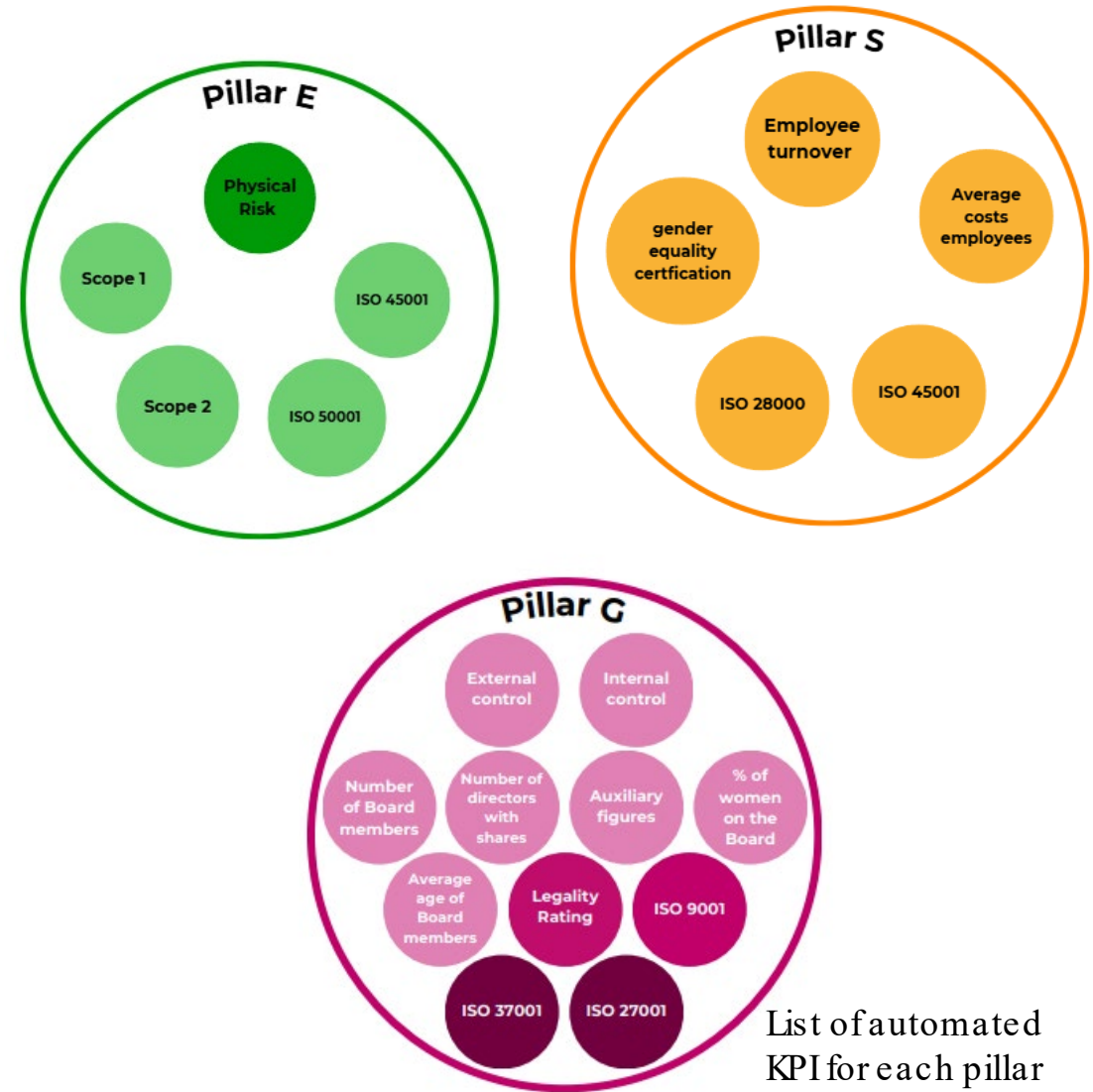
Automated KPIs:

- Governance structure KPIs
- ISO 231
- Rating legalità
- ISO 37001
- ISO 9001



Conclusion

- A subset of KPI is defined to evaluate the ESG score of SME; in particular for not-listed companies. The list is dynamic since it changed based on endogenous and exogenous company characteristics.
- The KPI selection procedure followed the guidelines defined in VSME standard and «Dialogo tra sostenibilità e banche»
- A group of KPIs can be extracted automatically from external sources such as: Visura camerale e balance sheet, helping companies to provide sustainability information.
- GHG nowcasting, a tool for the estimation of GHG emission based on the invoices can help companies in one of the most complex issue related the environmental disclosure



List of automated KPI for each pillar

Thank you for your attention!