

ADDRESSING SUSTAINABILITY DATA GAPS FOR SMES: CHALLENGES, ALTERNATIVE SOLUTIONS AND DATA-SHARING

Borja Fernández-Rosillo San Isidro

Central Balance Sheet Data Office

Statistics Department

12TH IFC CONFERENCE ON "STATISTICS AND BEYOND: NEW DATA FOR DECISION MAKING IN CENTRAL BANKS"

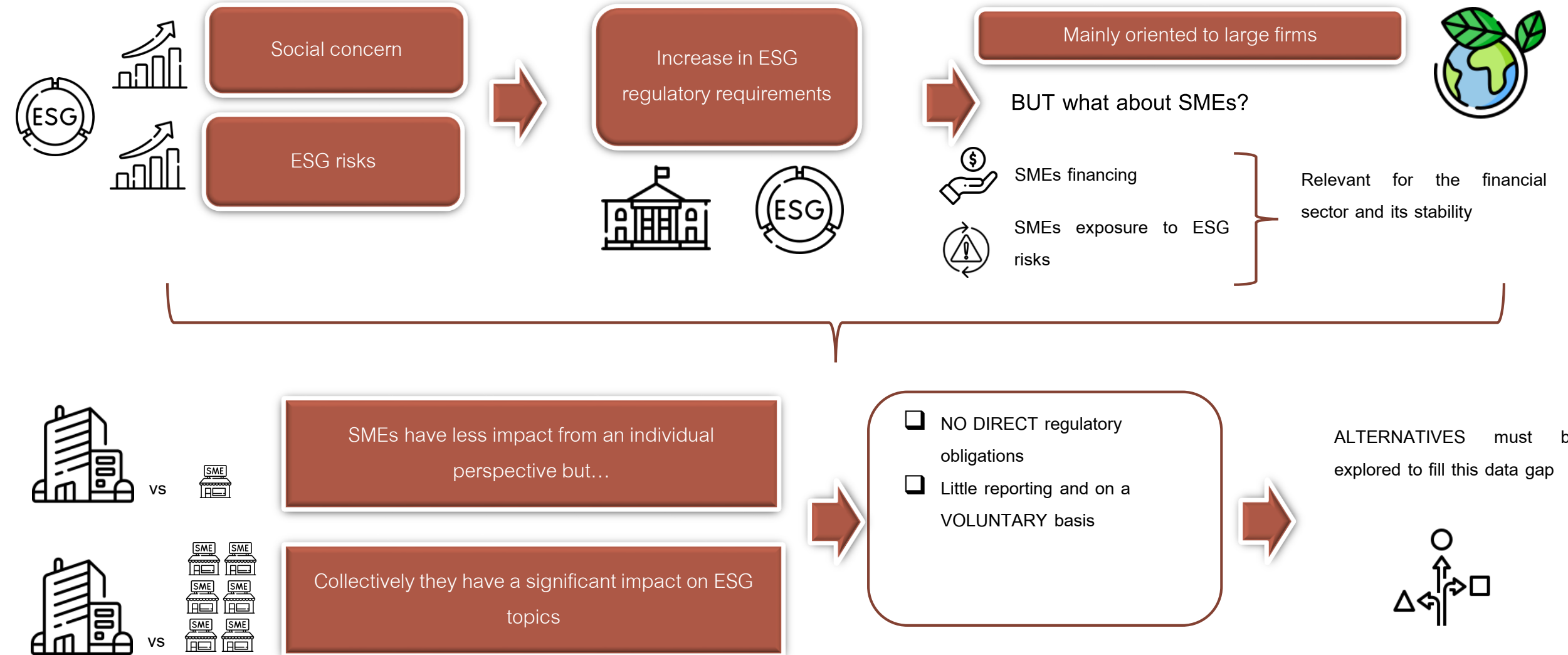
BASEL

23th August 2024



INDEX

1. Introduction and context
2. Current situation of ESG indicators for SMEs
3. Stakeholders needs and main drivers to address them
4. Alternative measures to fill the data gap on SMEs ESG:
 - 4.1 An econometric model for estimating the carbon footprint [work in progress]
 - 4.2 Voluntary sustainability-related indicators in the annual accounts
 - 4.3 P&L items as a proxy for energy and GHG emissions
 - 4.4. Data-sharing: Public-private collaboration for the creation of a Green Data Space [work in progress]
 - 4.5 Data-sharing: Establishing an integrated climate-data repository ¿?
5. Conclusions

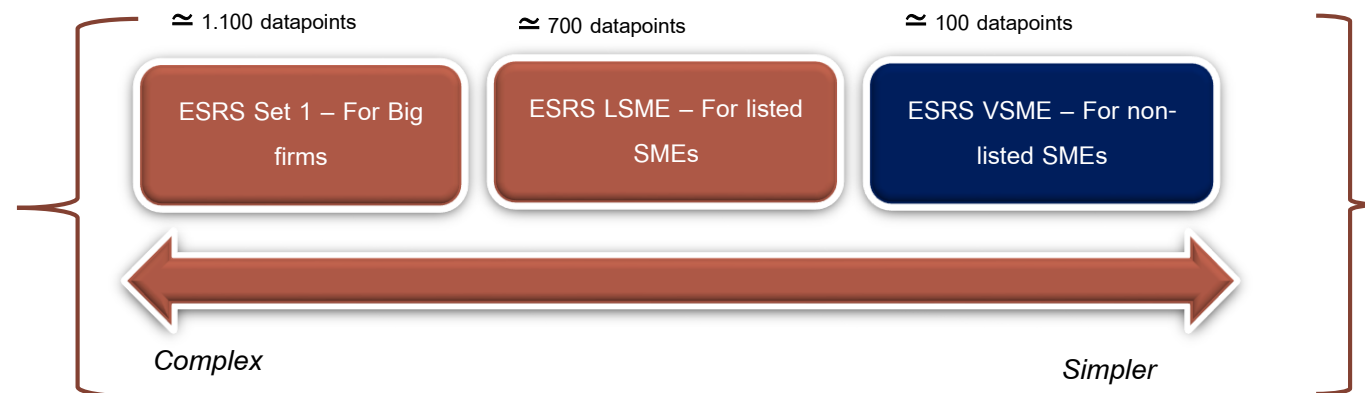


2. CURRENT SITUATION OF ESG INDICATORS FOR SMES

Landscape of ESG requirements for SMEs



- ❑ Only EFRAG has developed SME oriented standards but are VOLUNTARY



- ❑ NO obligatory requirements



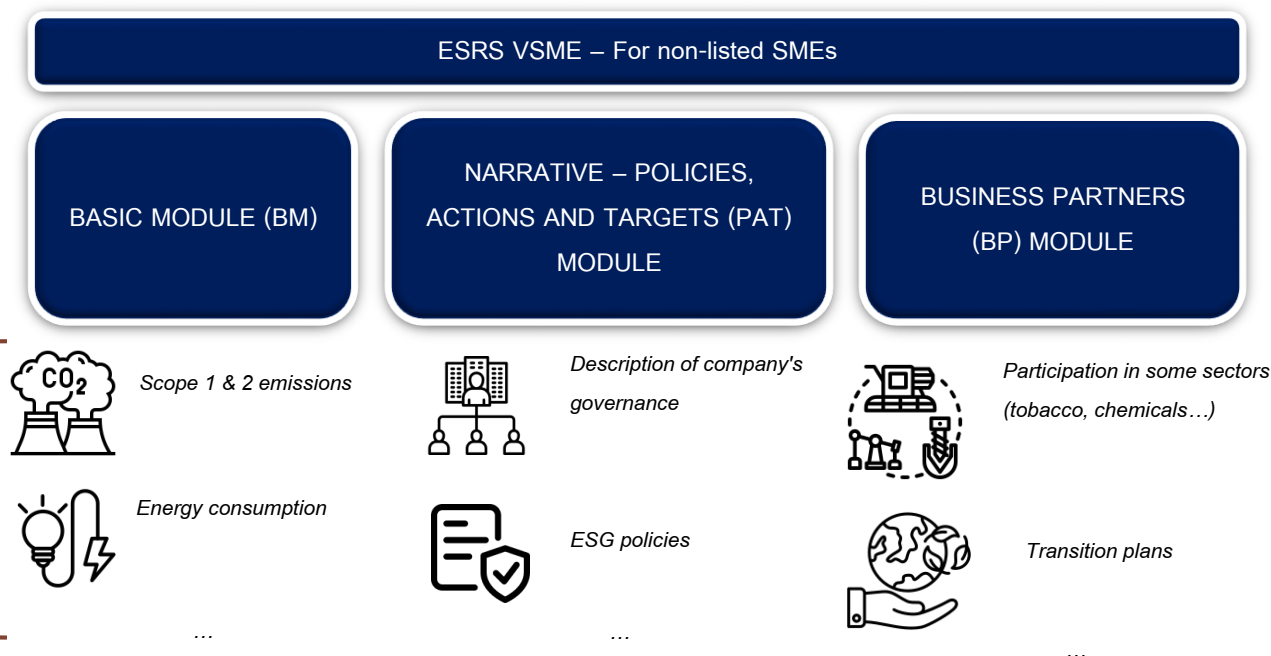
- ❑ Few ESG SMEs oriented standards developed



- ❑ Most SME lack resources and technical capacities to prepare this information

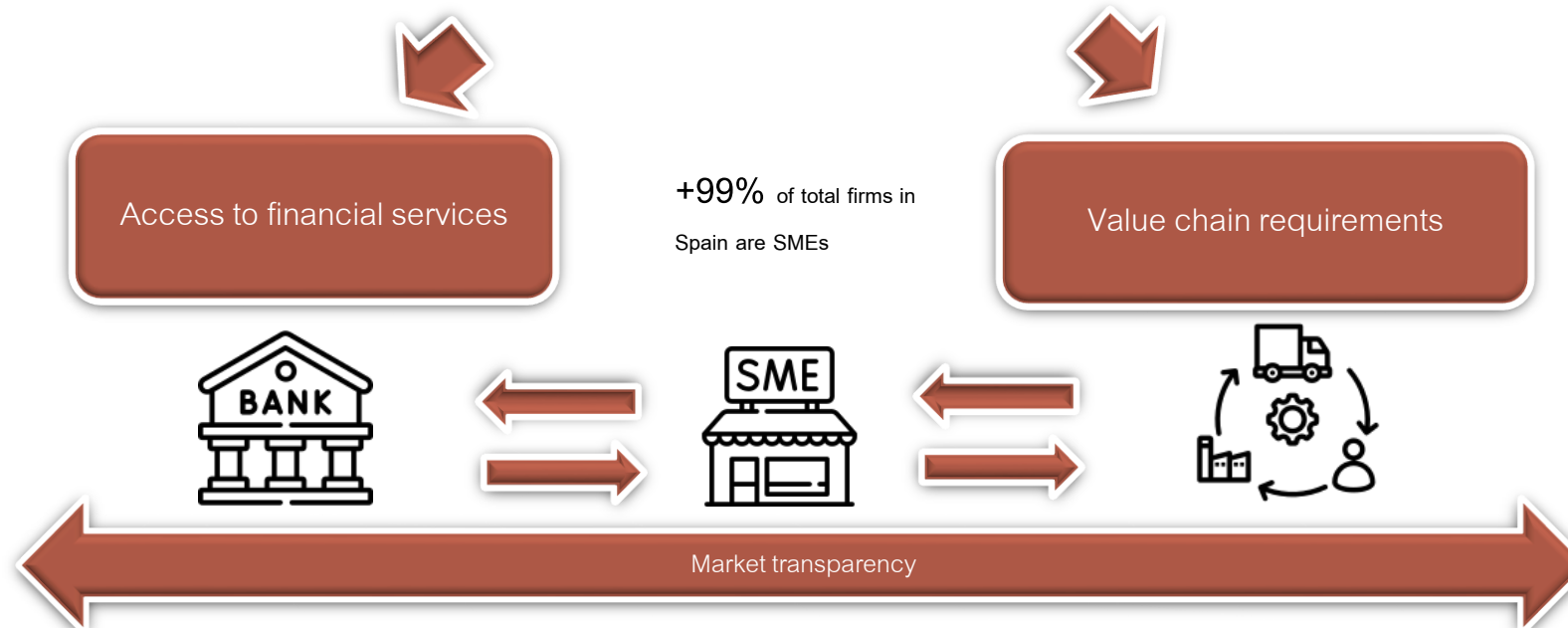


Examples



Non-listed SMEs are not required to report sustainability information under the CSRD but...

INDIRECTLY they will be “pushed” to present this information due to:



For this reason, voluntary indicators for non-listed SMEs have been developed by EFRAG (VSME)

4. ALTERNATIVE MEASURES TO FILL THE DATA GAP ON SMES ESG

4.1 An econometric model for estimating the carbon footprint [work in progress]

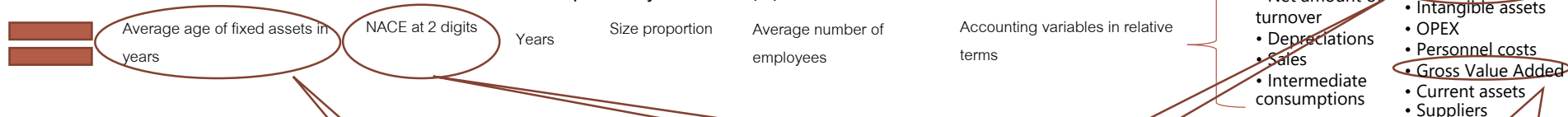
Objective

To build an econometric model capable of estimating the carbon footprint of each Spanish non-financial company based on the greenhouse gas (GHG) emission intensity of its sector of activity (based on the NSI environmental accounts) in combination with other accounting variables

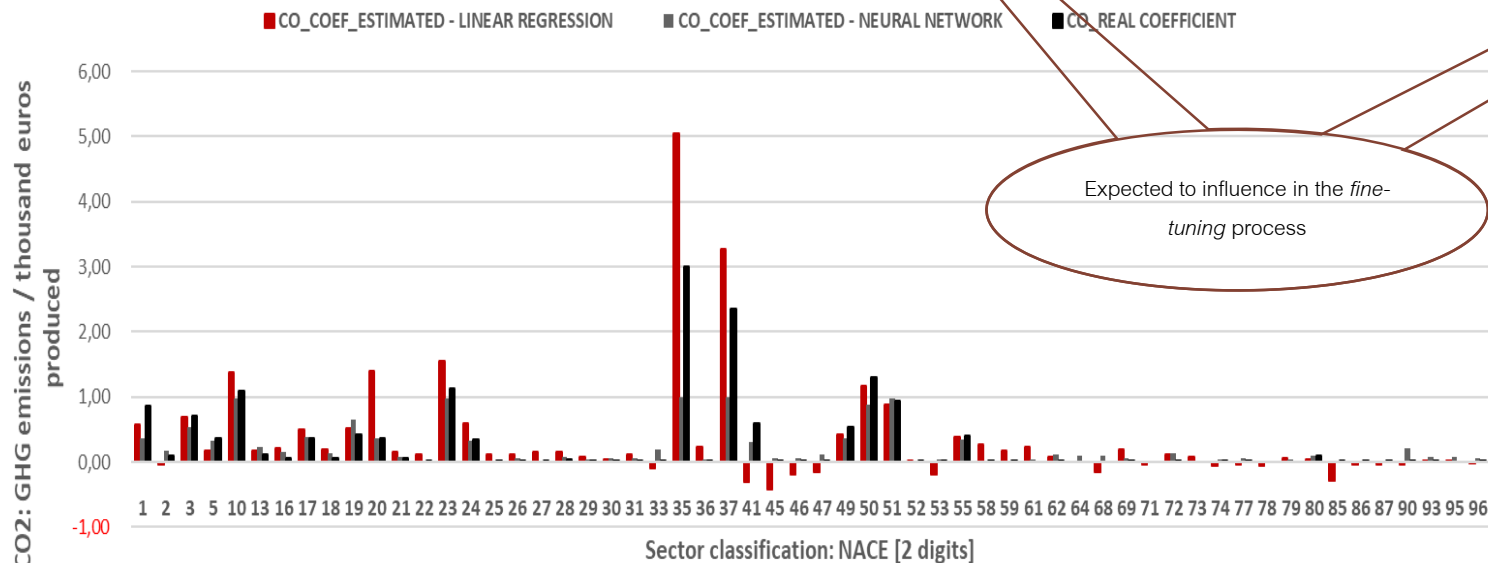
Response variable (yt)

Emission coefficient (TnCO₂eq per 1,000€ produced)

Explanatory variables (xt)



COMPARISON OF ESTIMATION METHODS FOR SECTOR AGGREGATED DATA: LINEAL REGRESSION VS NEURAL LINK VS REAL DATA



Different models tried (linear regressions, neural network...)

GVA and NACE sector as the most significant explanatory variables

Expected to influence in the *fine-tuning* process

CONCLUSIONS:

- ❑ Considerable overestimation or underestimation of emissions both at individual and aggregated level
- ❑ Inconsistent values for some methods (i.e. negative emissions for the linear regression model)
- ❑ Interpretability issues with the neural network model that complicate the explicability of the results



4. ALTERNATIVE MEASURES TO FILL THE DATA GAP ON SMES ESG

4.2 Voluntary sustainability-related indicators in the annual accounts

Set of **VOLUNTARY** ESG indicators on the annual accounts deposit

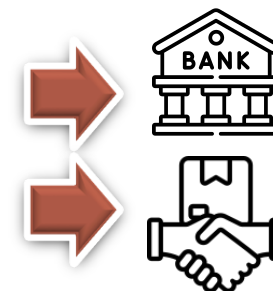
On a **STANDARDISED** format and aligned with the CSRD

- ☐ Increase quantity and quality of data
- ☐ Help firms (specially SMEs) start familiarizing with this reporting

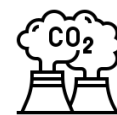


- ☐ First results for environmental indicators are **extremely poor** both in quantity and quality terms

- ☐ Although it is the first year, **voluntary** information request seems to not work



- ☐ Consequently, pressure from both banks and the value chain is essential to obtain this data



Environmental indicators

Sustainability indicators (voluntary content)

	Unit of measurement	Value	Amount (€)
Scope 1 emissions	tonnes of CO2eq		
Scope 2 emissions	tonnes of CO2eq		
Scope 3 emissions	tonnes of CO2eq		
Energy consumption within the organization	MWh		
Water consumption	m3		

Social indicators

		2022	2021
Percentage of women in the board	%		

4. ALTERNATIVE MEASURES TO FILL THE DATA GAP ON SMES ESG

4.3 P&L items as a proxy for energy and GHG emissions



Most SMEs are not familiar with climate-related indicators...



BUT they surely are with accounting items in monetary terms



Accounting items from the P&L account

- ☐ OPEX – Fuel expenses (€)
- ☐ OPEX – Electricity expenses (€)
- ☐ Cost of Goods – Fuel consumption (€)

1

- ☐ Replicate climate-related indicators behaviour
- ☐ Source of contrast

2

- ☐ Estimate GHG emissions or energy consumption (in MWh) based on average prices

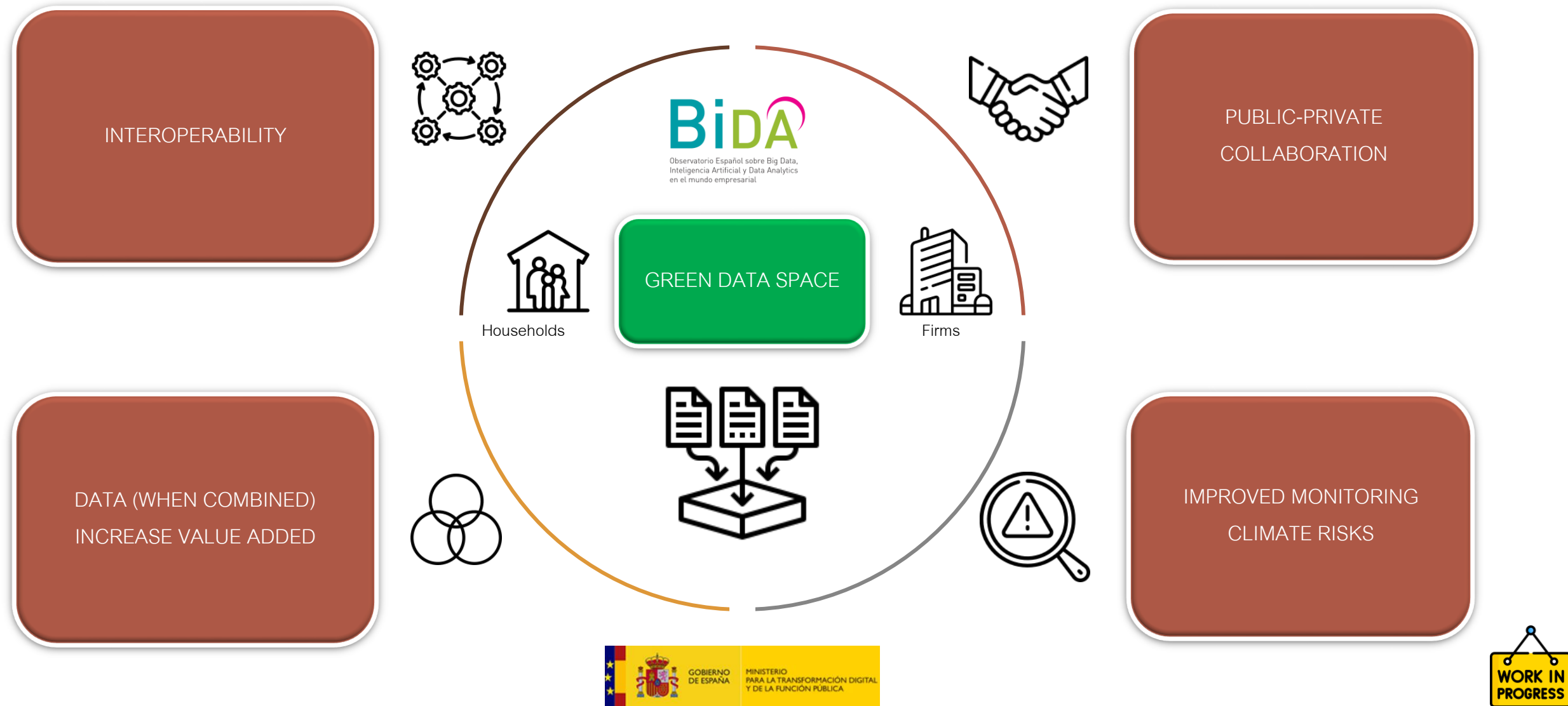
Example of comparison between fuel consumption (000€) from the P&L accounts with Scope 1 emissions (000 TnCO₂e) from sustainability reports

Year 2021	Fuel consumption (000€) from P&L		Scope 1 emissions (000 TnCO ₂ e) from sustainability reports	
	Aggregated value	Average value per company	Aggregated value	Average value per company
ENERGY	532.131	25.340	43.778	3.989
INDUSTRY	184.467	3.925	22.865	1.046
RETAIL & FOOD SERVICE	28.709	1.025	784	107
INFORMATION & COMMUNICATION	3.854	642	200	25
CONSTRUCTION & REAL ESTATE	1.184	118	869	114
TRANSPORTATION & STORAGE	549.871	32.345	11.961	2.071
REST	1.538	40	90	33

- ☐ However some caveats must be addressed in terms of type of source of electricity, type of fuel, energy mix... for a fine-tune approximation

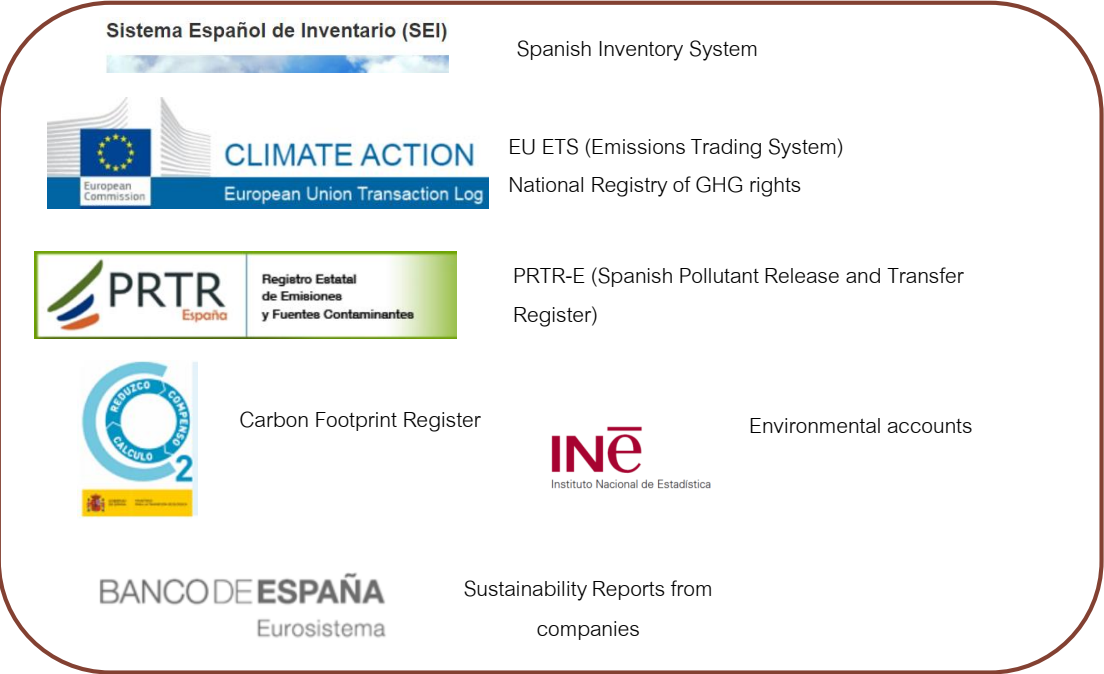
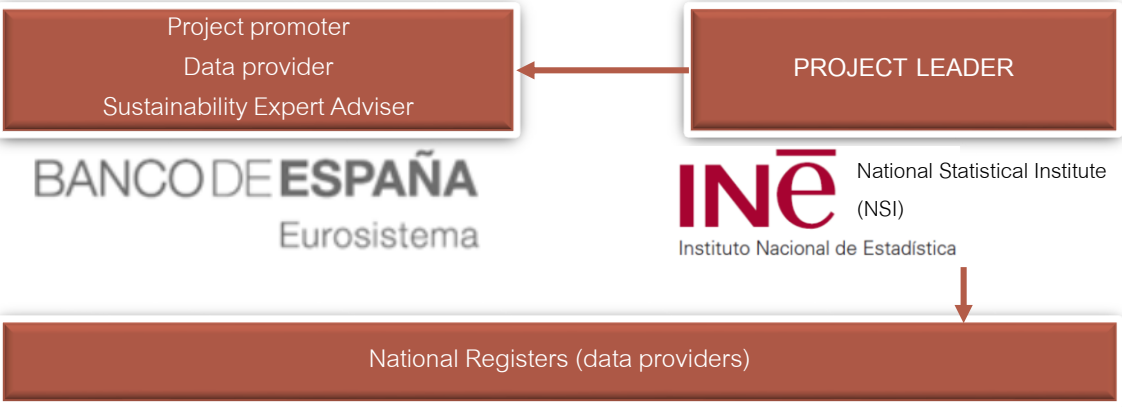
4. ALTERNATIVE MEASURES TO FILL THE DATA GAP ON SMES ESG

4.4 Data-sharing: Public-private collaboration for the creation of a Green Data Space [work in progress]



4. ALTERNATIVE MEASURES TO FILL THE DATA GAP ON SMES ESG

4.5 Data-sharing: Establishing an integrated climate-data repository ¿?



Effort to share all the existing info from GHG in different Spanish institutions



Milestones achieved



- ☐ Technical Note
- ☐ Preliminary taxonomy for the integrated repository

Future work*



- ☐ Solve confidentiality issues
- ☐ Build the architecture for the repository

PRELIMINARY TAXONOMY DEFINED
National Tax Identifier
Internal code of the company within the administrative register
Company name
Year
Variable/indicator (i.e. Scope 1, Energy consumption...)
Value
Unit of measurement (i.e. TnCO2e, MWh...)
Type of indicators (i.e. GHG, Energy, Water)
Data source (i.e. sustainability statements, EU ETS, PRTR...)
Administrative Register that provides the data
Frequency (i.e. annual, monthly...)
Granularity (Industrial complex / company level / Consolidated level...)
Name of the industrial complex (when available)
Geolocalization of the industrial complex (when available)
Confidentiality (yes/no)
Level of use (statistics purpose, publicly available...)
Quality level (high, médium, low...)
Original or transformed data
Commentaries

(*) subject to further discussion and agreements among the institutions collaborating

5. CONCLUSIONS

Main highlights

Sustainability-related information has become a reality

Efforts from regulatory agencies are focused on large companies BUT, what about SMEs?

Although indirect drivers will force them to prepare this information...

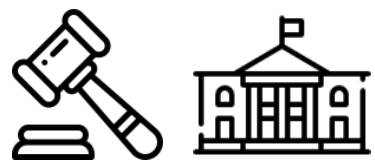
Something needs to be done in the meantime

In order to increase quantity/quality of ESG data for SMEs and necessary for all stakeholders involved

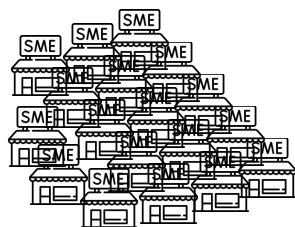
1



2



CSRD



3



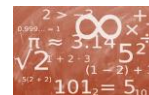
Financial services



Value chain



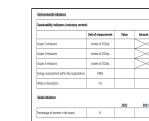
4



Econometric modelling



P&L accounting items



Voluntary reporting



Data-sharing agreements

5



Increase data for better decision making



THANKS FOR YOUR ATTENTION

