



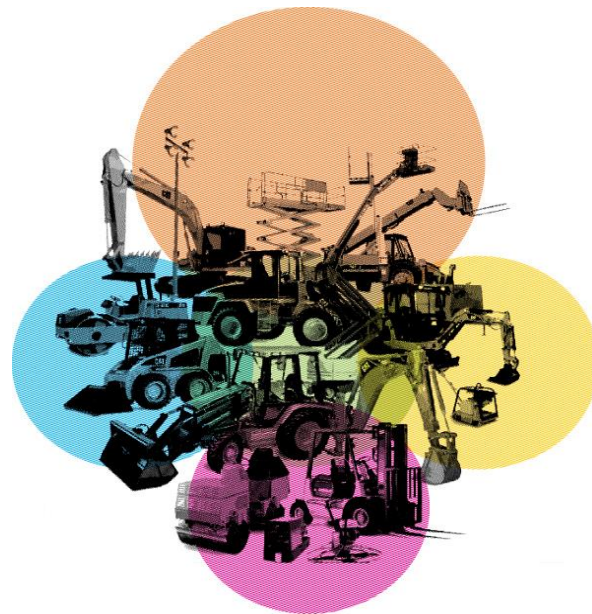
EUROPEAN
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The ERA project : a first step into a carbon journey

Context of the project led by KPMG

Speaker: Paola Eydiou

Organization: KPMG



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ERA Convention 2024

“The future of rental solutions”, Lisbon, May 15th-16th

Agenda

With you today



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1. **Introduction to carbon accounting and GHG Protocol**
2. **ERA carbon reporting guidance objective**
3. **ERA carbon reporting guidance output**

Carbon accounting is a key priority for corporates, and the **GHG Protocol** is a key guidance for assessing GHG emissions



- The GHG Protocol was created by the WBCSD (*World Business Council for Sustainable Development*) and the WRI (*World Resources Institute*) in 1998
 - It establishes **comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions** from private and public sector operations, value chains, and mitigation actions
- ➔ **The GHG Protocol is recommended by European non-financial regulation CSRD (Corporate Sustainability Reporting Directive)**



sectoral and standard tools for calculating GHG emissions



Methodologies for calculating products, projects and companies' GHG emissions



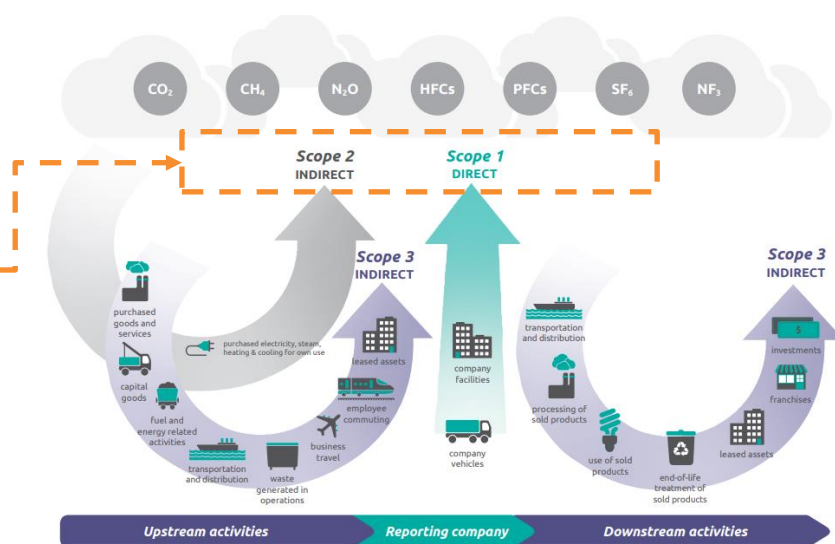
General and specific guidance (agriculture, financial sector, public sector, ...)

It is designed to cover both emissions generated under the **company own operations** (scopes 1 & 2)...

- **SCOPE 1** represents GHG direct emissions linked to **the combustion of fossil fuels of sources controlled or owned by the reporting company** (e.g., emissions linked to the use of company cars or a factory gas furnace)

Note: emissions linked to **refrigerant gases leaks** are also accounted in scope 1

- **SCOPE 2** represents GHG indirect emissions linked to **the consumption of electricity, steam, heating and cooling for own use**

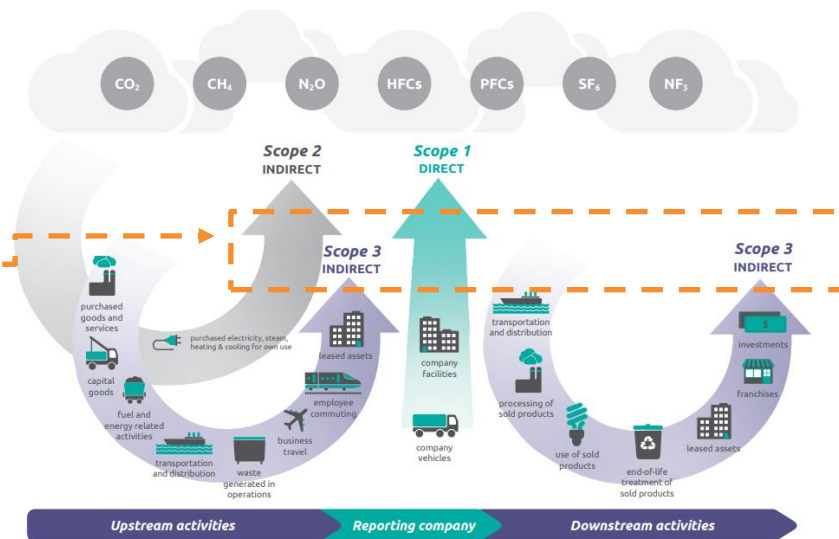


Sources: KPMG research and analysis

... as well as emissions generated in the upstream and downstream operations (scope 3)

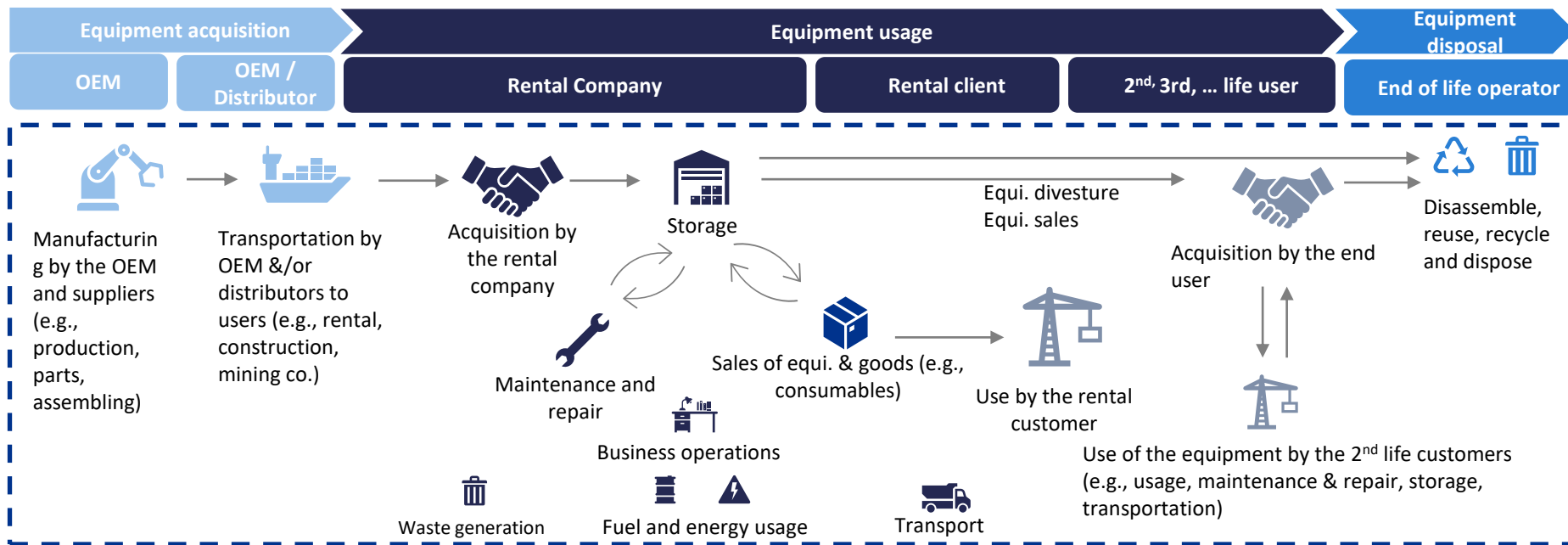
- **Upstream SCOPE 3** represents GHG indirect emissions mainly linked to **purchased goods and services, capital goods use, upstream transportation, waste generated and employees' travels**

- **Downstream SCOPE 3** represents GHG indirect emissions mainly linked to **downstream transportation, use of sold products and end-of life treatment of products**



Sources: KPMG research and analysis

To assess the rental operation carbon footprint, the full life-cycle of the equipment use is considered for the project



Sources: expert interviews and contribution from Projet team, KPMG research and analysis

What is the ERA carbon reporting guidance project and why is it needed? (1/2)

The ERA seeks to establish a **standardized framework** for corporate greenhouse and help **companies** to address their **carbon reporting**. The **ERA sectoral guidance**, tailored for the industry, is answering to **three main objectives**:



01

Build a standardized methodology

with the objectives of **comparing with peers**, **develop best practices** and **harmonize the reporting methodology**

02

Prioritize and concentrate on main categories

with a **practical and high standard approach** for scope 3 categories that need more clarity on reporting

03

Answer to EU obligation

by developing a credible methodology and get aligned with the **CSRD requirement**

What is the ERA carbon reporting guidance project and why is it needed? (2/2)

The ERA database will allow the industry to:



Database



01

Emphasize on most emissive operations

Provide the industry with **emissions averages** (when no data is available) to be able to **address clients' requirement** regarding equipment emission during use (e.g., jobsite)

02

Data from the industry and for the industry

Provides a database based on **industry data from OEM** and **rental companies**

Olivier Colleau and Douglas McLuckie 's presentation

The sectoral guidance is designed to help companies with their carbon reporting, regardless of their maturity on carbon accounting

Illustrative examples

Scope 1 | Calculation (1/3)

Scope 1 | Direct emissions | Stationary emissions

1 Consumption methodology

2 DATA NEEDED

- Quantity of fossil fuel / biofuel consumed - Natural gas (liters, kWh, GJ, m³), Coal (kWh, liters), Other fuels, Biofuel consumption (liters/GJ/kg)
- OR
- Estimation from building's occupancy square meters (m²)

3 DATA COLLECTION

- Quantity of fuel consumed within a year can be asked from:
 - Directly measured from meters
 - Suppliers (bill)
 - Facility or office manager (bill)
 - Accounting (average gas price is needed to convert priority spending into quantity consumed)
 - Facility manager and average natural gas consumption can be found in literature (e.g. DEFRA, EPA.gov)

4 EMISSION FACTORS

- Natural gas EF (kgCO₂/liter or kgCO₂/kWh)
- Coal EF (kgCO₂/kWh or kgCO₂/kg)
- Biofuel EF (kgCO₂/liter) (see DEFRA)
- Other fuels (kgCO₂/kg)
- Etc.

5 EMISSION FACTORS DATABASES

- AJQME (France)
- EPA (US)
- ECCC (Canada)
- DEFRA (UK)
- IEA (All countries)
- Umwelt Bundesamt (Germany)
- Specific country-based public database

6 Formula

$$\text{natural gas consumed (liters)} \times \text{EF (kgCO}_2\text{/liter)}$$

$$\text{Biofuel consumption (liters/GJ/kg)} \times \text{EF (kgCO}_2\text{/liter)}$$

$$\text{Building's occupancy square meters per country (M2)} \times \text{average emission factor (kgCO}_2\text{/M2)} \times \text{natural gas EF (kgCO}_2\text{/liter)}$$

Comments

- The same approach applies to each scope 1, 2 and 3 categories:
 - A **first page** describing the **category** (e.g., Scope 1), what **emissions** are to be **included and excluded** (if necessary), and the associated **calculation methodologies** possibilities

The following pages describing **each methodology** with:

- A brief **explanation** of the methodology (e.g., precise or estimated method)
- What **type of data** is required **to be collected** (e.g., energy consumption kwh, liters, weight, units)
- Where that **data can be collected** (e.g., from energy provider, facility manager, accounting extraction)
- What is the **emission factor associated** (to transform a data into a co2e emission)
- From **which database** it can be extracted
- The **calculation formulas** that can be applied to calculate the emissions

The **database** will provide **industry average metrics** on equipment regarding the **production and use phase**

Illustrative examples

Metrics database – database structure

Related GHG Categories	Metrics for carbon reporting			
	Average upstream emissions (Cradle-to-gate)	Average usage emissions	Average consumption per operating hour	Average engine operating hours over a rental day*
	KgCO ₂ e / Kg	KgCO ₂ e / operating hour	litres or Kwh / operating hour	Engine operating hours / rental day
3.2 Capital goods				
		3.13 Downstream leased assets		
		3.11 Use of sold products		

1

2

3

4

Comments

- The database will be based on **industry average**, thus can be used as **fill in gaps**, when no other data is available
- The database will provide **22 categories of equipment** (from earthmoving to smaller tools for gardening and landscaping) divided into more than **100 subcategories**
- The metrics that will be provided for each equipment are:
 1. Average upstream **production emissions** (kgCO₂e/kg of equipment)
 2. Average **usage emissions** (kgCO₂e / operating hour)
 3. Average **consumption per operating hour** (in litre or kWh)
 4. Average **engine operating hours over a rental day** “*engine on – engine off*” (engine operating hours / rental day)

Each category will include the first five most representative equipment

		N°	Equipment
Construction machines	Earthmoving	1	Dumpers
		2	Excavators > 10t
		3	Mini & Midi excavators < 10 t
		4	Skid steers & wheel loaders
	Road-making equipment	5	Rollers
		6	Compactors
Material handling & Access	Material handling	7	Telehandlers
		8	Forklifts
	Powered access	9	Scissor lifts
		10	Telescopic boom lifts
		11	Articulated boom lifts
		12	Truck mounted boom lifts

		N°	Equipment
Power generation, pumps and climate control	Electricity supply	13	Generators
	Compressors	14	Compressors
	Pumps	15	Pumps
	Climate control	16	Air conditioners, air coolers and heating systems
	Lighting	17	Lighting
Welfare facilities	Accommodation and office containers	18	Temporary accommodation
Tools and general equipment (energy consuming)	General, gardening and landscaping tools	19	Drillers, breakers, saws, scissors
		20	Gardening and landscaping
Transportation	Vehicles and transportation equipment	21	Rented vehicles (3.5 tonnes)

Next steps of the project

FINALIZE

Finalization of the guidance, definition of the values to be used, and validation of the database

RECOMMEND

First restitution of the guidance and database **by the end of May 2024**

RESTITUTE

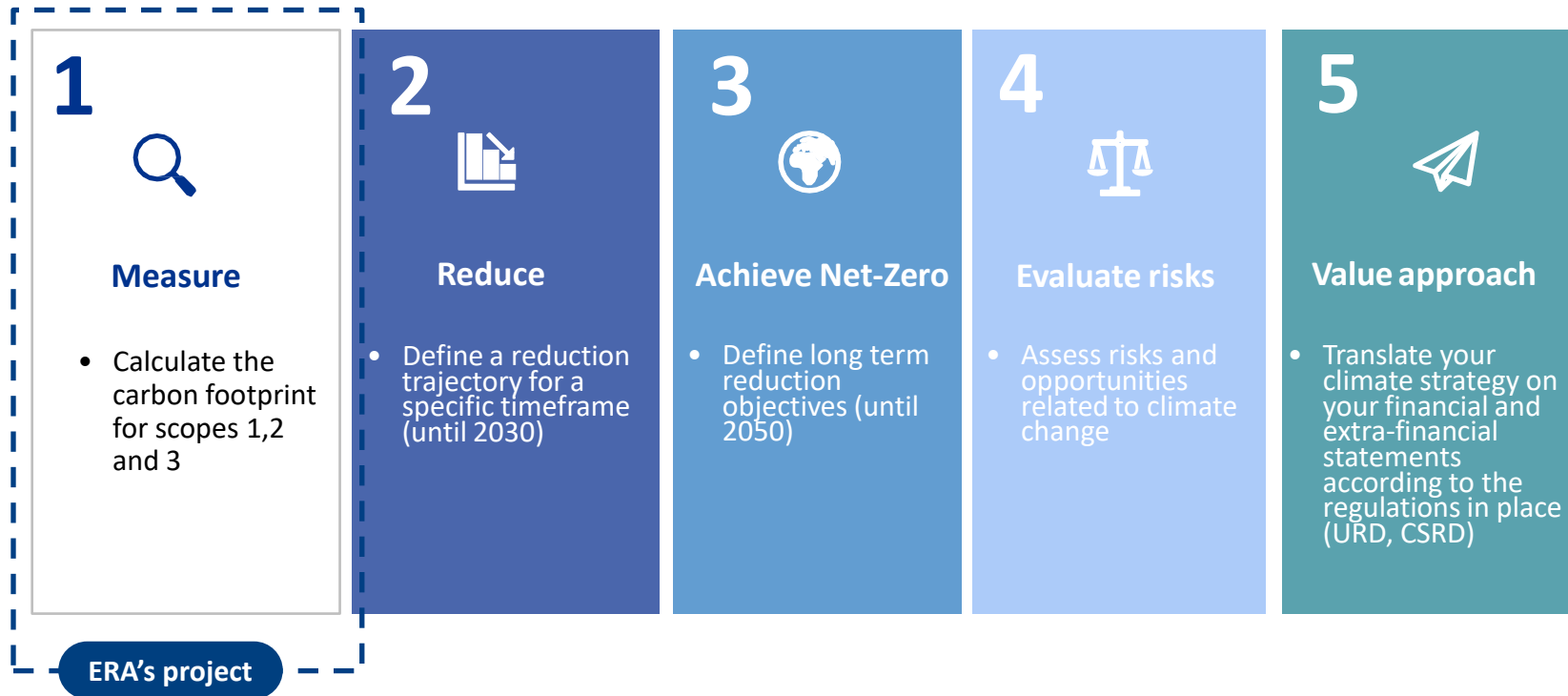
Restitution of the final guidance **by the end of June 2024**



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Equipment rental
industry guidance

The ERA project is a **first step** to help companies going further within their **climate journey**





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