

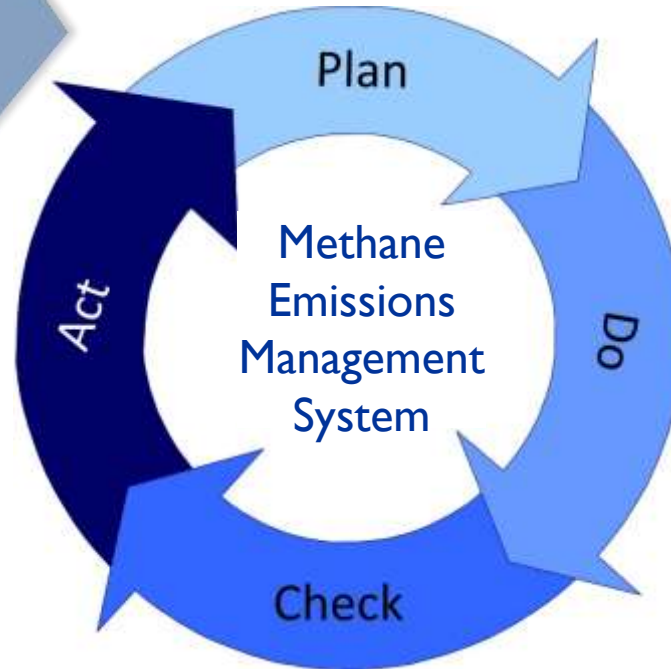
# **Guidelines for methane target setting**

Jose Miguel TUDELA



# I. Why is important to set a target?

## INTERNAL APPROACH

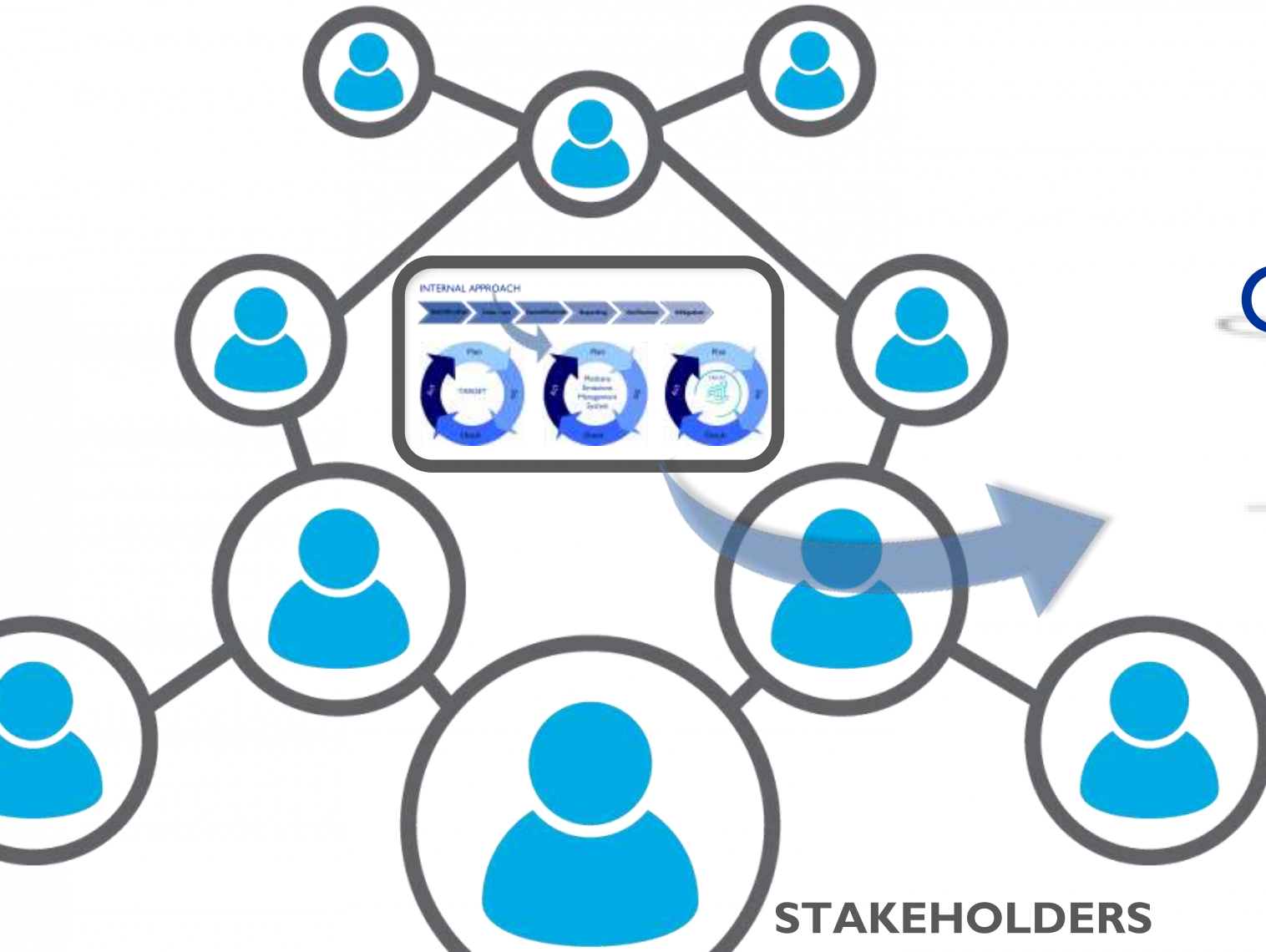


# I. Why is important to set a target?

EXTERNAL APPROACH

COMMITMENT

TRANSPARENCY



STAKEHOLDERS

# I. Why is important to set a target?



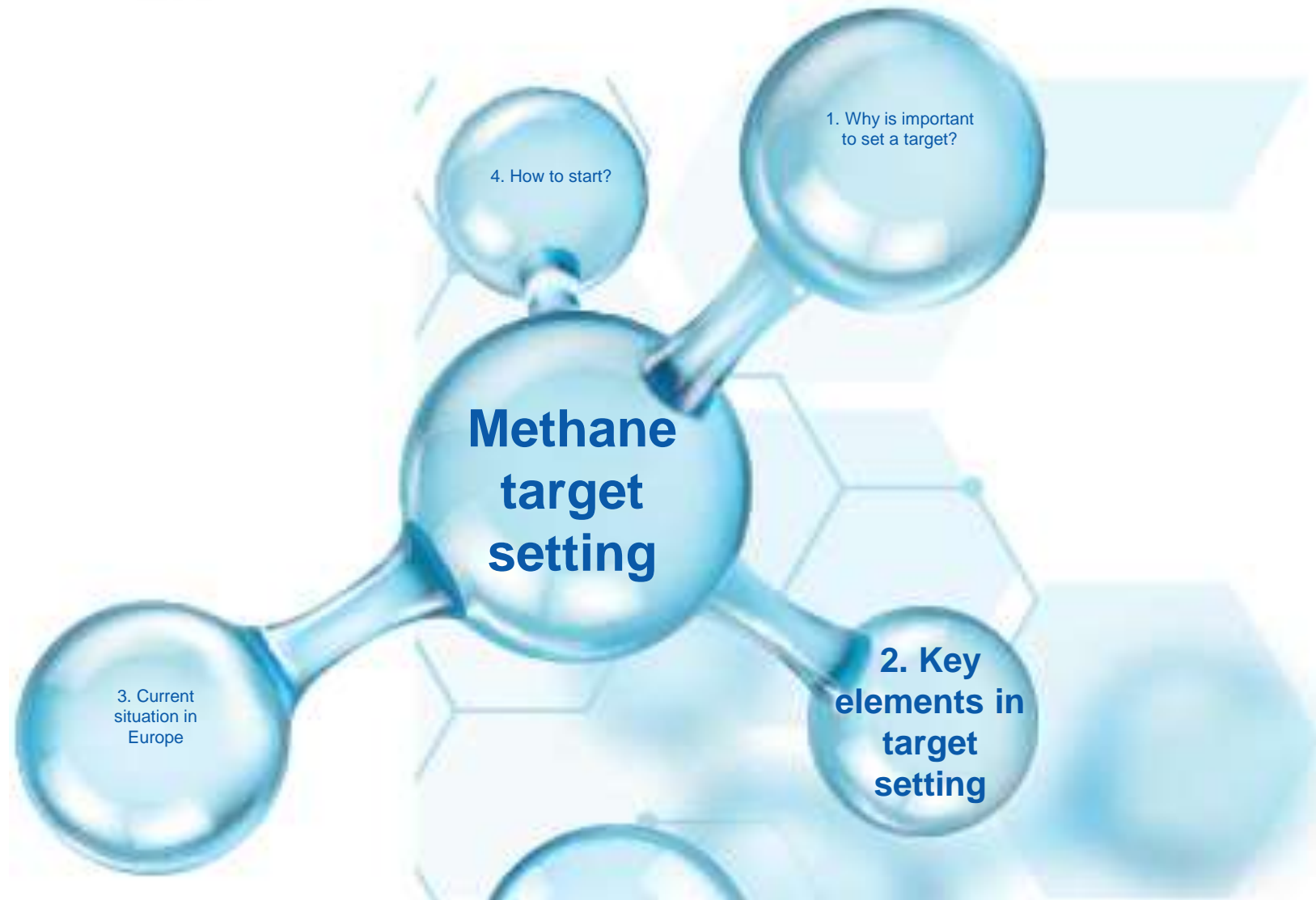
INTERNAL APPROACH

EXTERNAL APPROACH

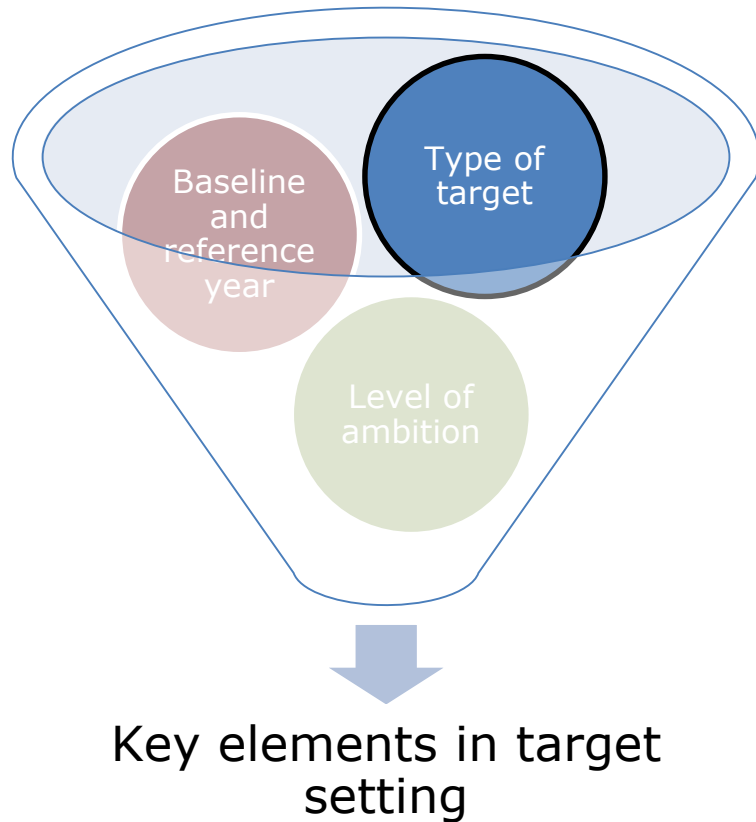


## Why Set a CH<sub>4</sub> Target?





# 2. Key elements in target setting



### Absolute vs intensity target

An **absolute** target describes a reduction in actual emissions in a future year when compared to a base year.

**Intensity** target describes a future reduction in emissions that have been **normalized** to a business metric when compared to the same normalized business metric emissions in a base year.

It is important to well-define the relationship of scale between the absolute quantities and the **normalization factors**. In general, when using intensity targets, organizations should define the target in ways that align with business decision making and in ways that allow clearer communication of performance to stakeholders.

### GHG vs Methane Targets

In general, **GHG targets are set in CO<sub>2</sub>e** and include all GHGs derived from an organization activities covered by the kyoto:

- CO<sub>2</sub>
- CH<sub>4</sub>
- N<sub>2</sub>O
- HFCs
- PFCs
- SF<sub>6</sub>
- NF<sub>3</sub>

GHG targets can relate to Scope 1, Scope 2 and/or Scope 3 emissions in full or in part.

**Methane specific targets** can be set individually apart from a GHG target and contribute to achieve GHG emissions targets. Methane emissions are expressed either in tCH<sub>4</sub> or normalized in tCO<sub>2eq</sub>.

Investors are increasingly asking for specific methane targets in the O&G sector, so it is **considered a Best Practice** to set methane specific targets. It is **highly advised that companies set specific methane targets** together with GHG emissions targets.

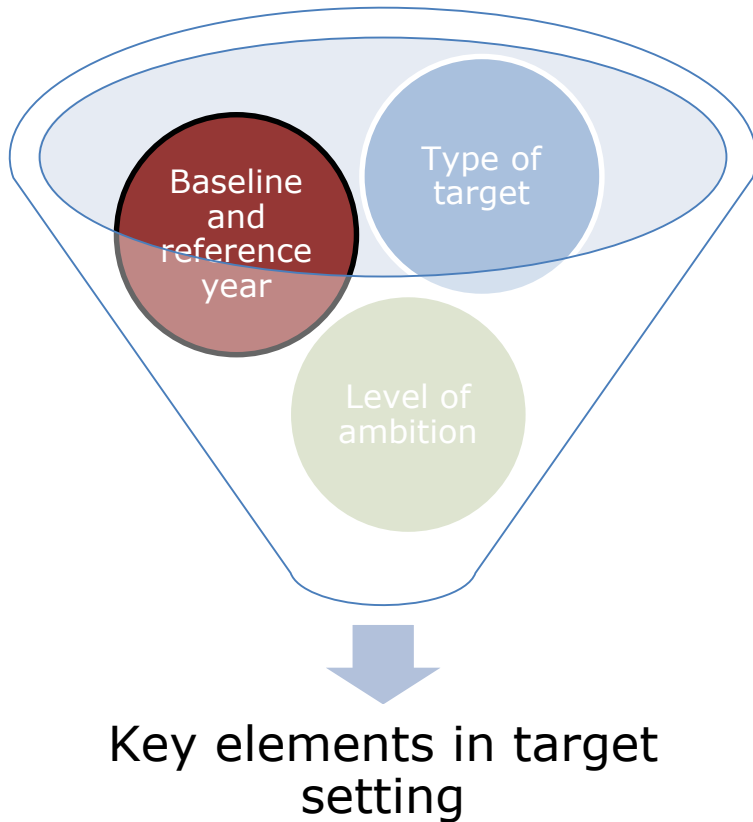


Reduce **GHG emissions** of 40 % by 2030 compared to 2016 levels.



Reduce the collective average **methane intensity** of their aggregated upstream O&G operations to below 0.25% by 2025 (from a baseline of 0.32 % in 2017), with an ambition to achieve a level of 0.2%.

# 2. Key elements in target setting



**Baseline year**

The **base year** is the year against which companies compare their reduction target.

Organizations can have:

- Fixed target base year
- Year-on-year rolling target
- Target based on average emissions over a period of time (e.g. 5-year average).

**Reference year**

**Target year** defines the target completion date and depends on the length of the commitment period.

Organization can have:

- A single year commitment period.
- Multi-year commitment period.

The target completion date determines whether the target is set for the short, medium or long term.

**Best Practices** for GHG targets include the setting of at least two targets to cover both the medium (5-15 years) and long time frames (>15 years).

For Methane Targets, International initiatives such as the Global Methane Alliance refers to 2025 and 2030.

Generally, long-term targets depend on uncertain future developments. Adding intermediate targets and/or milestones increases the credibility of these long-term commitments by giving investors more clarity on how this vision is going to impact the short-term.

Source: GHG Protocol

**gasunie**

*Up to 2030 annually an average of 4% reduction in GHG emissions compared with the emissions in the three previous years.*

**Naturgy**

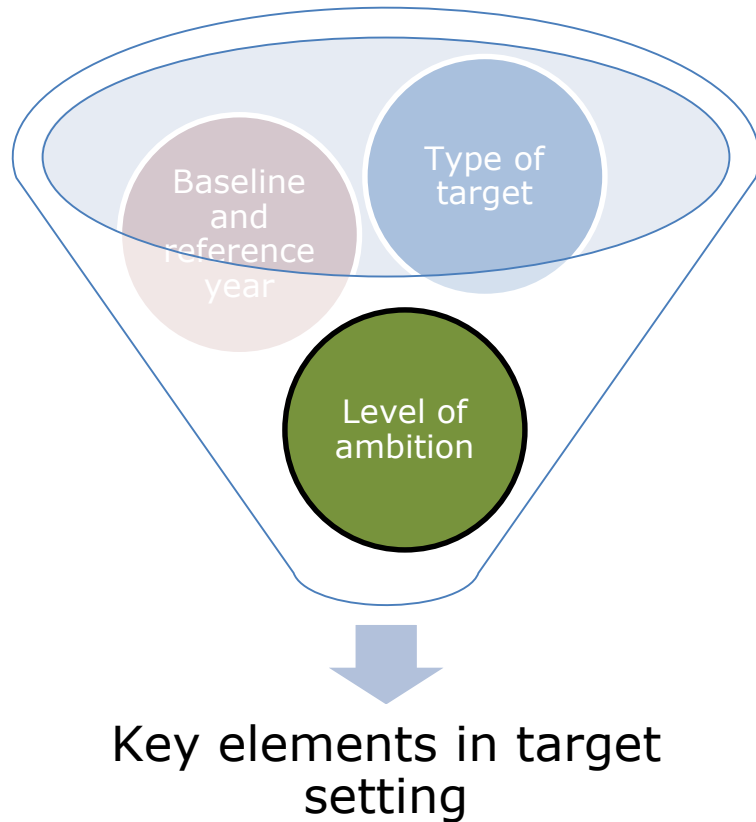
*Reduce the average absolute emissions, in Scope 1 and 2, by 17.8 % for 2013-2030 compared to the 2012 base year.*

**enagas**

*Reducing GHG emissions an average of 5% in the period 2019-2021 compared to 2018.*



# 2. Key elements in target setting



### Level of ambition

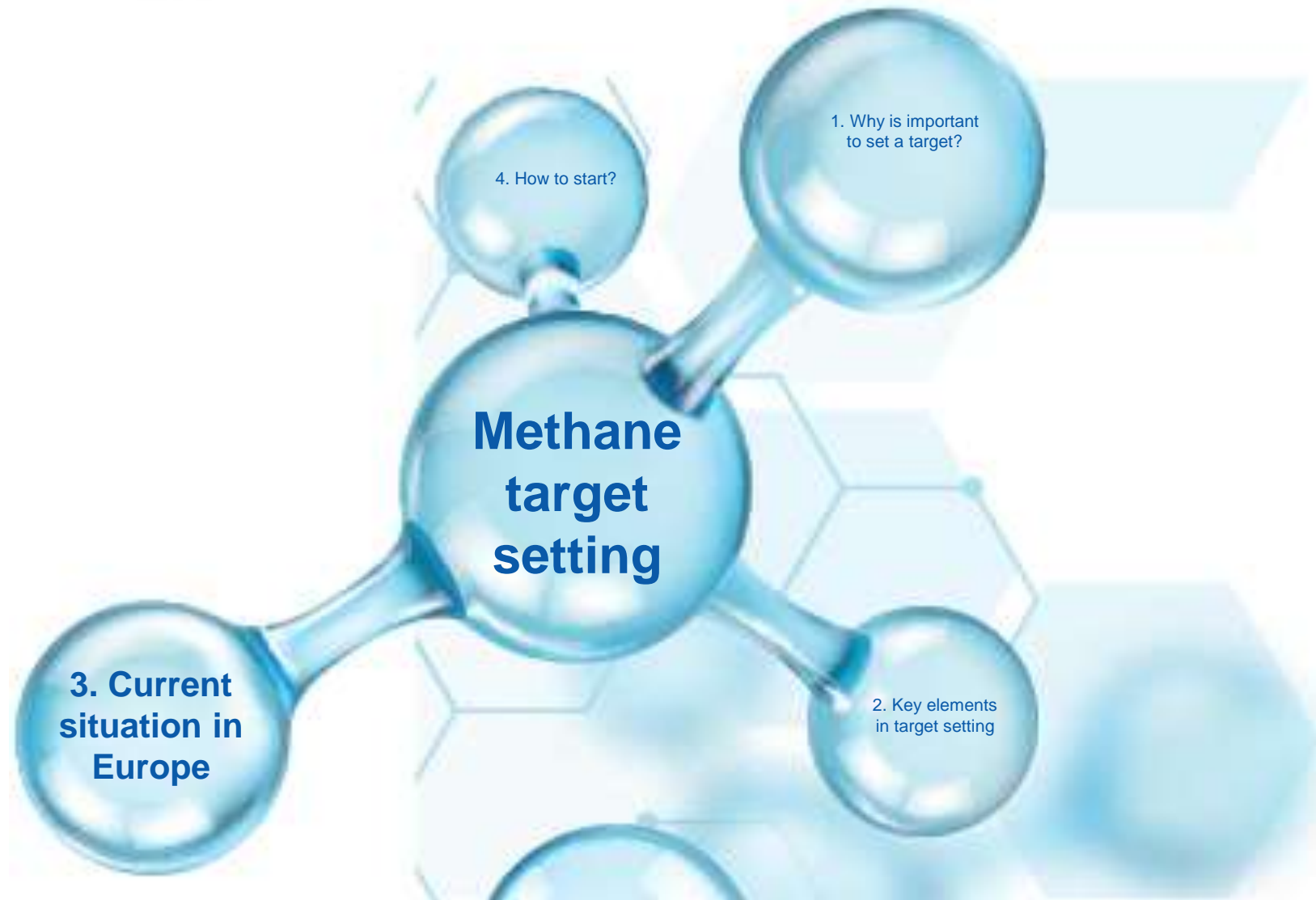
Main factors to determine the **level of ambition** include:

- Methane reduction potential based on the implementation of BATs or improvement of operational activities.
- Drivers affecting methane emissions, this is, the relationship between methane emissions and business metrics, investment and growth strategy.
- International/national initiatives with a specific level of ambition (eg. MGA ambition level: reduce by 45% by 2025 and 60%-70% by 2030).
- Alignment with other companies (benchmarking of methane targets with similar organizations).
- Science based targets scenarios to ensure that targets are in line with the IPPCC scenario toward Paris agreement goals.

Generally, organizations that have not previously invested in energy and other GHG reductions should be capable of meeting more aggressive reduction levels because they would have more cost-effective reduction opportunities.



*Reduce methane-emission 50% by 2025 (ref-year 2017).*

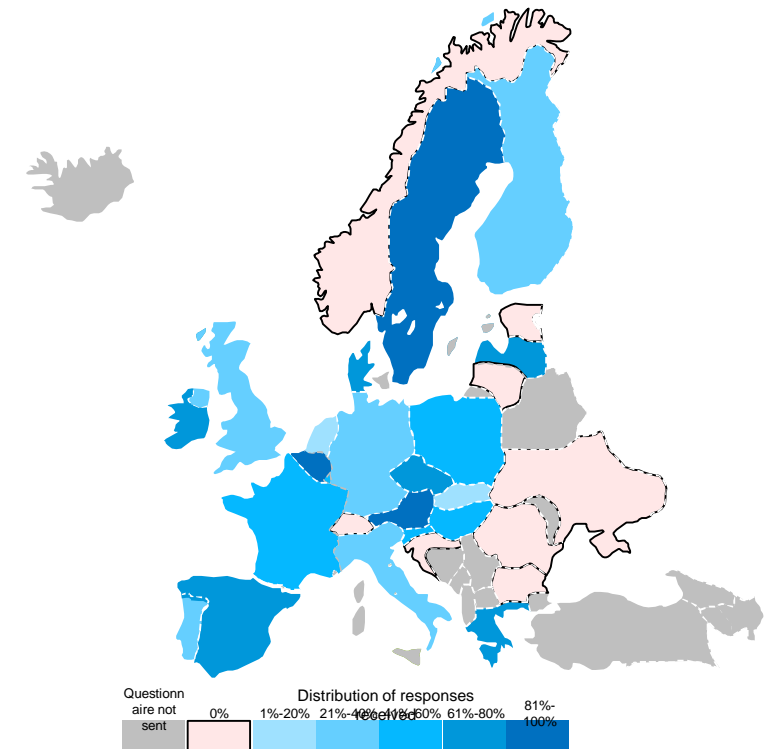


# 3. Current situation in Europe

A short analysis was performed two years ago (Nov. – 2019) by GIE & Marcogaz: 40 companies covering all parts of the gas value chain were considered (results in the following slides).

During these 2 years, the initiative OGMP 2.0 and the increase on the level of ambition of the EU, have reinforced the necessity of setting ME targets.

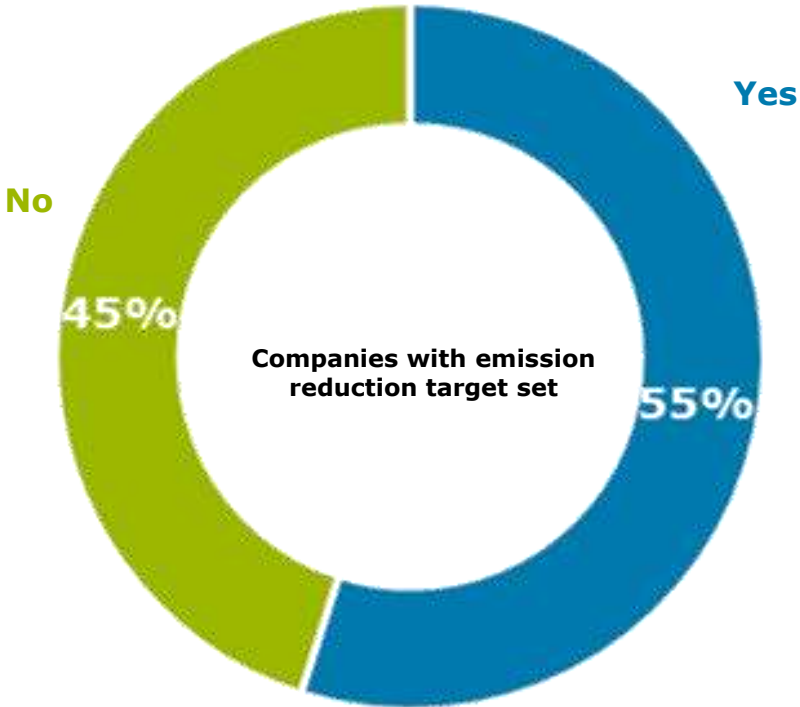
On going initiative: MARCOGAZ is going to analyse the possibility to establish a European methane emissions reduction target covering mid & downstream. Specific Questionnaire has been sent



# 3. Current situation in Europe

Results of the 2019 Study

## European companies with emission reduction target



**55%** of the Companies have already set Emission Reduction Targets (GHG or methane).



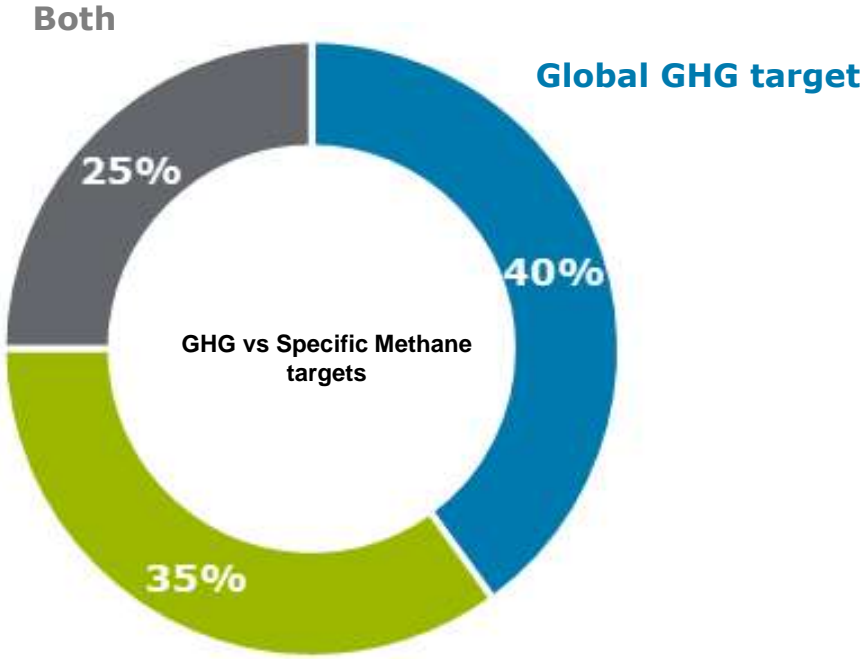
**33%** of companies with no targets are willing to implement them

# 3. Current situation in Europe

Results of the 2019 Study

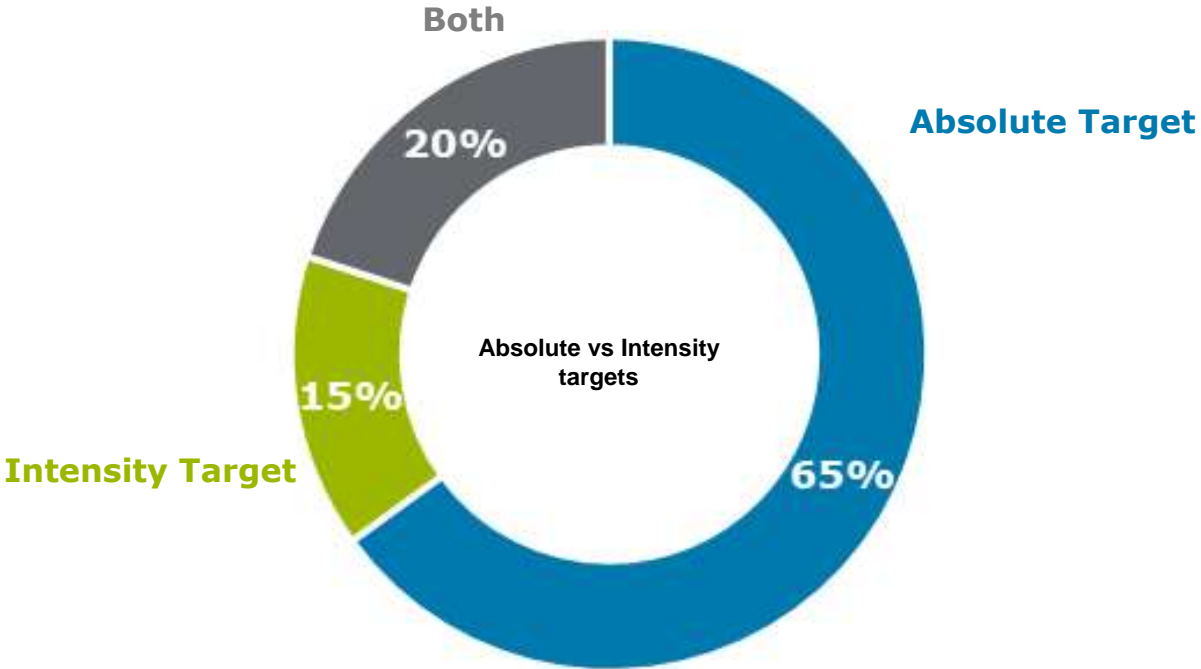
## TYPE OF TARGET

### GHG vs Methane Targets



Specific Methane Target

### Absolute vs intensity target



(\*)32% of companies with more than 1 target set.

# 3. Current situation in Europe

Results of the 2019 Study

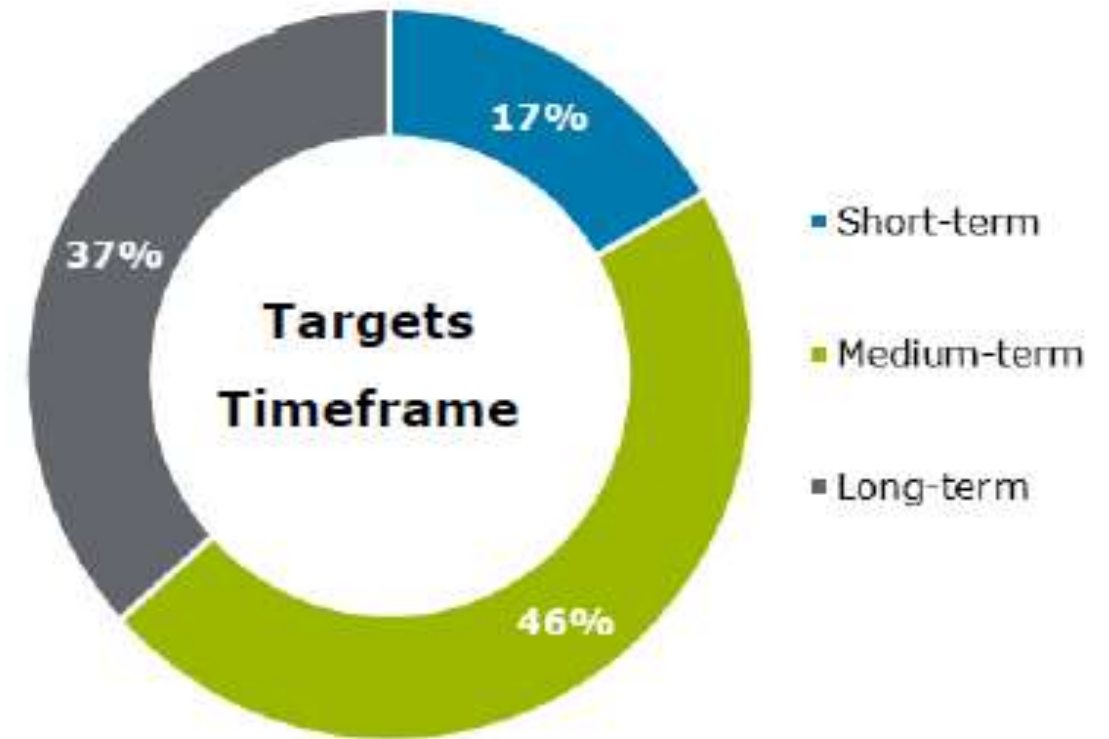
## BASELINE AND REFERENCE YEAR

### Baseline Year

- 2018 is the "most popular" base year among targets reported by companies.

### Reference Year

- 2030 is the "most popular" target year among targets reported by companies.
- Only one company has established a target beyond 2030.



(\*) Timeframe (years): Short-term:  $0 \leq 3$  years; Medium-term:  $> 3 \leq 10$  years; Long-term:  $> 10$  years

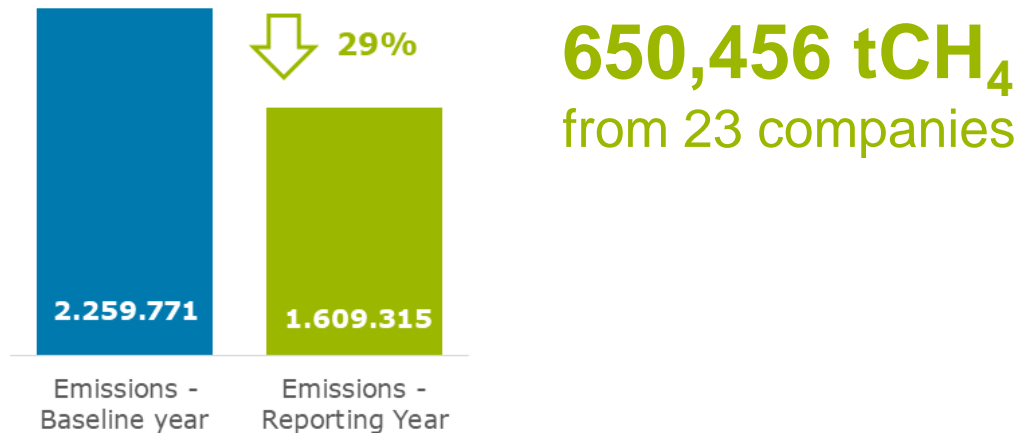
# 3. Current situation in Europe

Results of the 2019 Study

## LEVEL OF AMBITION

### How much has the gas sector reduced to date?

Methane emission reduction already achieved (tCH<sub>4</sub>):



(\*) Emissions in baseline year represents 88% of European Methane emissions considered by Methane Tracker (2,582 ktCH<sub>4</sub>).

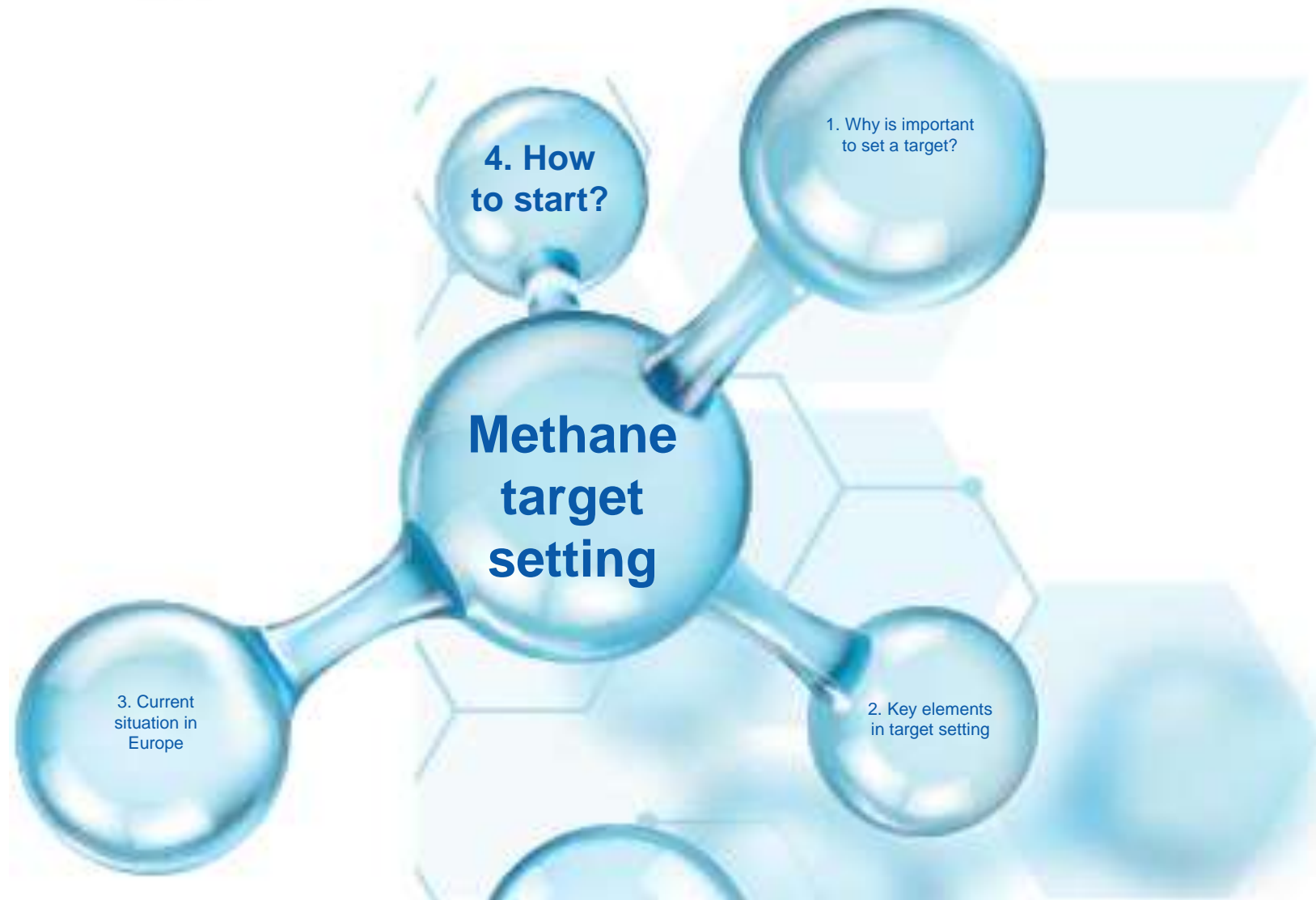
### What is the level of ambition for the future?

#### GHG

- Most of the **GHG absolute targets** have been set for 2020-2040 with a **level of ambition between -5% and -60%** (compared to baseline years between 2012-2018).

#### Methane

- Most of the **methane absolute targets** have been set for 2020-2025 with a **level of ambition between -7% and -66%** (compared to baseline years between 2014-2018)
- Only **two companies** have established **methane reduction targets for 2030** (reduction between 60% - 80% compared to 2014 and 2013).

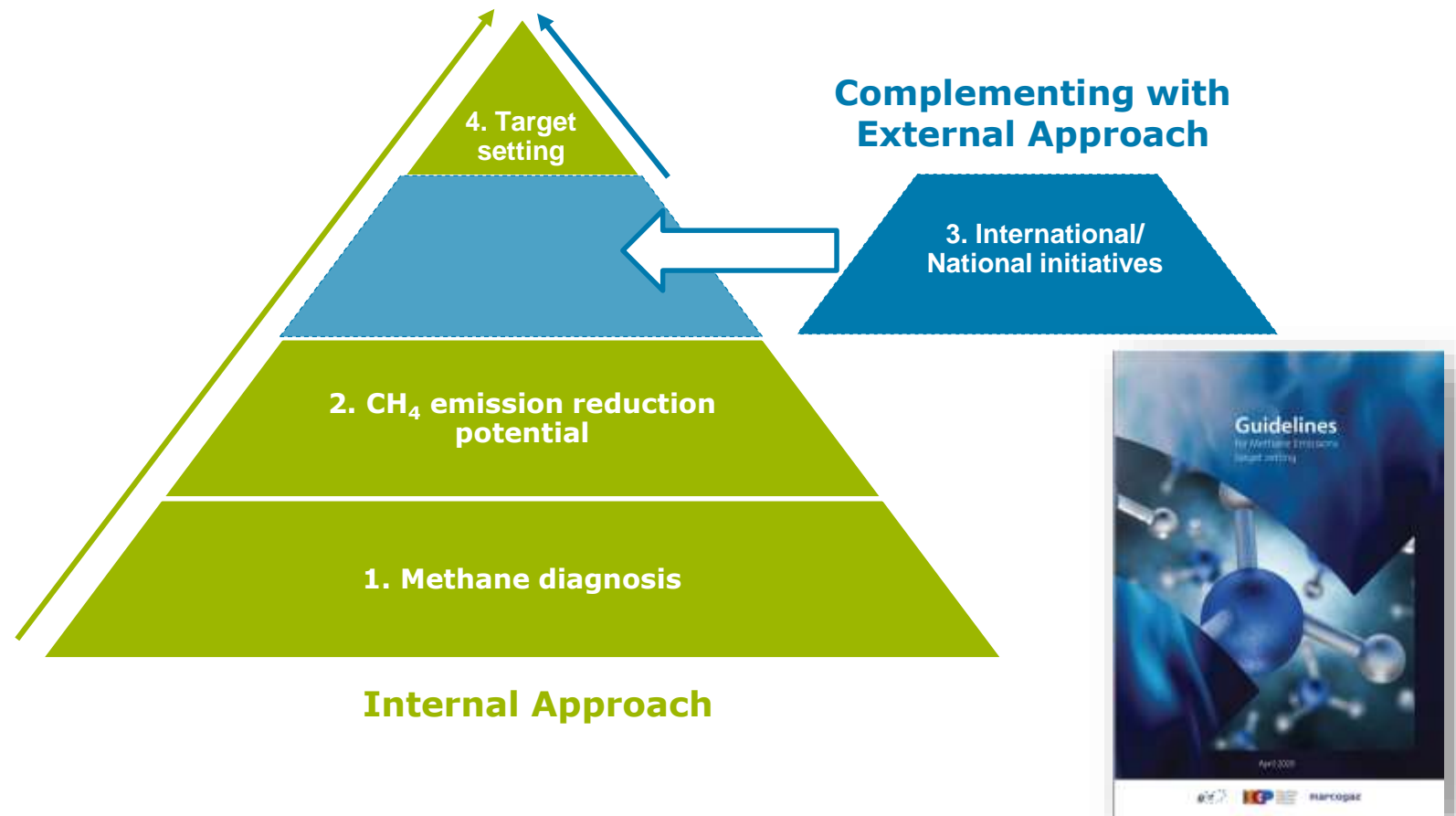




# 4. How to start?

## A guideline in target setting

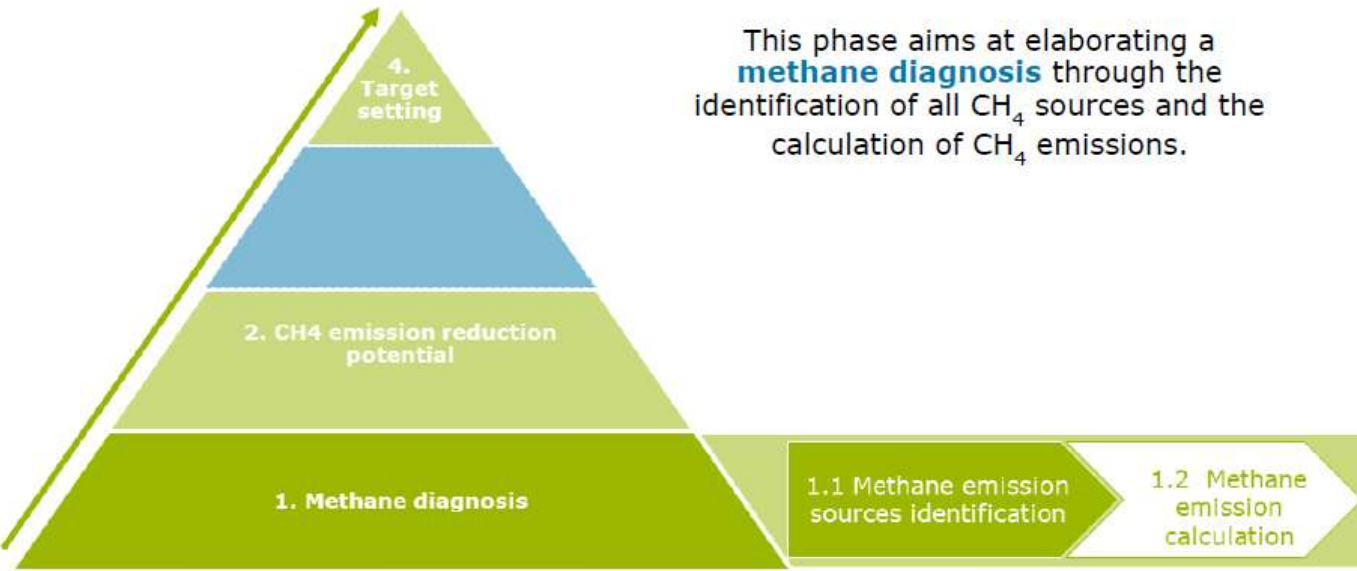
The two most common methodologies used for CH<sub>4</sub> target setting are considering only an Internal Approach and adding an External Approach.



The document “**Guidelines for Methane target setting**” was published in April 2020 ([link](#)).

# 4. A guideline in target setting

## I. Methane diagnosis



This phase aims at elaborating a **methane diagnosis** through the identification of all CH<sub>4</sub> sources and the calculation of CH<sub>4</sub> emissions.

Full content of each phase is available [here](#).

Full content of each phase is available [here](#).

### 1. 1 Methane emission sources identification:



#### Objective:

Identification of all methane emissions sources.



#### Tasks

##### a) Setting organization boundaries

Companies should select an approach for consolidating methane emissions and select those businesses and operations for the purpose of accounting and reporting CH<sub>4</sub> emissions (equity share or operational control approach).

##### b) Setting operational boundaries<sup>27</sup>

After determining the organizational boundaries, companies should identify CH<sub>4</sub> emissions associated with their operations. To this end, operational activities<sup>28</sup> as well as equipment<sup>29</sup> and components<sup>30</sup> are analyzed and classified as follows:

- Incomplete combustion from burning of fuels as well as flaring.
- Fugitive emissions from leaking equipment and components.
- Vents from operating activities, maintenance/repairs works, emergency situations, etc.

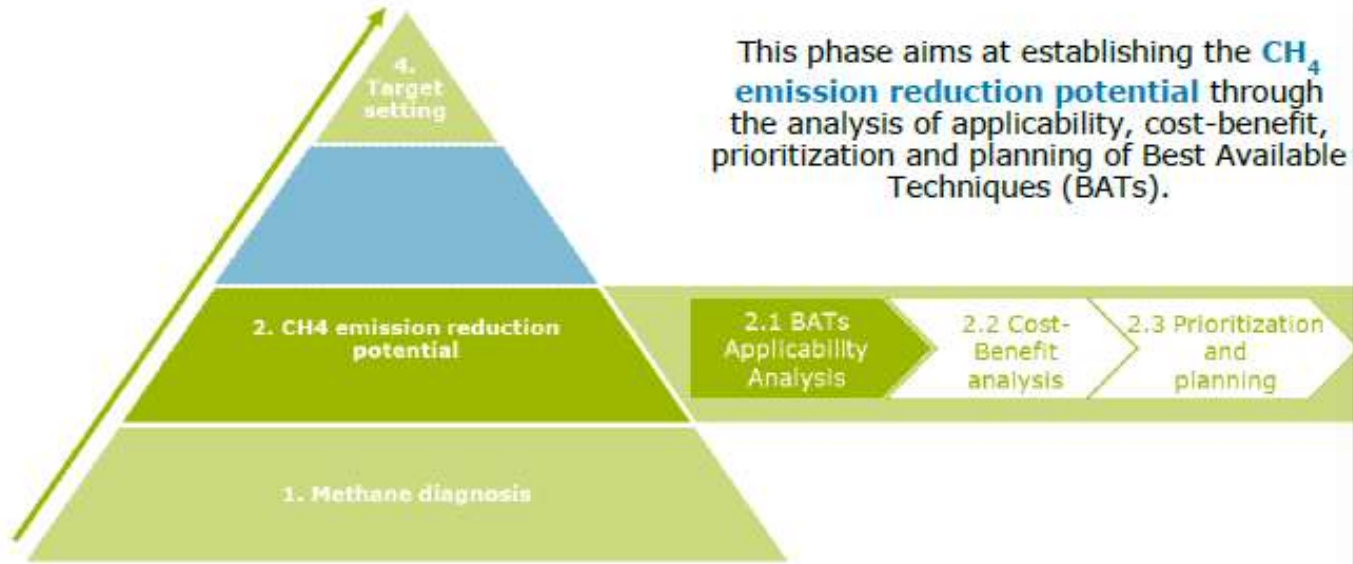


#### Output:

Inventory of all CH<sub>4</sub> emission sources linked to the organization's activities.

# 4. A guideline in target setting

## 2. CH<sub>4</sub> emission reduction potential



Full content of each phase is available [here](#).

### 2.1 BATs Applicability Analysis:



#### Objective:

Analyze whether the BATs are applicable to the organization's business considering the facilities owned and operated by the organization. This task only seeks to understand whether BATs apply to the facilities; a further analysis is then carried out in task 2.2 *Cost-Benefit Analysis* to assess if BATs can be technically and economically implemented.



#### Tasks

##### a) Identification of BATs

The company should identify what BATs for methane emissions reduction can be applied in their business operations. To this end, a benchmark analysis should be carried out considering BATs implemented by gas companies as well as official publications from international/national organisms or initiatives (e.g. GIE/MARCOGAZ<sup>35</sup>, the Methane Guiding Principles<sup>36</sup>, OGMP technical guidance documents<sup>37</sup>, etc.).

##### b) Applicability Analysis

Once BATs have been identified, companies should analyze whether they are applicable to their segment of the gas chain, facilities and/or operations. To this end, companies will analyze if BATs can be implemented in the facilities (e.g. improvements in pneumatic valve only if the organization use this kind of valves).



#### Output:

List of BATs applicable to an organization facilities and operations.

# 4. A guideline in target setting

## 3. External approach



This phase would only apply to companies which have follow the **Internal Approach** and want to complement the target setting process with an External Approach to ensure consistency and methodology alignment with international/national initiatives.

### 3.1 Identification of international/National initiatives:



#### Objective:

Include in the target setting approach the analysis of external initiatives related to CH<sub>4</sub> emission reduction to ensure that target is aligned with international/national standards.



#### Tasks

##### a) Methane reduction target benchmark

Companies should conduct a benchmark to identify what are the current and upcoming trends in CH<sub>4</sub> emissions reduction. Benchmark should include:

1. Type of target including intensity vs absolute as well as GHG vs methane targets.
2. Base year and target year to determine the baseline and well as the time horizon.
3. Level of ambition to consequently plan the implementation of BATs.

This analysis should include public and private sector along the whole gas value chain. In addition, the company should analyze its GHG emission reduction strategy to align the CH<sub>4</sub> reduction pathway. This analysis will allow to adjust the methane reduction pathway as well as the global methane target. To be in line with external initiatives, additional BATs might have to be considered to reach the level of ambition set by legislation or other initiatives.



#### Output:

Alignment of methane target with external initiatives for CH<sub>4</sub> emission reduction.

# 4. A guideline in target setting

## 4. Target setting



Full content of each phase is available [here](#).

### 4.2 Target approval:



#### Objective:

Approval of total CH<sub>4</sub> reduction target and methane reduction pathway by obtaining senior management commitment and transparency



#### Tasks

##### a) Target approval

Total CH<sub>4</sub> emissions reduction target as well as CH<sub>4</sub> reduction pathway should be corporate approved to guarantee that technical and economic resources are available to achieve targets.

After approval process, companies should consider sharing the commitment in external and public means (e.g. website, Annual Reports, press release) and internally to ensure that they are clear at all levels.

##### b) Target monitoring

Organizations should monitor and track performance against targets and set corrective measures as necessary. To this end, regular monitoring is recommended.

In addition, annual reporting and verification is recommended.



#### Output:

Total CH<sub>4</sub> target and CH<sub>4</sub> reduction pathway approved.