

# GUIDE to Natural Refrigerants Training in Europe

 **ATMO**  
sphere  
Business Case for  
Natural Refrigerants  

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**Alvaro de Ona, Group COO, shecco**

# GUIDE TO NATURAL REFRIGERANTS TRAINING: PROJECT RATIONALE

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A **perceived lack of training** among technicians and installers is often cited as a **barrier to wider uptake** of natural refrigerants-based HVAC&R technologies.

Reasons for lack of awareness for available training

- there is not a single body coordinating the training activities on natural refrigerants.
- EU legislation does not mandate the training providers to report about their activities on natural refrigerant training and number of people trained
- National authorities do not get a good picture about the availability of natural refrigerant training in their countries.

- To show that natural refrigerant training is in fact readily available for those who need it
- To provide an overview of the current market situation of training for natural refrigerants and its future outlook
- To consolidate a list/database of institutions that offer training

**GUIDE TO NATURAL REFRIGERANTS  
TRAINING IN EUROPE 2017:  
MAIN FINDINGS**

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The Guide demonstrates that **training is readily available**.

Analyses survey responses and opinions from over **340 participants** on a range of topics:

- Major trends in training on CO<sub>2</sub>, HC & NH<sub>3</sub> in Europe.
- Figures for participation in training courses and growth prospects.
- Analysis of barriers and drivers of natural refrigerants training in Europe.
- Comparative analysis of supply and demand for training in Europe.

Provides a Directory of natural refrigerants training currently on offer in Europe.

- List of almost 200 training providers located throughout Europe, according to needs.

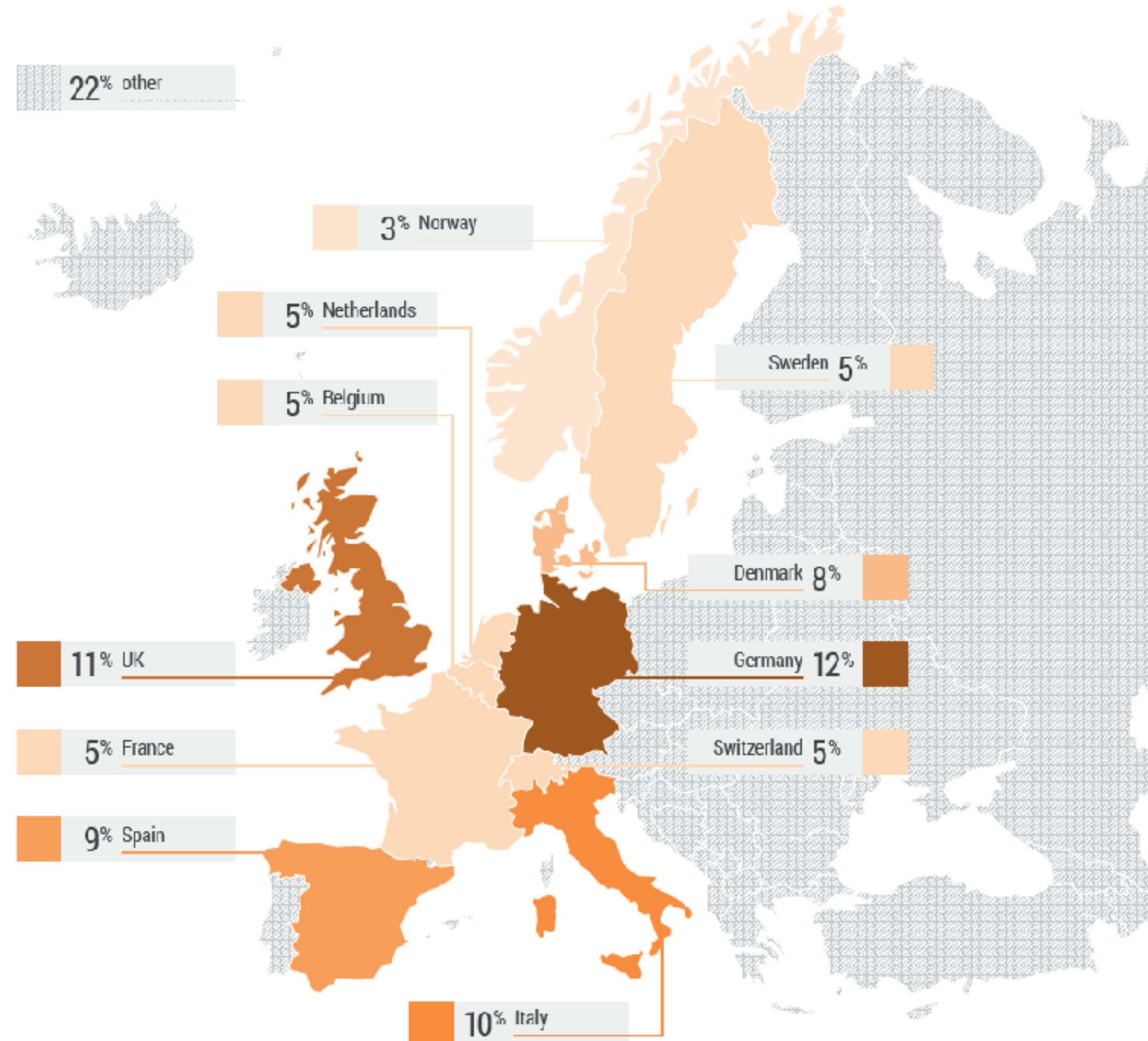


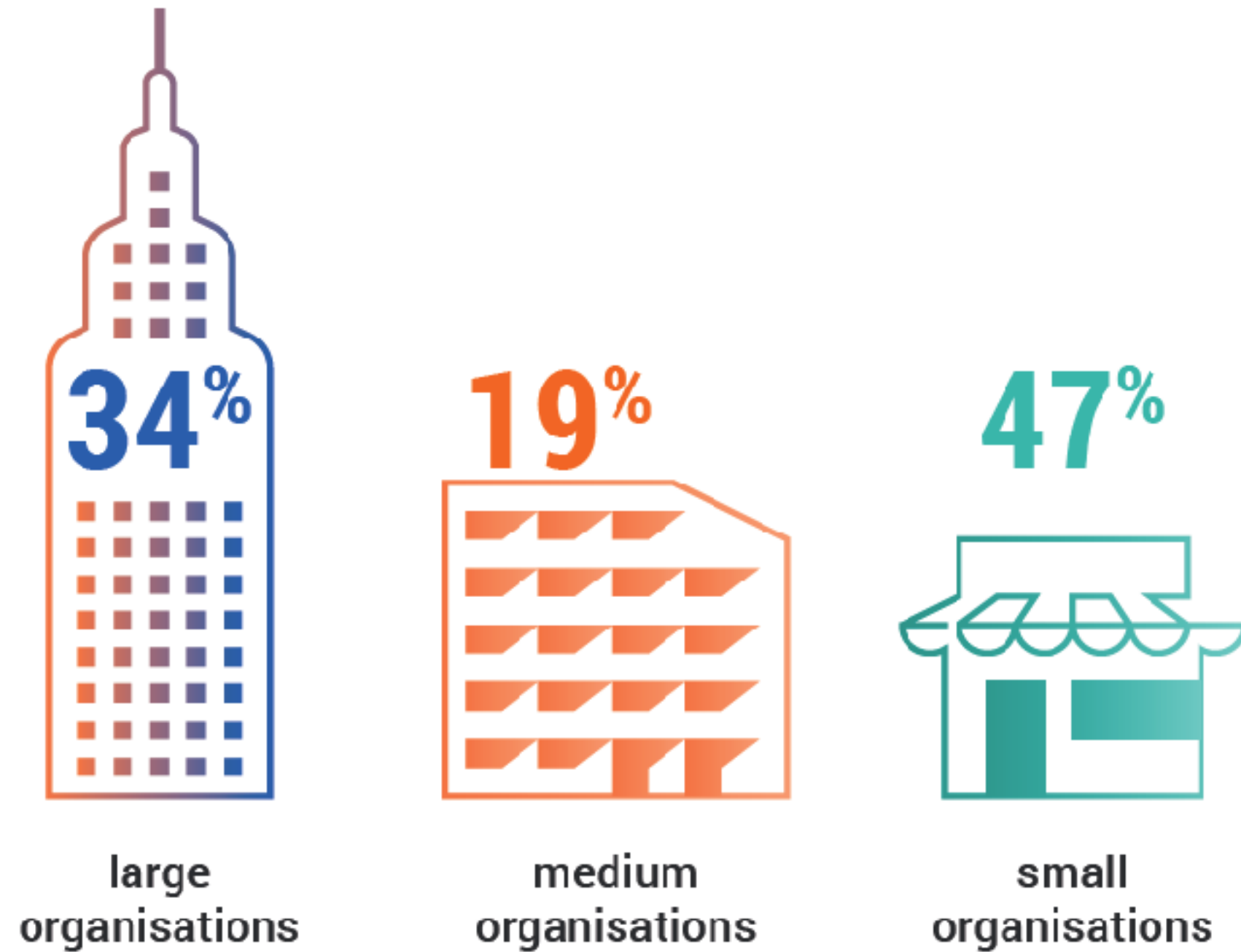
<http://publication.shecco.com/publications/view/guide-natural-refrigerants-training-europe-2017>



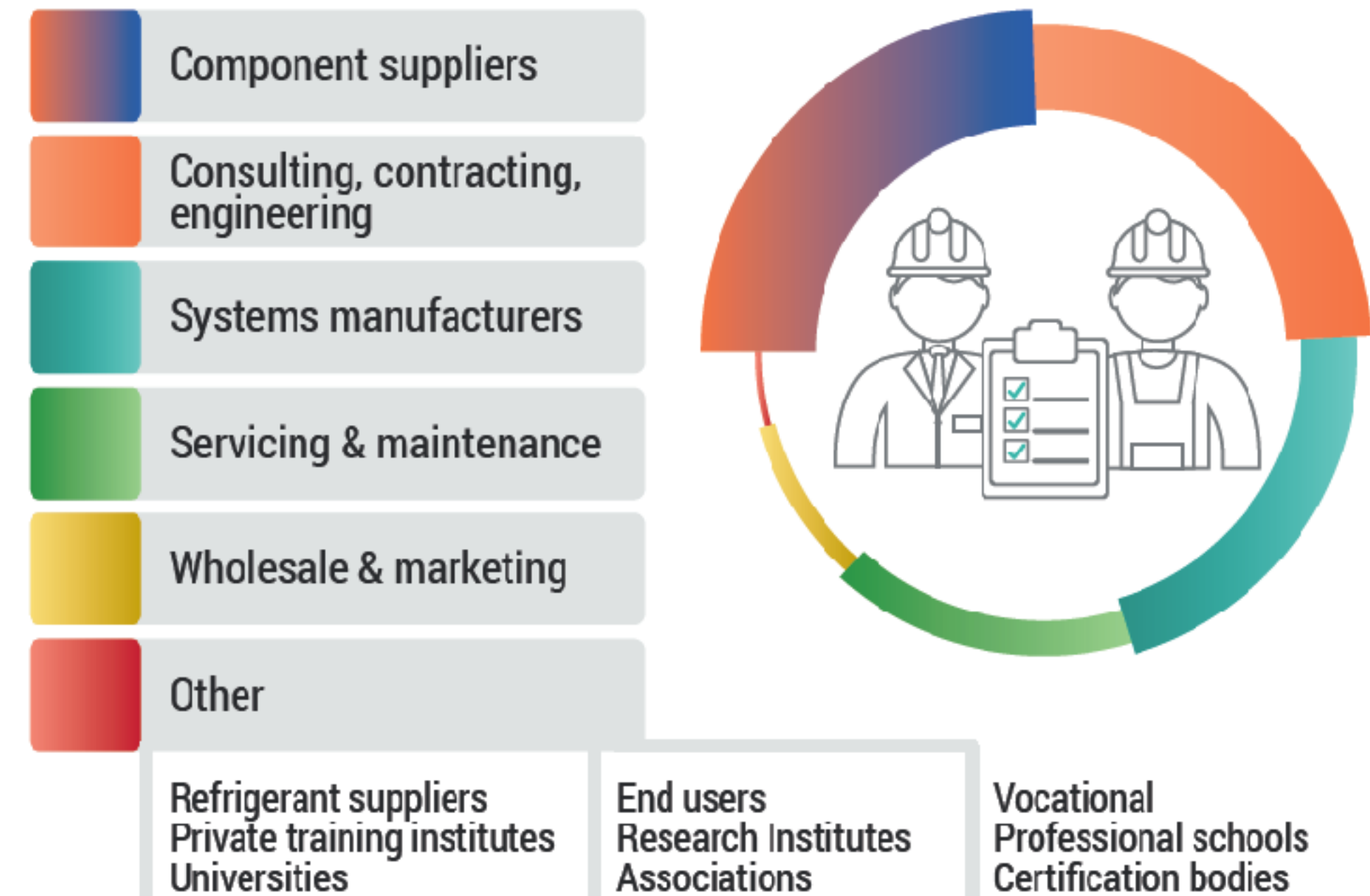
The location of the organisations that responded to the survey was predominantly in Western Europe

Fair share of representatives from Souther Europe





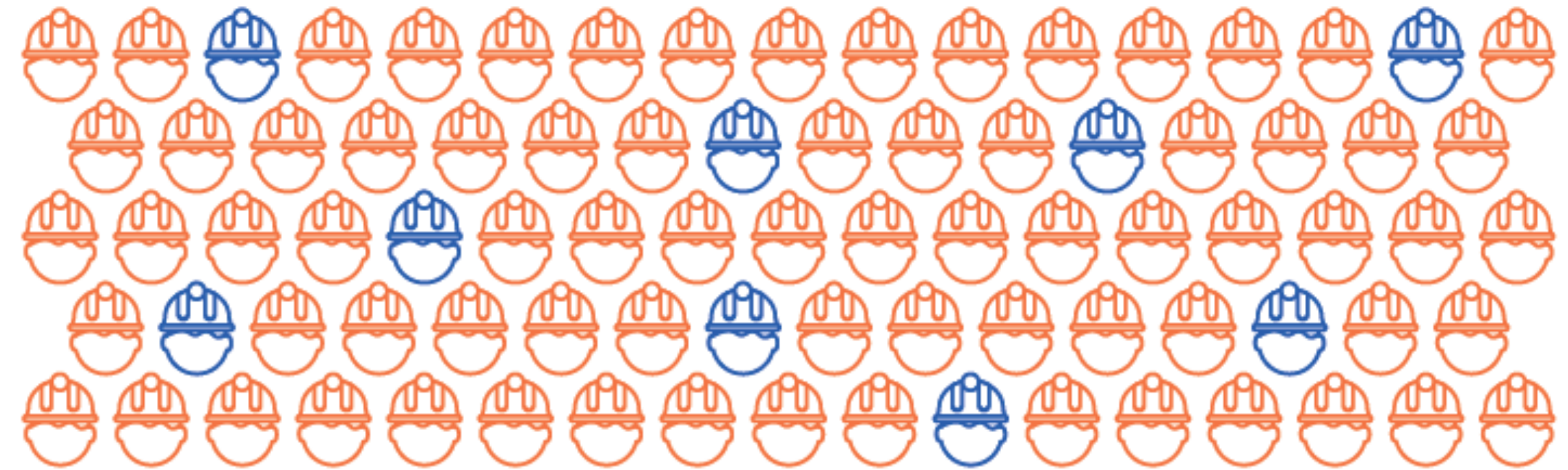
Small companies show highest response rate



Majority of respondents are component suppliers, contractors, and system manufacturers

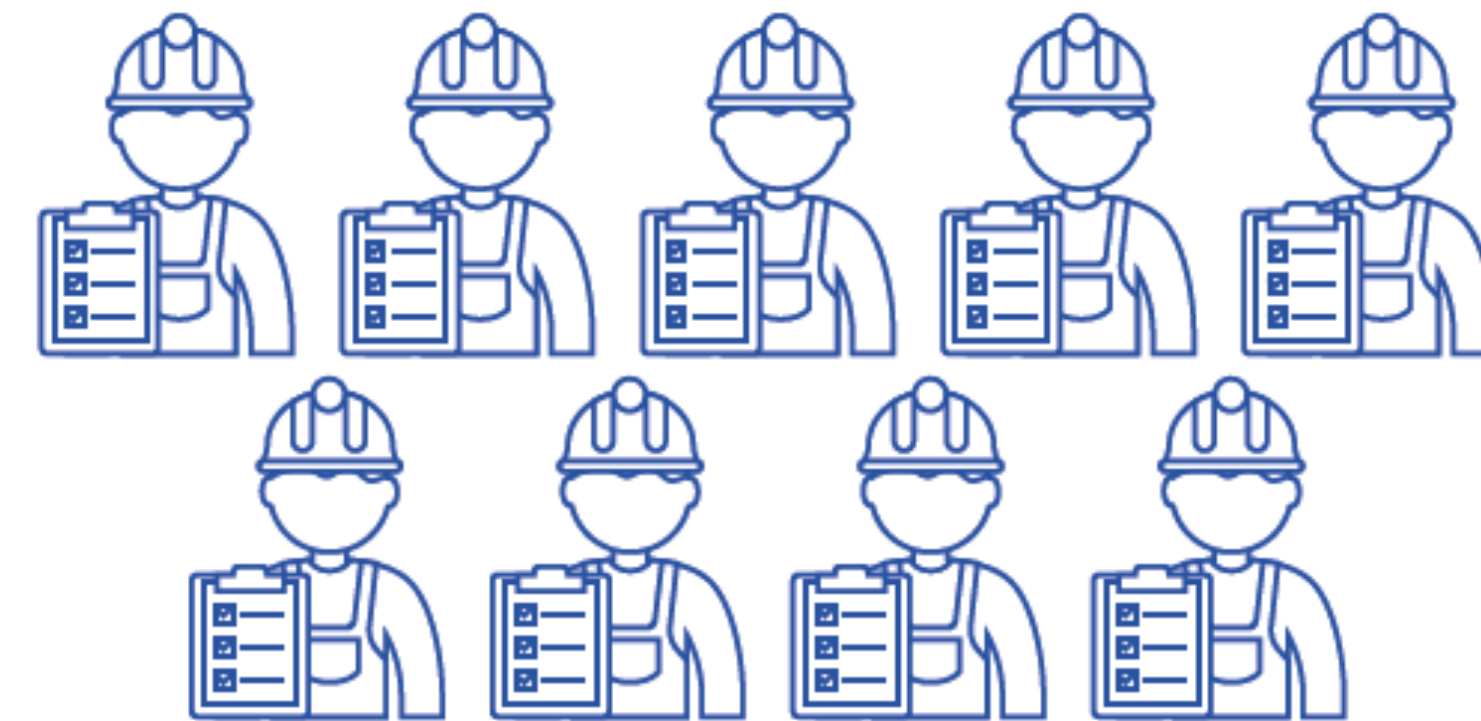


overall there are 160,000 technicians



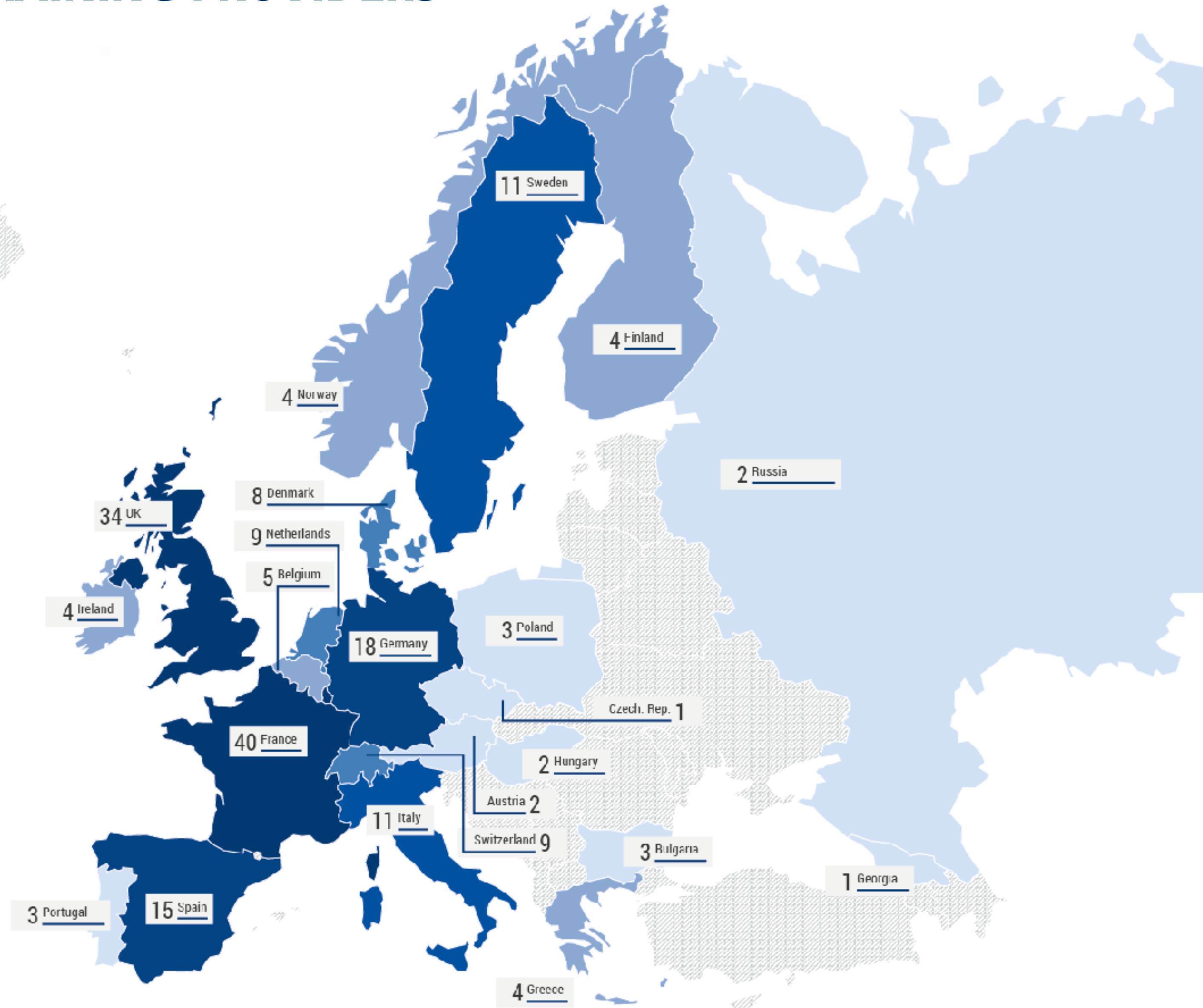
Based on estimations from the survey:

**8,000-10,000** technicians received training on natural refrigerants in 2015



out of these 8,000 - 10,000 received natural refrigerants training in 2015

leading organisations that provide training active in the European market in 2016



Close to **200 companies** provide natural refrigerants training in Europe

80% of natural refrigerant training providers offer practical training either on-site or long-distance



## THEORETICAL TRAINING...

98% of natural refrigerant providers offer theoretical training

90% on-site

33% online / e-learning

16% offline / distance learning



## PRACTICAL TRAINING...

80% of natural refrigerant providers offer practical training

75% on-site

09% online / e-learning

06% offline / distance learning



## CO<sub>2</sub> training is a clear leader

Natural refrigerant training providers:



Natural refrigerant training receivers:

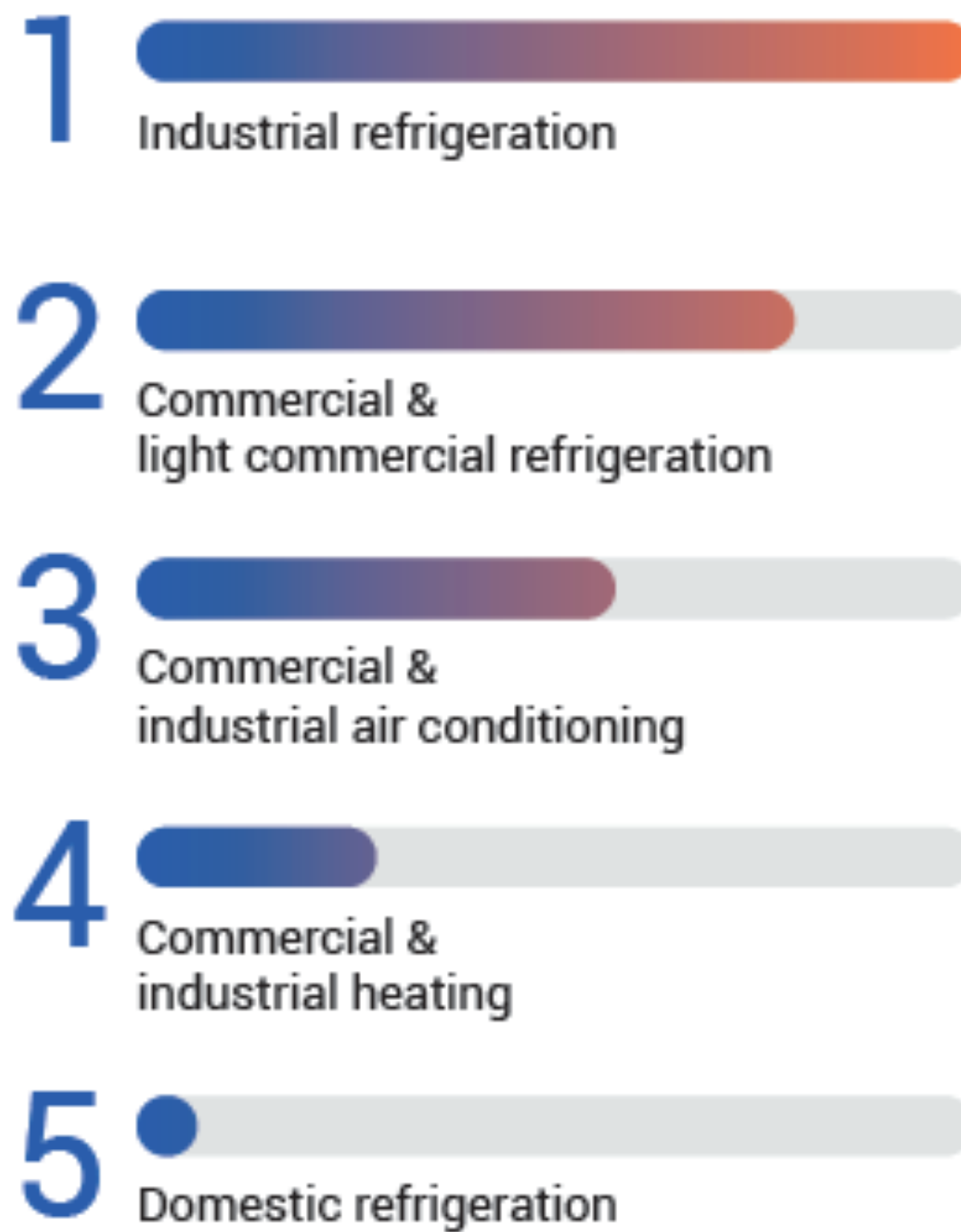


There is a good correlation between training natural refrigerant providers and receivers when it comes to the type of natural refrigerant for which they either receive or provide training.

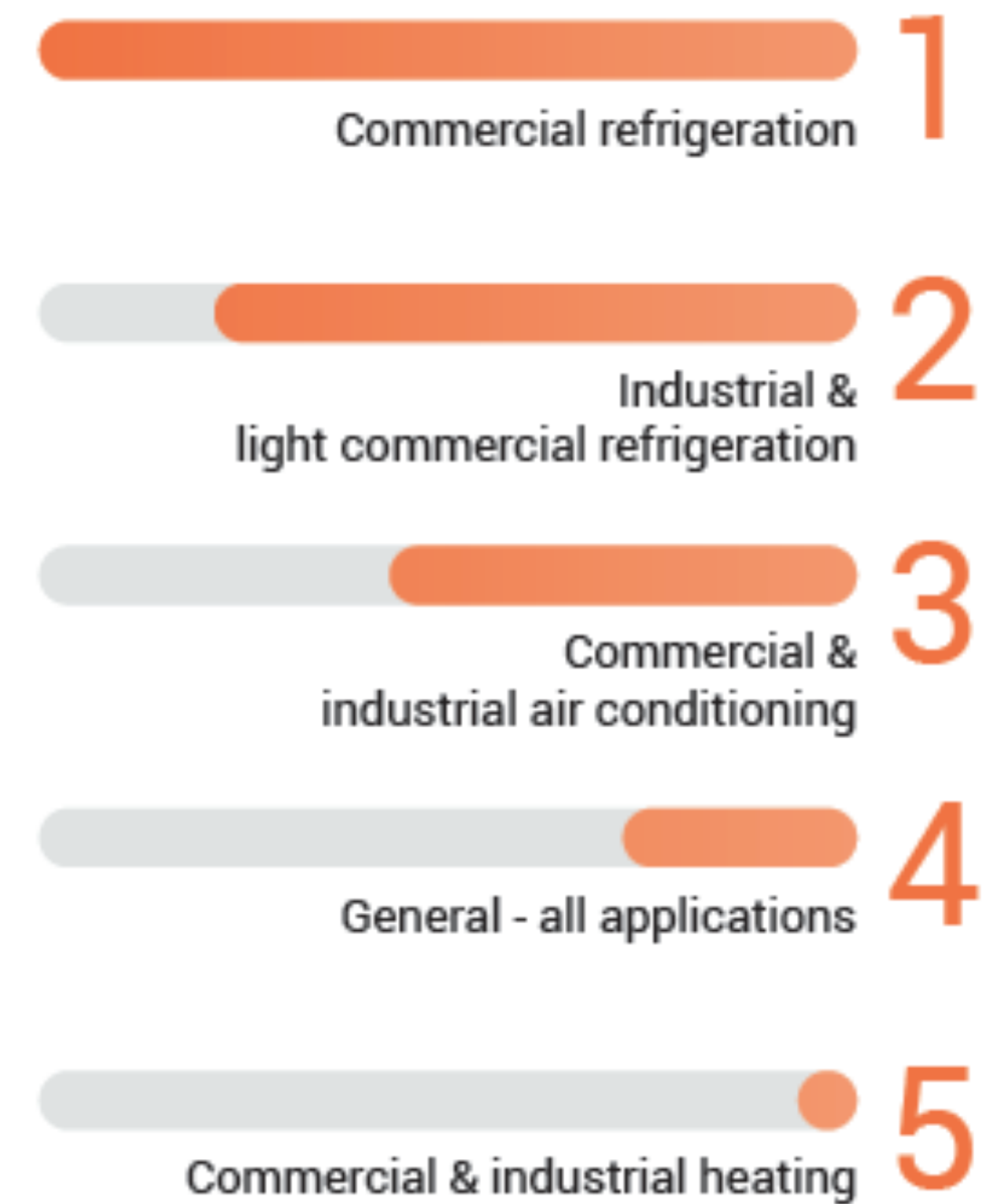
Commercial, industrial and light commercial refrigeration rank the highest for both groups of respondents

This is in clear correlation with the market uptake of natural refrigerants in these sectors.

## Applications most covered by natural refrigerant training providers:

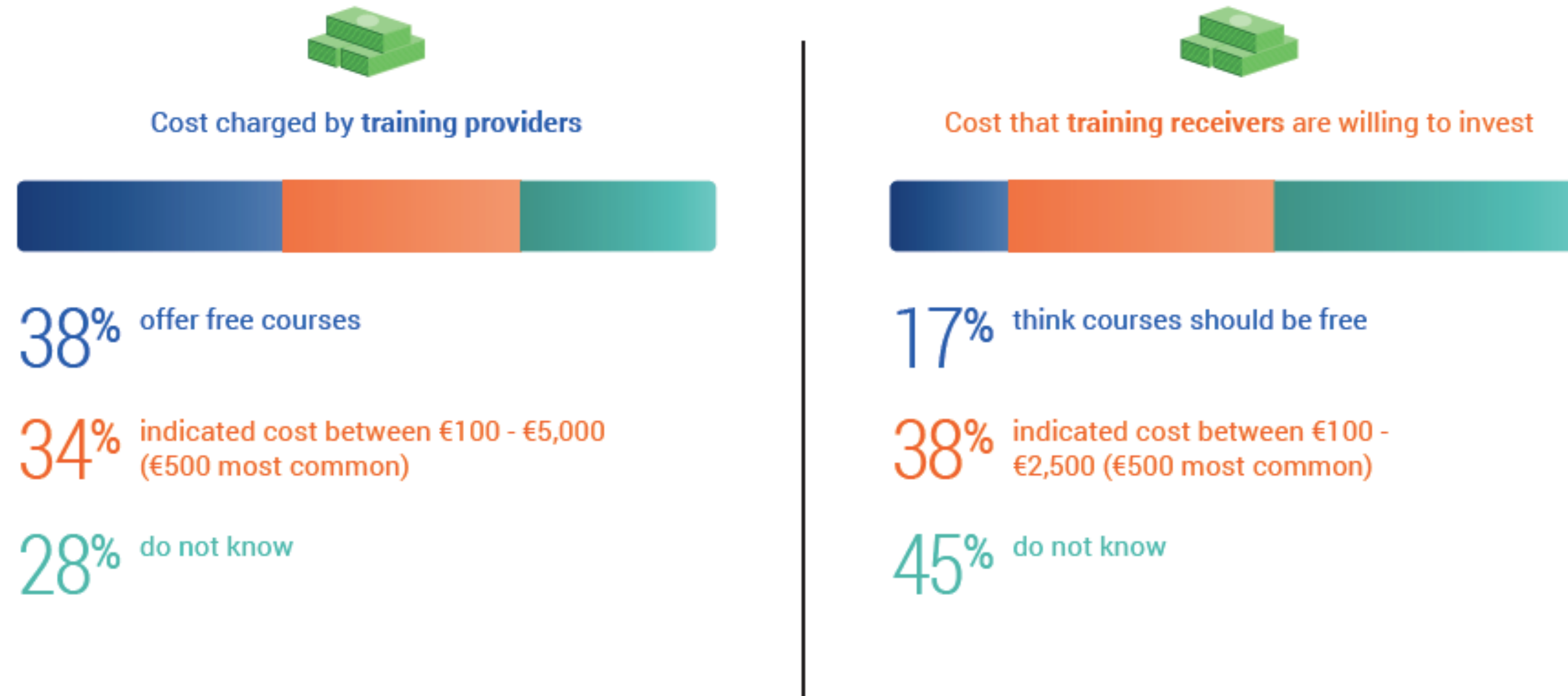


## Applications most desired in natural refrigerant training by receivers:





## Average cost for natural refrigerant course



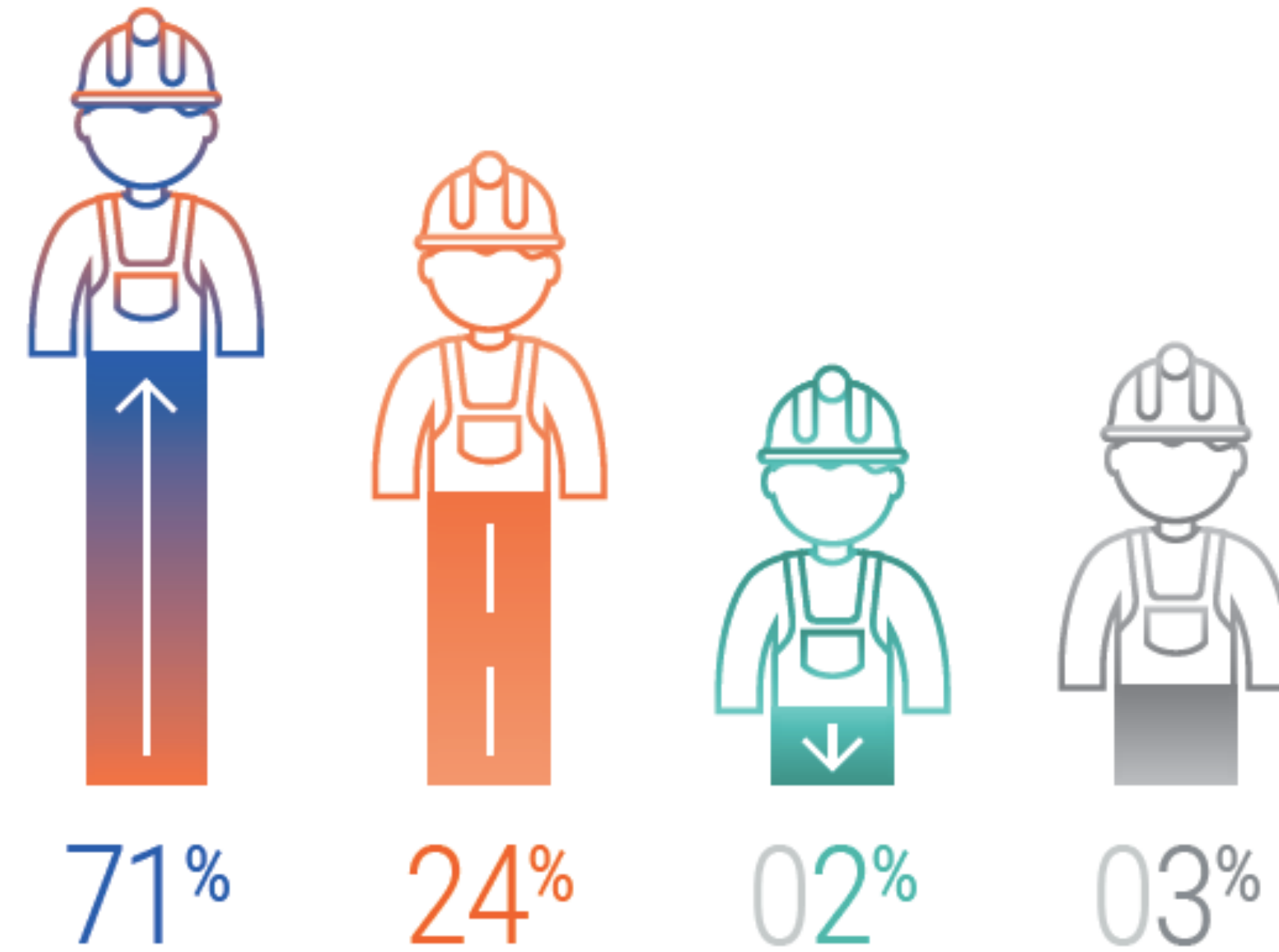
Over a **third** of the training providers said they offer their **courses free of charge**.

Less than **one fifth** of training receivers responded that they **think courses should be free**.

➔ **Lack of awareness !!!**

**Better communication** about the availability of free training courses, **key step** to improve knowledge of natural refrigerants, and their position in the market

Training receivers



...of training receivers who expect that the number of people trained per year will...

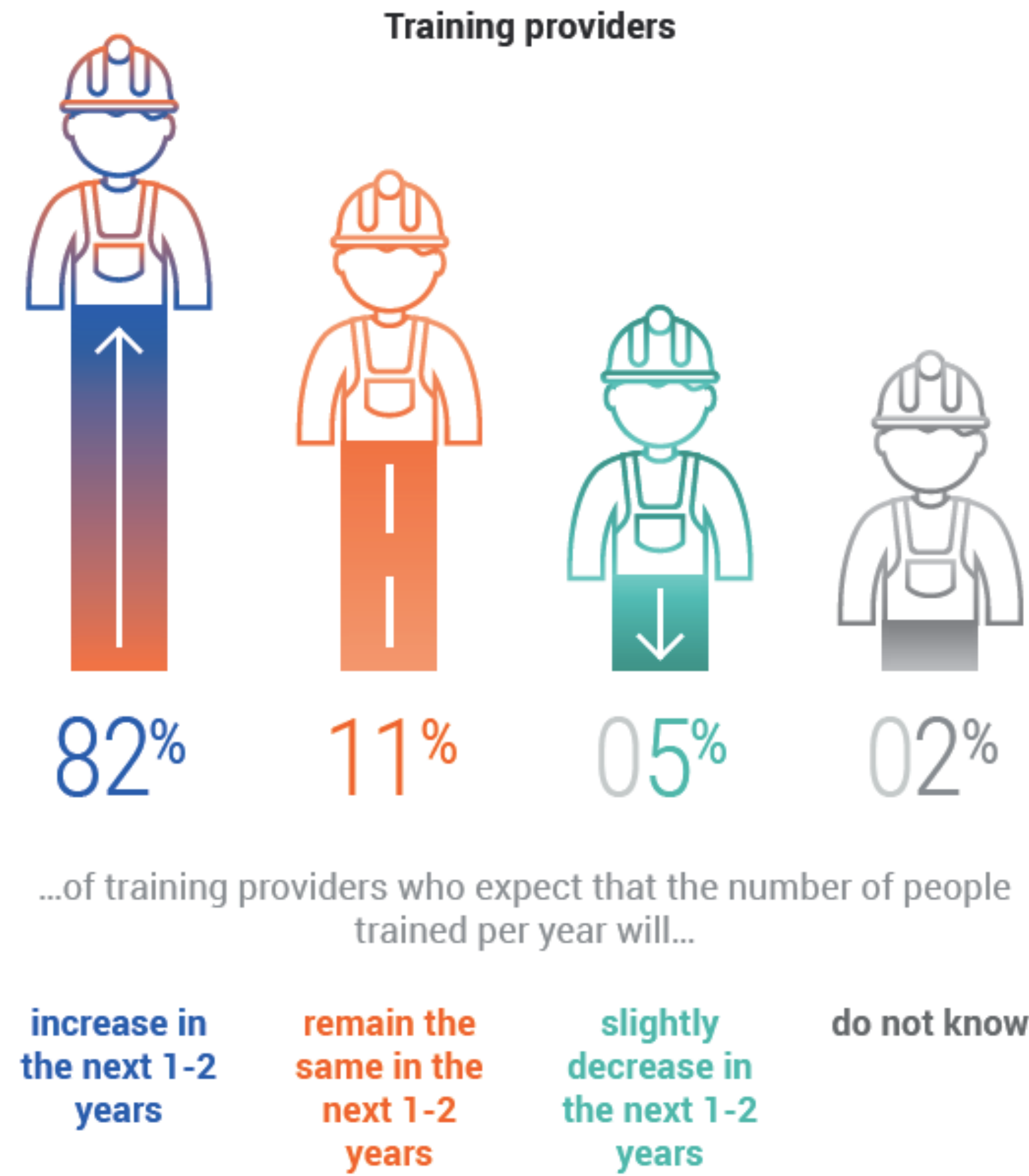
increase in the next 1-2 years

remain the same in the next 1-2 years

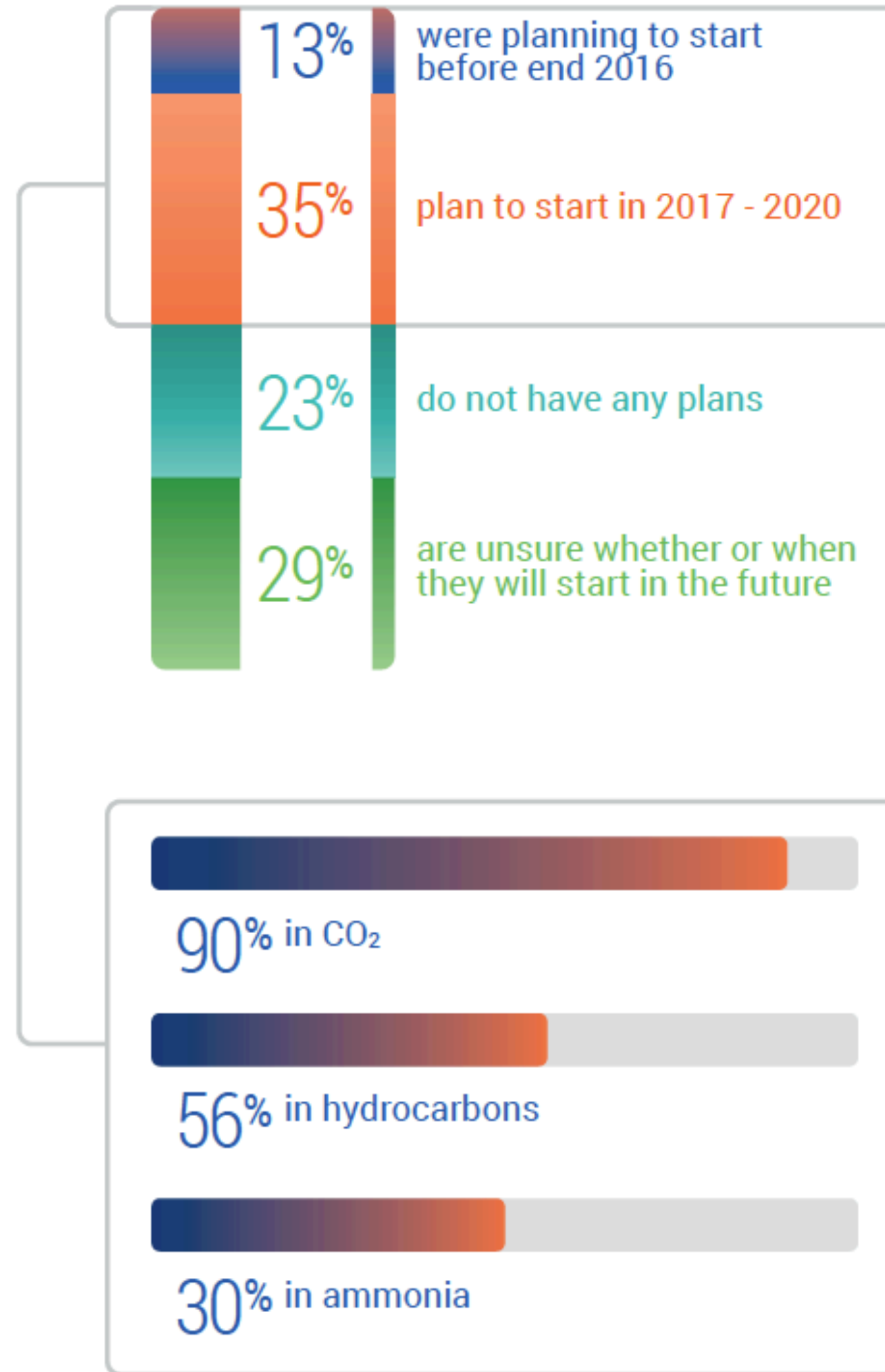
slightly decrease in the next 1-2 years

do not know

Industry highly optimistic about the uptake of natural refrigerant training in the next 1-2 years



Out of the respondents that do not offer / receive natural refrigerants training today...



Half of survey respondents who currently do not provide or receive training on natural refrigerants said that they plan to do so in 2016-2020

## Industry Platforms:

[www.hydrocarbons21.com](http://www.hydrocarbons21.com)

[www.R744.com](http://www.R744.com)

[www.ammonia21.com](http://www.ammonia21.com)

## shecco Publications, incl. GUIDEs

<http://publications.shecco.com>

## Accelerate Magazines:

[www.accelerateEU.com/](http://www.accelerateEU.com/)

[www.accelerateNA.com/](http://www.accelerateNA.com/)

[www.accelerateAUNZ.com/](http://www.accelerateAUNZ.com/)

[www.accelerateJapan.com/](http://www.accelerateJapan.com/)

## ATMOsphere conferences:

[www.ATMO.org](http://www.ATMO.org)

## #WebinarWednesday

[www.webinarwednesday.net](http://www.webinarwednesday.net)

## The Natural Voice

[www.thenaturalvoice.org](http://www.thenaturalvoice.org)





**THANK YOU!**