CA18235 PROBE

Deliverable 1.1

List of identified relevant stakeholders

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1 CONTEXT

1.1. WG1 OBJECTIVES

It is the overall objective of PROBE WG1 to engage stakeholders from five identified groups:

1) Academia
2) Industry
3) Operational agencies
4) Sustained research structures
5) End-users

The aim is to

- Establish a user group covering a variety of application domains.
- Identify, review, and define ABL profiling user needs for different applications.
- Identify weaknesses hampering exploitation of ABL profiling by end-users.
- Coordinate studies to quantify the value of ABL profiling for various stakeholders.
- Provide training to end-users on the use and benefits of ABL profiling products.

1.2. STAKEHOLDER IDENTIFICATION AND ENGAGEMENT

Knowledge exchange between PROBE and stakeholder groups has been identified as an iterative process (Figure 1). Throughout the action, potential stakeholders will be identified and invited to join PROBE activities. To be able to address the needs of the diverse user group, it is essential to classify stakeholders not only by group (Sect. 1.1) but also by stakeholder category and application domain (Sect. 2.1). Attractive information material is considered an important means to demonstrate the benefits of PROBE to the stakeholders. Based on feedback from the stakeholders, user needs will be identified, reviewed and defined. This again provides the basis for the design of studies that are to be conducted within the action to quantify the value of ABL profiling. Respective training will be offered to engage stakeholders and to provide a platform for new stakeholders that can be introduced to PROBE.

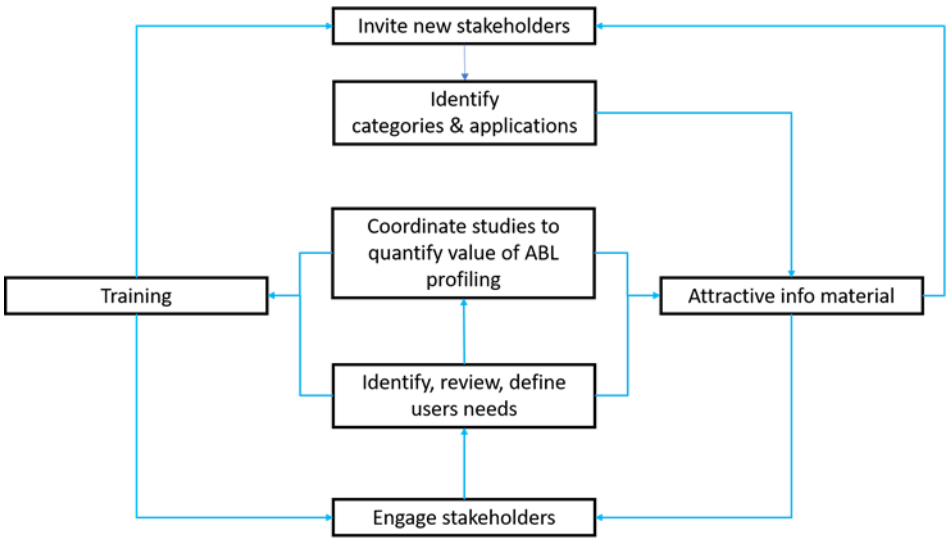

Figure 1: Iterative strategy of WG1 to engage stakeholders in the PROBE action.

2 LIST OF STAKEHOLDERS

2.1. INITIAL INVITATION

It was the first action of WG1 to distribute an initial user invite questionnaire (0). This questionnaire was sent out to various individuals and mailing lists to reach potential PROBE stakeholders. The survey was answered by 64 users from 24 countries (Table 1). Based on the collected responses, the following stakeholder categories and application domains are identified:

Stakeholder categories:

1) Process understanding and forecast
2) Model evaluation and data assimilation
3) Network operations
4) Algorithm development
5) Dissemination and capacity building

Application domains:

1) Sensor development
2) Meteorology/hydrology/climate
3) Air quality/aerosols/dust/ash/smoke
4) Hazards (incl. aviation and catastrophe modelling)
5) Wind energy/building engineering
6) Urban atmosphere

Table 1: Number of stakeholders by country: results from the first PROBE user invitation.

Country	Number of stakeholders
Albania	1
Austria	1
Belgium	1
Canada	1
Croatia	1
Cyprus	2
Czech Republic	4
Denmark	2
France	5
Germany	7
Greece	1
India	1
Ireland	1
Israel	2
Italy	8
Netherlands	1
Portugal	1
Romania	1
Serbia	4
Spain	5
Switzerland	1
United Kingdom	11
USA	1
Various	1

2.2. SPATIAL REPRESENTATION

To summarise the status of stakeholder engagement, EU maps are created that visualise the geographical representation by stakeholder category and application domain (Figure 2, Figure 3). These maps are created for all categories and application domains. Critical gaps can be identified, such as the urgent **need to engage potential stakeholders in ITC countries**.

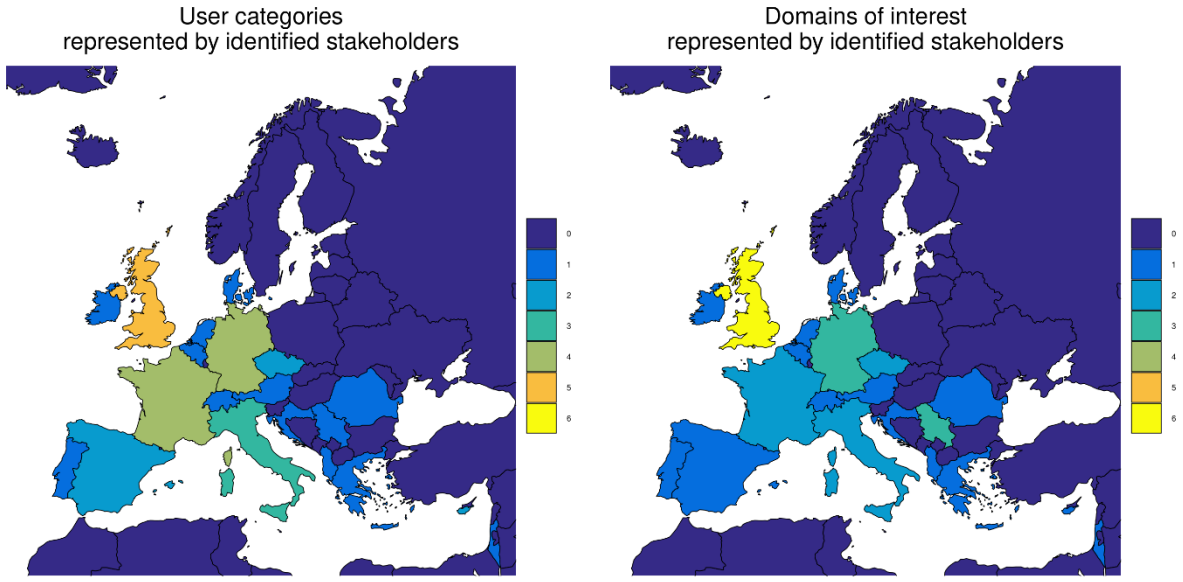

Figure 2: Maps summarising current representation of stakeholders by (left) user category and (right) application domain.

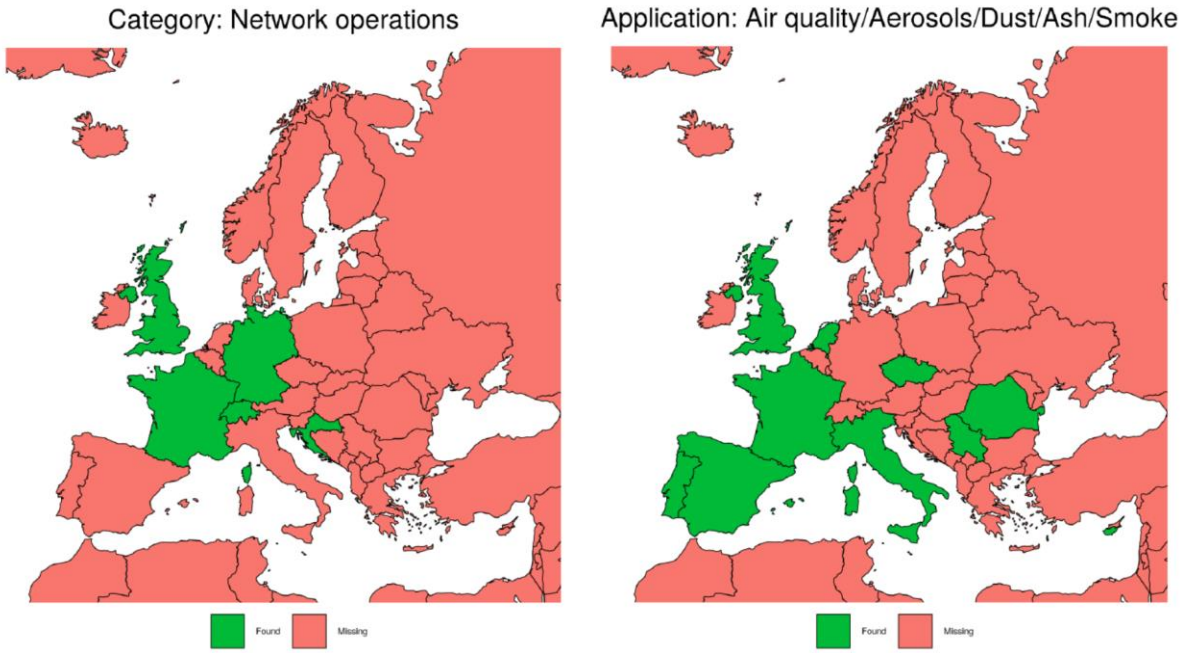

Figure 3: Maps indicating where at least one stakeholder of a certain (left) category (here showing the example of network operations) or (right) application domain (here showing the example of air quality/aerosols/dust/ash/smoke) has joined the PROBE user group.

2.3. NEXT STEPS

WG1 is going to work towards a complete distribution of stakeholders, i.e. each category and application should be represented at least once in each PROBE participating country.

In order to deliver this objective, the following next actions have been identified:

1) Formulate key **benefits of joining the PROBE user group;**
2) Create attractive information material that demonstrates these benefits;
3) Invite PROBE-all to consider joining the list of stakeholders;
4) Ask MC members to identify potential contacts in their countries as well as countries outside the PROBE network, that could be invited as stakeholders;
5) Ask stakeholders to identify their group/category/application domain. Any combination and multiple matches are possible.

Appendix A.

PROBE COST action - User invitation
The PROBE COST action is inviting end-users and stakeholders to participate actively in the action by sharing their specific user needs and help advance products describing processes in the atmospheric boundary layer (ABL).

Possible domains of interest include:

- Cities, local / regional authorities
- Air quality authorities
- National Meteorological Services
- Space agencies
- Private companies for weather and air quality prediction
- Construction engineering
- Insurance sector
- Transportation companies or systems (e.g. airports, road safety)
- Renewable energy (wind energy, solar energy)
- Instrument manufacturers
- Various weather enthusiasts
- Other…

PROBE is a new initiative (2019-2023) funded by the European Cooperation in Science and Technology (COST), that aims to extend the field of applications that can benefit from ABL profiling data. This will be achieved by strengthening the links between a wide range of user needs and the science and technology expertise residing in industry and academia. Further, methods and procedures will be improved and harmonized to yield higher quality ABL observational data.

PROBE is going to address the following four challenges:

Challenge 1: Capacity building to enhance knowledge exchange between academia, industry, and end-users for exploiting the full potential of ABL profiling for societal benefit

Challenge 2: Enhancing pan-European research coordination to develop advanced ABL profiling products and tools for data assimilation and long time-series reanalysis

Challenge 3: Fostering coordination between operational agencies, academia and industry to tailor measurement networks for clearly identified applications

Challenge 4: Capacity building to improve the operation and data quality of existing ABL profiling instruments for integration within a European network.

* Required

To maximize the societal impact of the action, PROBE is looking to engage end-users and stakeholders from the very beginning. If you are interested in ABL data, please provide some information about yourself:

Name *
Institution *
Function
Country *
Domain of interest *
Email address *

Do you fit into the early-career investigator (ECI) category? (up to 8 years after the date of obtaining the PhD) *
Yes/No

Experience with remote sensing data or measurements in the boundary layer *

Which PROBE challenge (listed above) is closest to your needs? *

Specify your interests in the challenges of the PROBE COST action? *

What is your previous experience in participating in a COST action? *

Would you be able to provide user requirements? Please indicate your availability: *
Check all that apply.
[ ] Participate in an online survey
[ ] Join PROBE COST action throughout (1-2 meetings per year; support reporting for 4 years)