# IEA Wind Task 36 Workshop:

Experiences in using Wind Power Predictions and Gaps in Forecasting Research

Barcelona, 9th June 2016

# Session 4: Some preliminary results from the first interviews on the state-of-the-art use og uncertainties in the power industry

Task 3.1: State of the art of use of forecast uncertainties in the business practices of actors in the power systems sector

Purpose: to get an overview of the current situation regarding use and application of probabilistic forecasts in the power industry in order to estimate and deal with uncertainties.
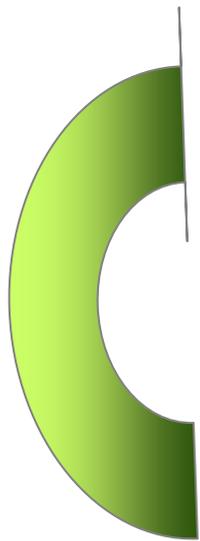
Phase 1: Collection of Information
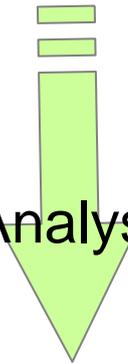
Phase 2: Analysis of Results

Phase 3: Communication and Dissemination

Work-in-progress over 3 years

How we setup the interviews

Generated a set of questions that can be used in
→ personal interviews
→ to be filled out in writing

Objectives:
→ focus on information not on person/organisation
→ get a broad overview over all participants dealing with forecasting

What we did to fulfill these objectives:

=> Design of questions and submission procedure to be confidential

Setup a Dropbox

→ **interview documents**:
https://www.dropbox.com/l/sh/2enjMxIGWsOvVvcGxBNjRo
Language packs (more to come...):
Danish: https://www.dropbox.com/l/sh/oeSDsHWoFrAsuY3oGxW6du
German: https://www.dropbox.com/l/sh/Zg2VHJNqitGADh5mG4KaNq

→ **submission**: https://www.dropbox.com/l/sQH9I8nW9LQlhYZNEGlyRG
Submission possible as "common user": Interview Provision
<ieawind36.wp3@gmail.com>
Purpose: nobody needs to register with Dropbox to delivery the interview

How we setup the interviews

Questions were separated into 2 categories:

General character questions to:
→ identify the type of business
→ identify the size of the organisation
→ identify the span of the business
   processes
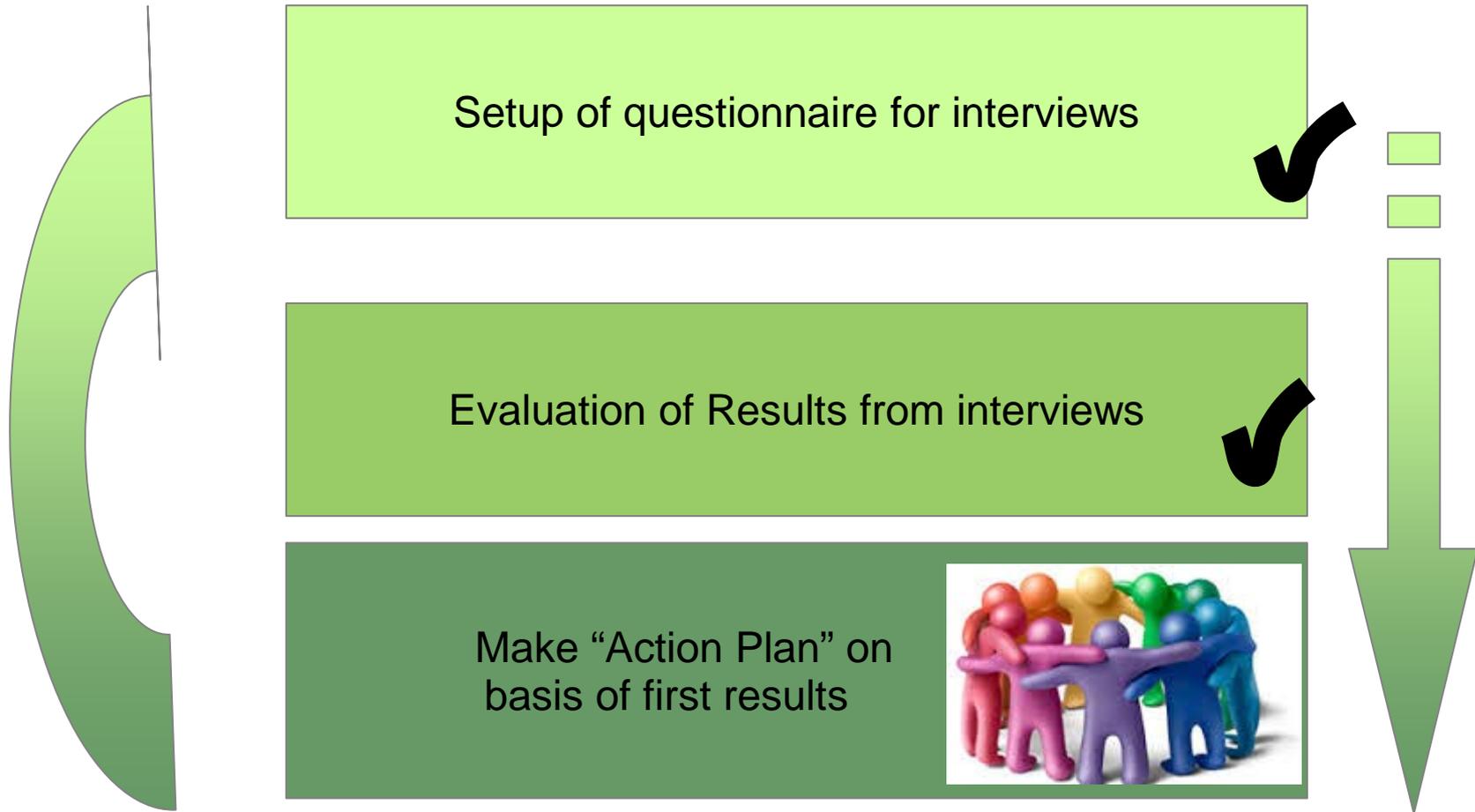→ identify the barriers

Forecasting and uncertainty questions to:
→ identify the level of forecasting products
   that are used today
→ identify the knowledge and awareness of
probabilistic products
→ identify the challenges that hinder
   implementation of new products
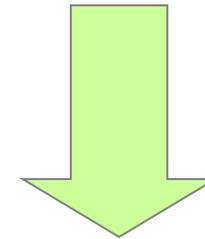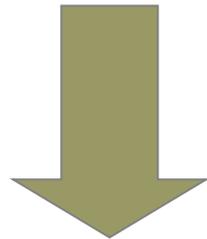
Get a broad overview of the state-of-the-art use of forecasting and forecast uncertainty in the power market

Phase 1: Collection of Information

Setup of questionnaire for interviews

Evaluation of Results from interviews

Make "Action Plan" on basis of first results

Action Plan 1:
→ Reformulate questions
→ Add more language packs to it
→ Reconnect and widen group to get more information
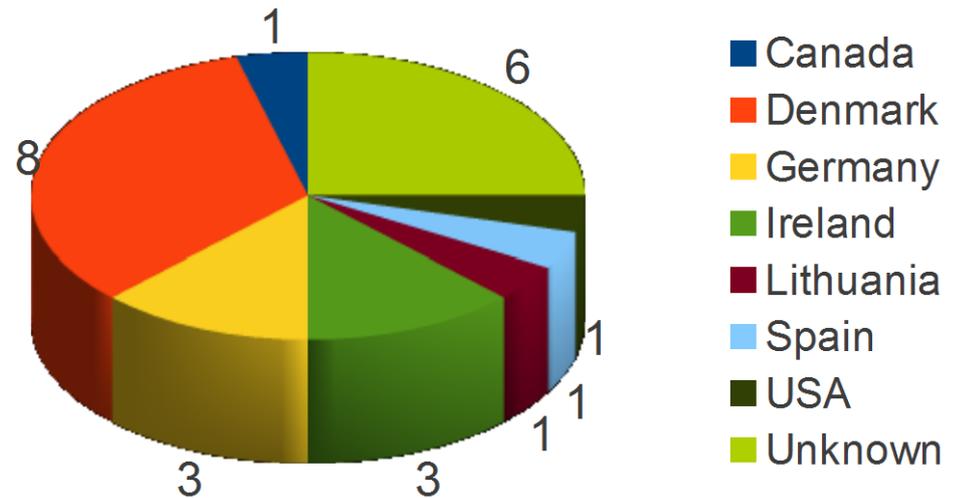
First preliminary Results: Statistics

Interviews Task 3.1

Total number of interviews: 24

- R&D
- PP_PMC
- ESO
- SO
- ETC
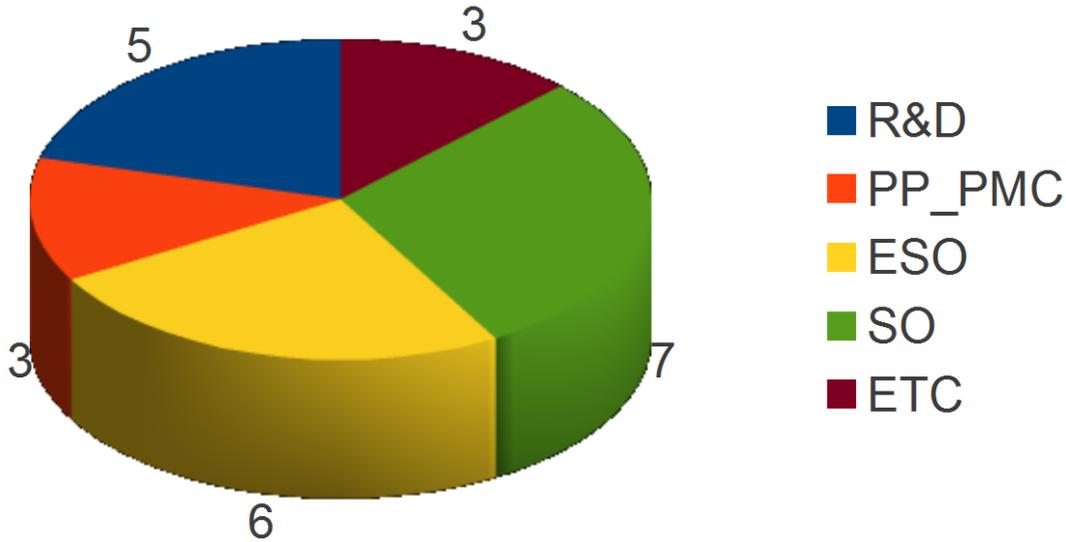
Answers distribution over countries

Total number of interviews: 24

- Canada
- Denmark
- Germany
- Ireland
- Lithuania
- Spain
- USA
- Unknown

Note: "Unknown" means we do not know the country of origin of the answers

First preliminary Results: Statistics

Uncertainty forecasts seems to still be associated with speculation
=> 61% of the answers indicate that there is
"fear of that speculative behavior leads to loss"

Knowledge about how to make use of uncertainty forecasts is lacking

98% use multiple forecasts
60% know provider and products of uncertainty forecasts
**< 10% make use of uncertainty forecasts**

Interdisciplinary aspects are underestimated in the power industry
Less than 10% of all organisations employ meteorologists or engineers with an atmospheric science education

→ lack of awareness of meteorological dependencies in the power market
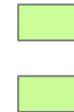→ no knowledge building of these dependencies

Phase 2: Analysis of Results
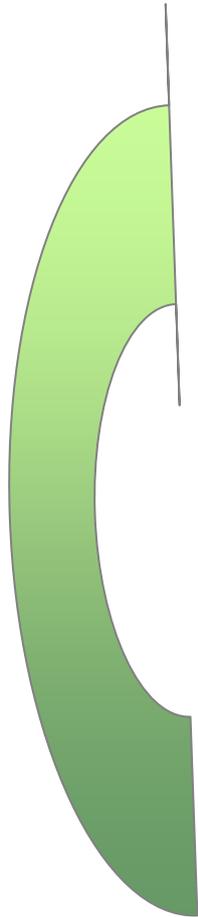
Analyse all questions in the various **categories**

Draw conclusions and **reconnect** with interested stakeholders on the basis of the results

Make "**Action Plan**" for recommendations & dissemination

Phase 3: Recommendation & Dissemination

Generate recommendations in form of
journal papers, conference papers, white papers
presentations and webinars

Present the Results to the community

Keep webpage online to enable people to find
documents, white papers, seminar presentation etc.

Summary and Conclusion
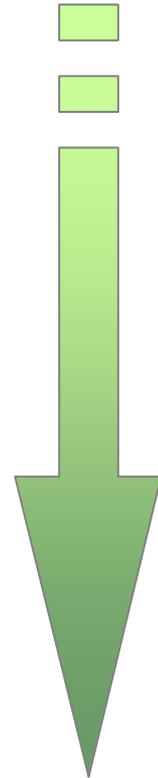
We have already learnt a lot in phase 1

Please participate and share your experience with us, so we can

- identify the gaps of knowledge
- develop recommendations on the use of uncertainty forecasts
- work on industry standards

→ **lift the industry to the next level**

Thank you for your attention !

Follow us on the

Project webpage
http://www.ieawindforecasting.dk

and

Workpackage 3.1-page:
http://www.ieawindforecasting.dk/Topics/Workpackage-3/Task-3-1

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