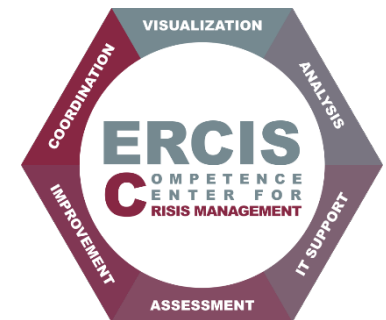# MEASURING INNOVATIONS IN CRISIS MANAGEMENT

ADAM WIDERA, CHIARA FONIO, SANDRA LECHTENBERG, BERND HELLINGRATH
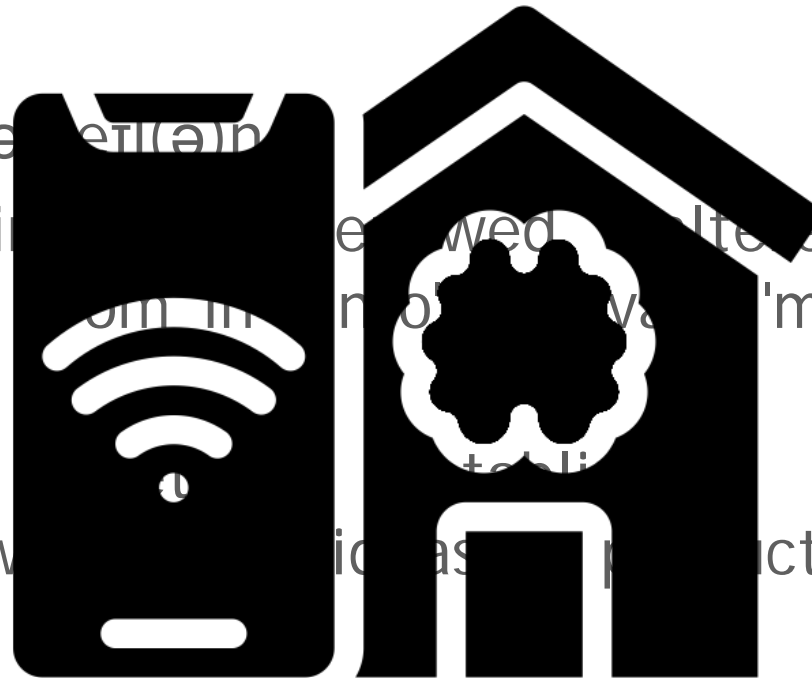
MOTIVATION AND SCOPE

Innovation /ɪnəˈveɪʃ(ə)n

from Latin innovat- 'renewed, altered', from the verb **innovare**, from in- 'into' + novare 'make new' (from novus 'new').

changes in something established, especially by introducing new methods, ideas, or products.

© Ben Davis from Noun Project

"Choices between good and bad are relatively easy. Choices between competing good things are much harder and call for different methods."
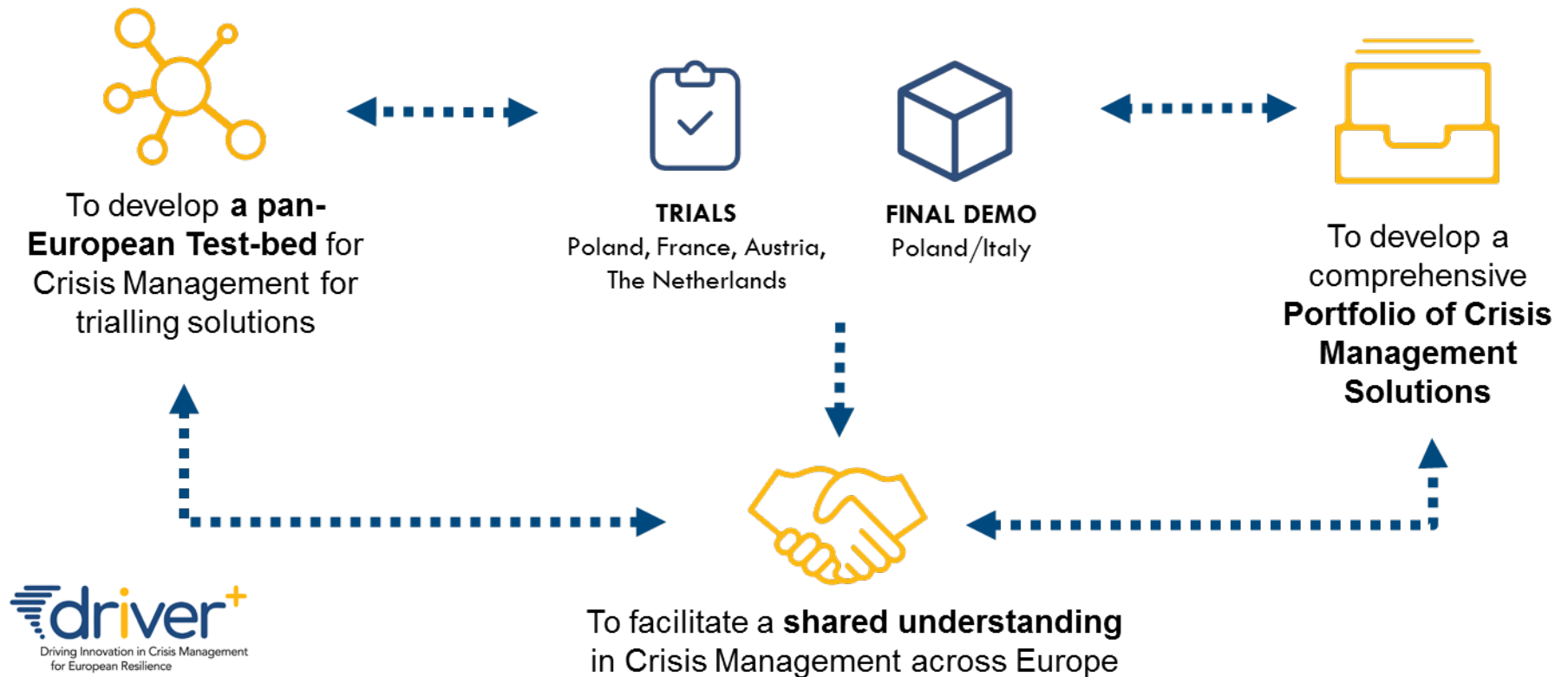
Prof. Mark Haselkorn
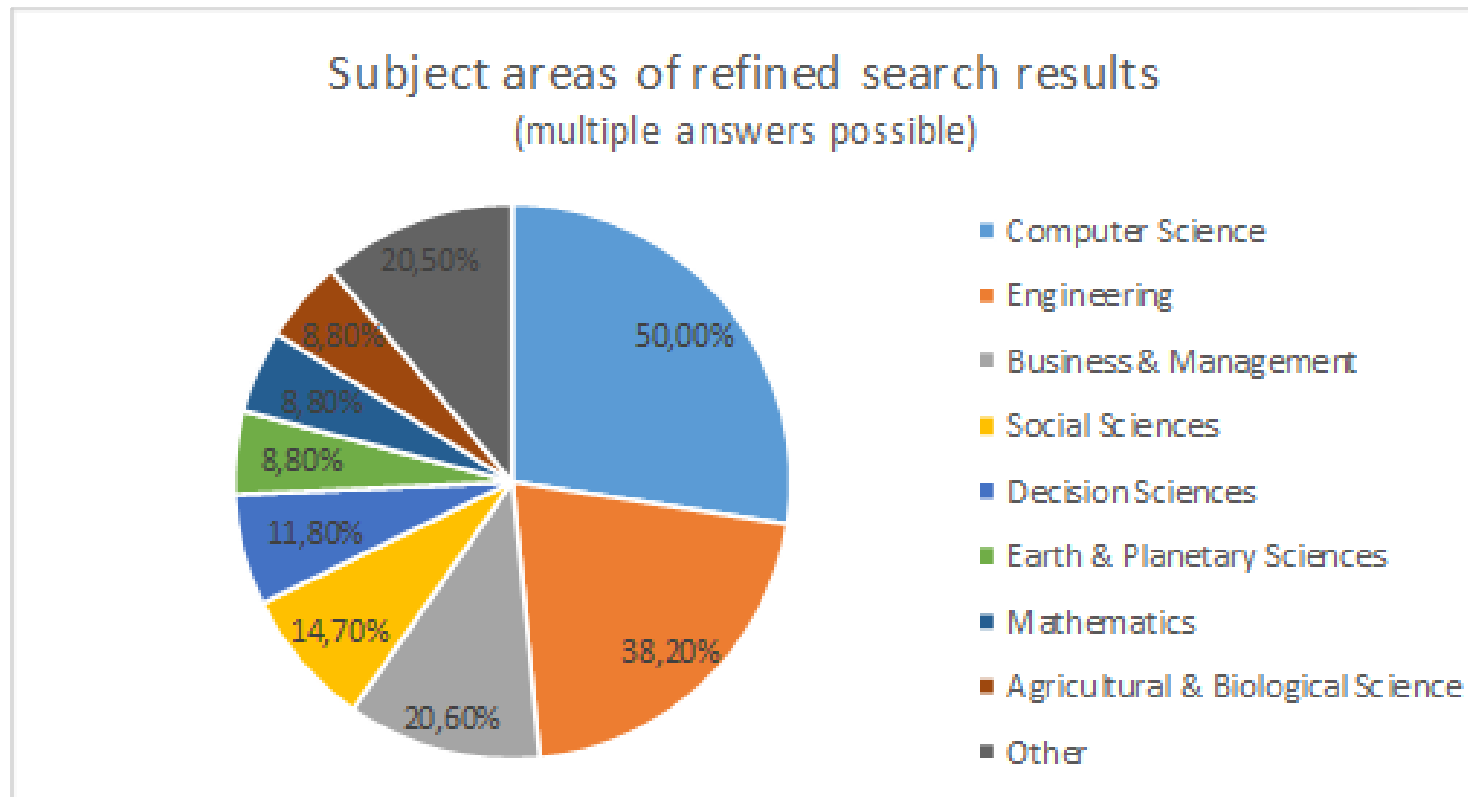
GUIDING RESEARCH QUESTION

▪ How can we measure crisis management performance?

To develop **a pan-European Test-bed** for Crisis Management for trialling solutions

TRIALS
Poland, France, Austria, The Netherlands

FINAL DEMO
Poland/Italy

To develop a comprehensive **Portfolio of Crisis Management Solutions**

To facilitate a **shared understanding** in Crisis Management across Europe

PERFORMANCE MEASUREMENT IN CRISIS MANAGEMENT

Subject areas of refined search results
(multiple answers possible)

- Computer Science
- Engineering
- Business & Management
- Social Sciences
- Decision Sciences
- Earth & Planetary Sciences
- Mathematics
- Agricultural & Biological Science
- Other

MAIN CONCLUSIONS

- CM performance measurement requires context-specific adjustments

Evaluation based on value judgement	*Complexity of crisis situations*
Questionable validity of information	*Limiting operation conditions*
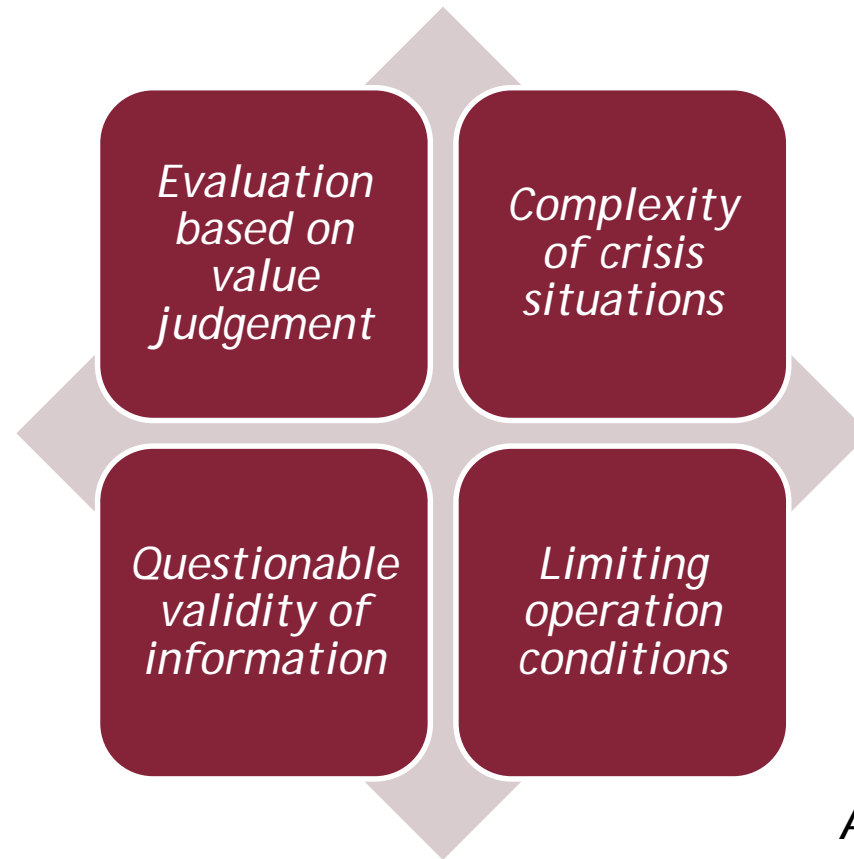
Abrahamsson et al. 2010

INSIGHTS FROM THE PERFORMANCE MEASUREMENT DOMAIN
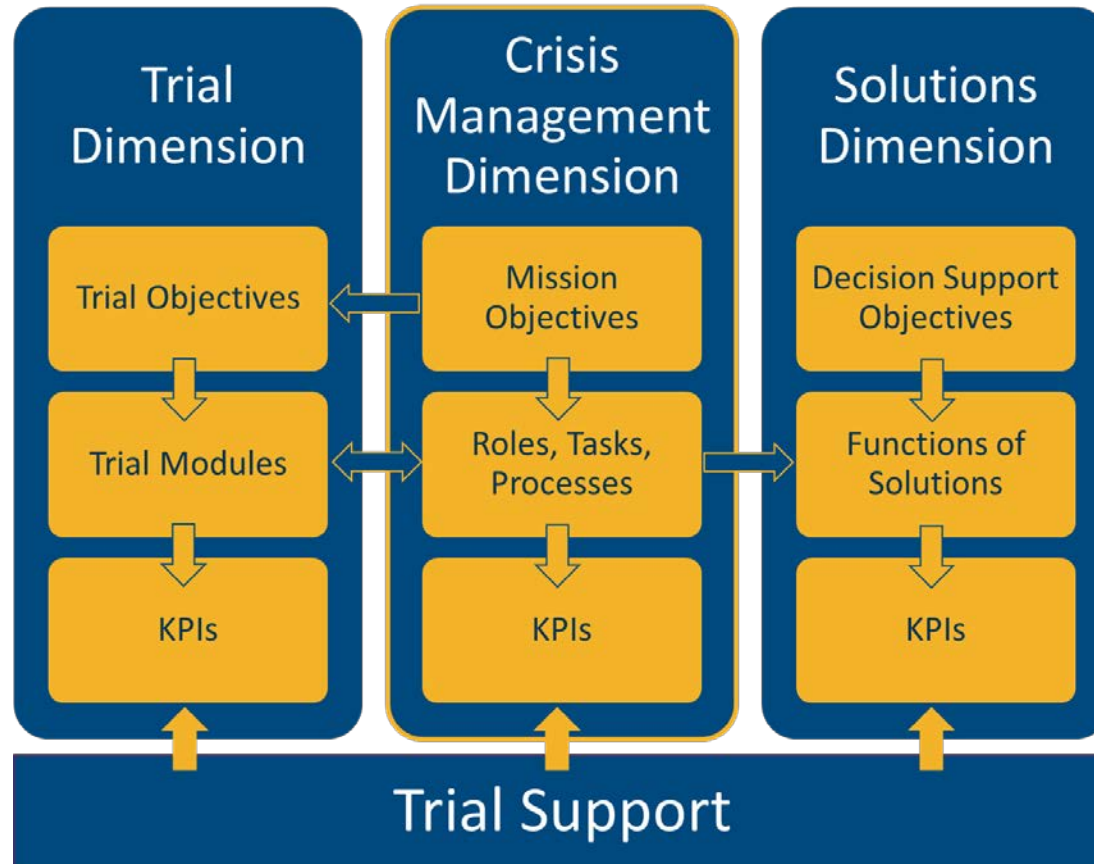

General requirements

Process/task orientation
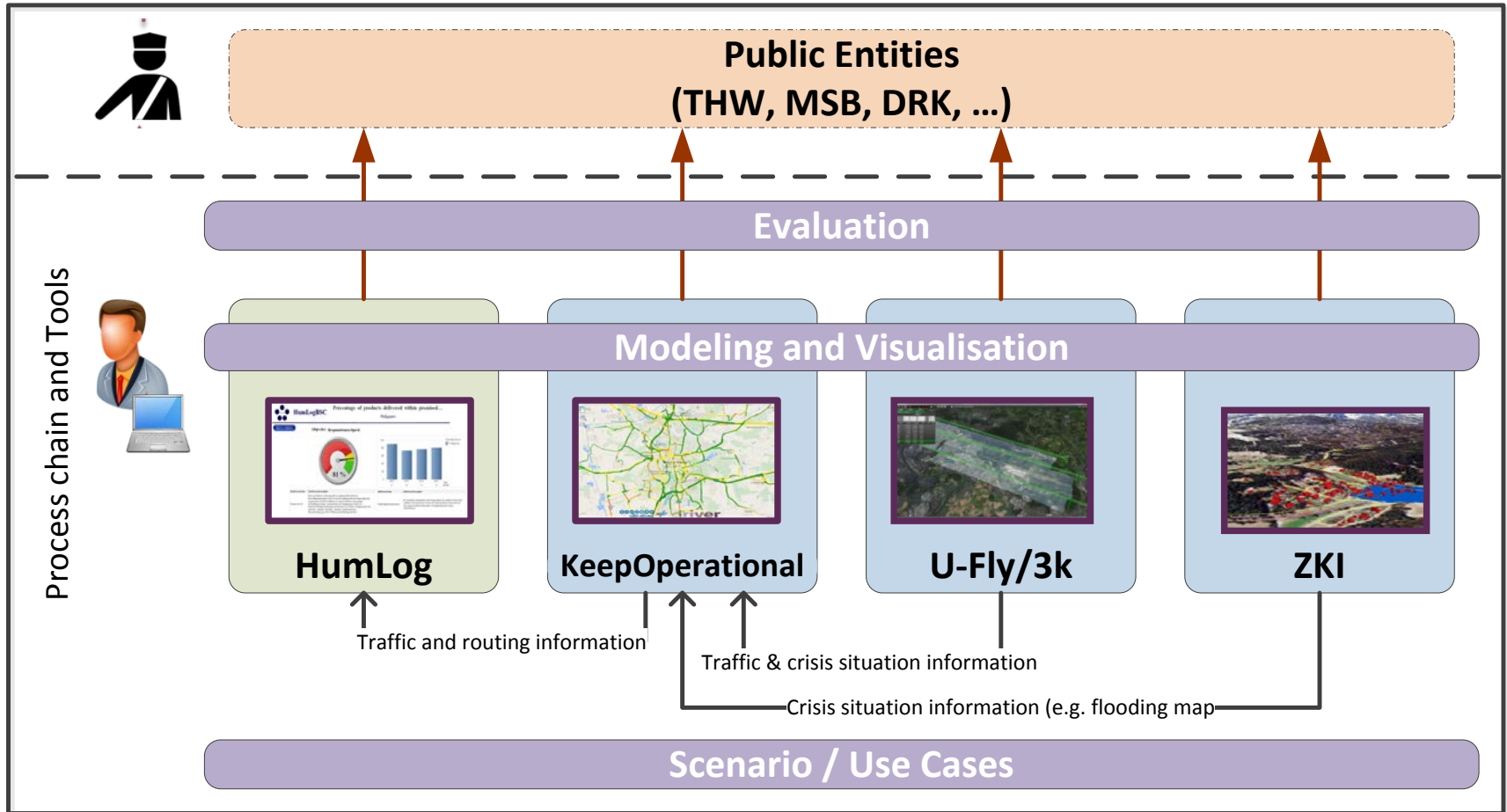
Systematization & prioritization

USE CASE: DRIVER+

PERFORMANCE MEASUREMENT DIMENSIONS

EXEMPLARY TRIAL EVALUATION

SETTING

Process chain and Tools

**Public Entities
(THW, MSB, DRK, …)**

Evaluation

Modeling and Visualisation

HumLog

KeepOperational

U-Fly/3k

ZKI

Traffic and routing information

Traffic & crisis situation information

Crisis situation information (e.g. flooding map)

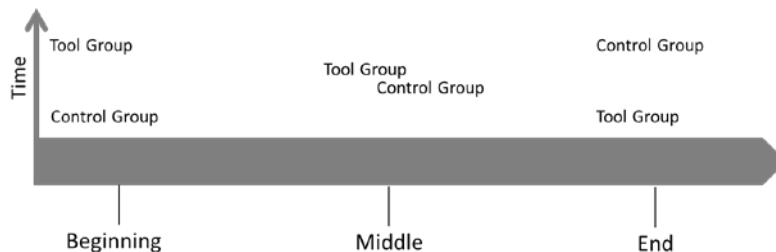**Scenario / Use Cases**

EXEMPLARY EVALUATION

RESULTS

- Quantitative
  - Diff. performances of the tool- & control groups
  - Control group faster in easy tasks
  - Tools esp. „better" for complex tasks

- Qualitative
  - Tools in total percieved as helpful
  - User friendliness highly tool-dependent
  - Identification of several limitations

DRIVER Experiment 44
Questionnaire for THW Volunteers

Deutsches Zentrum für Luft- und Raumfahrt
German Aerospace Center

3. Please answer the following questions.
If you reply a question with No, please write a note in the comment field.

	Yes	No
Could you manage the tasks more easily with the proposed solution?	☐	☐
Would you say that you could finish the tasks faster with the help of the provided solution?	☐	☐
From your perspective, would the provided features be helpful in crisis management?	☐	☐
Was a faster situation awareness possible?	☐	☐
Should be a software, like KeepOperational, instituted in crisis management?	☐	☐
Comment field:		

SUMMARY AND OUTLOOK

THE TIMELINE

January 2018
Gaps & Needs assessment workshop

November 2019
Final Demo (Italy/Poland)

February 2018
Trials workshop 0 (Poland)

June 2018
I4CM#3 + Standardisation needs identification workshop (Poland)

December 2018
I4CM#4 (Denmark)

February 2020
Final Conference (Belgium)

2018 .... **2019** .... **2020** ....

June 2018
Trial #1 (Poland)

October 2018
Trial #2 (France)

May 2019
Trial #3 (Austria)

October 2019
Trial #4 (The Netherlands)

February 2018
1st Policy-Research Dialogue Roundtable (Poland)

December 2018
2nd Policy-Research Dialogue Roundtable (Denmark)

February 2020
3rd Policy-Research Dialogue Roundtable (Belgium)

ERCIS

European
Research
Center for
Information
Systems

THANK YOU FOR YOUR ATTENTION.

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THE IS RESEARCH NETWORK

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