

# GATEWAY Final Event 24 April 2017

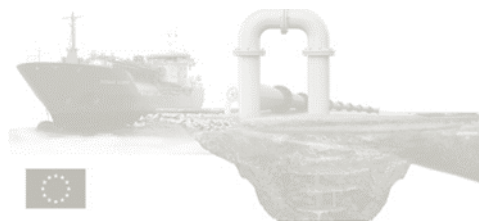
## *Part II: The way forward realizing a CO<sub>2</sub> infrastructure*

**– Synchronised funding streams –**

*Elisabeth Vågenes, SINTEF*

[elisabeth.t.vagenes@sintef.no](mailto:elisabeth.t.vagenes@sintef.no)





# AGENDA

12.30 *Networking lunch*



## PART I – H2020 GATEWAY and the PCI application – so far, so good

13.20 **Welcome and safety announcements** – *(Tom Mikunda, TNO)*

13.30 **H2020 project GATEWAY and the North Sea perspective** – *(Marie Bysveen, GATEWAY coordinator)*

13.45 **Stakeholder perspectives on CCS in the Rotterdam region**

*Update on the ROAD CCS project (Andy Read, ROAD)*

*Near-term CO<sub>2</sub> storage in the Dutch North-Sea (Chris Gittins, TAQA)*

14.10 **UK perspective and possible value creation** - *(David Hanstock, Progressive Energy)*

14.20 **PCI – Project of Common Interest – the Rotterdam Nucleus application**

*(Tom Mikunda, TNO)*

14.50 **Coffee break**

## PART II – The way forward realising CO<sub>2</sub> infrastructure

15.15 **Synchronised funding streams for CO<sub>2</sub> infrastructure** *(Elisabeth T. Vaagenes, SINTEF)*

15.30 **Statues and viable ownership arrangements** *(Rahpael Heffron; Queen Mary University)*

15.45 **Discussion – What now after GATEWAY and the PCI submission ?**

*Opportunities and barriers to CO<sub>2</sub> transport projects*

16.30 – 17.00 **Mingling reception with refreshments**



# Outline



- Background and introduction
- The Berlin Model
- European public funds (grants)
- Synchronized national funding



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# Background and introduction

- The contents of this talk comes from deliverable *D4.4 Assessment of Synchronized Funding. The Berlin Model*.
  - Will become publicly available on the [GATEWAY web](#) page by mid-May

The screenshot shows the 'Results and dissemination' page of the GATEWAY website. The page has a navigation bar with links for 'GATEWAY', 'About', 'Events', 'News', 'Results and dissemination', and 'Partners'. Below the navigation bar, there is a breadcrumb trail: 'You are here: GATEWAY > Results and dissemination'. The main heading is 'Results and dissemination'. The page is organized into several sections:

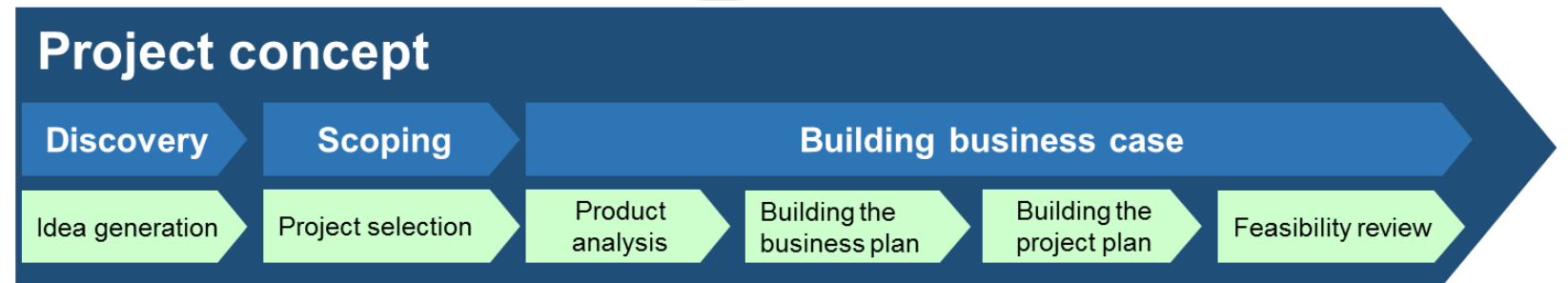
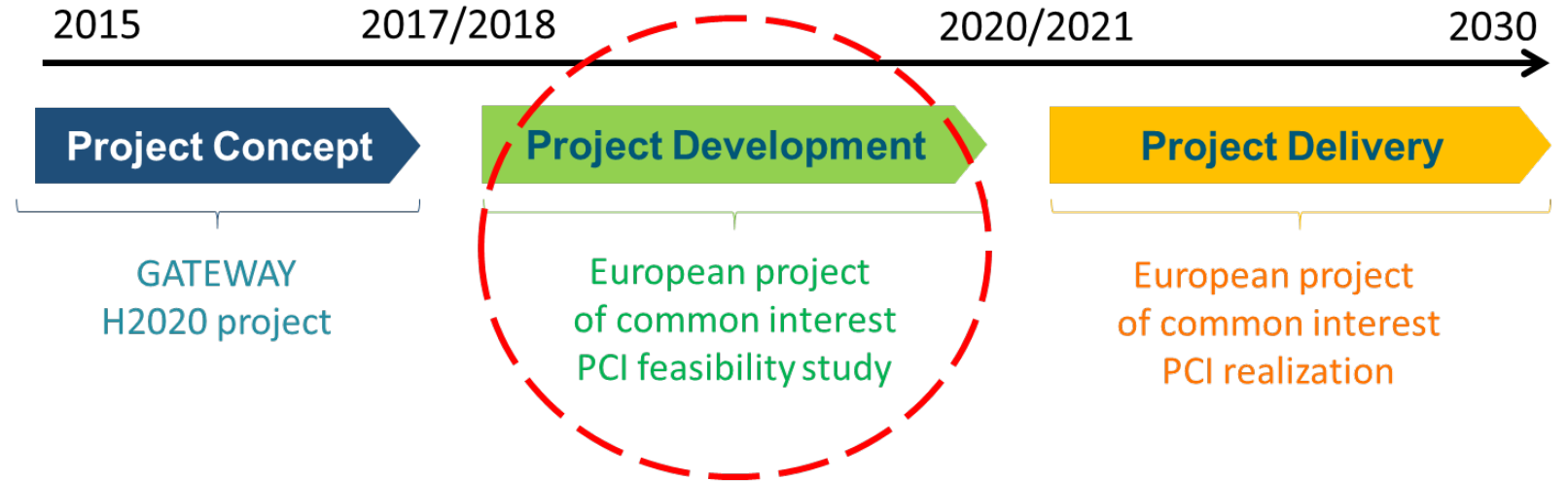
- PUBLISHABLE SUMMARY**
  - [GATEWAY Publishable Summary - Periode 1 \(Month 1-18\)](#)
- DELIVERABLES**
  - PUBLIC DELIVERABLES**
    - [D1.1 Communication plan applicable to the Pilot Case](#)
    - [D2.1 Public perception review \(D2.1 - part 1\)](#)
    - [D2.4 Design for assessing public perception of the Pilot Case \(D2.1 - part 2\)](#)
    - [D4.1 Pilot Case definition](#)
  - PUBLISHABLE SUMMARIES OF RESTRICTED DELIVERABLES**
    - [D4.2 Pilot Case scenarios](#)
- PRESENTATIONS**
  - [GATEWAY Presentation at ZEP's 1st Network Technology Meeting \(NWT1\) \(2015-03-24, Brussels\)](#)
  - [The GATEWAY project - Poster presentation at EERA CCS expert workshop in Brussels - Practical next steps in CCS de](#)
  - [GATEWAY - Developing a Pilot Case for European CO<sub>2</sub> transport infrastructure \(2015-09-15, Brussels\)](#)
  - [Accelerating deployment of CCS in Europe - Invitation to key stakeholders \(2015-10-28\)](#)
  - [H2020 success story: Blir hørt i Europaparlamentet om klimaløsning \(2015-11-26\)](#)
  - [GATEWAY at ZEP \(2016-06-08\)](#)
  - [The GATEWAY project, flyer brought to the European CCS Forum \(2016-10-13\)](#)



# Background and introduction

Looking at funding for the next phase(s) of GATEWAY – mainly the upcoming project development phase (feasibility study) → grants most relevant

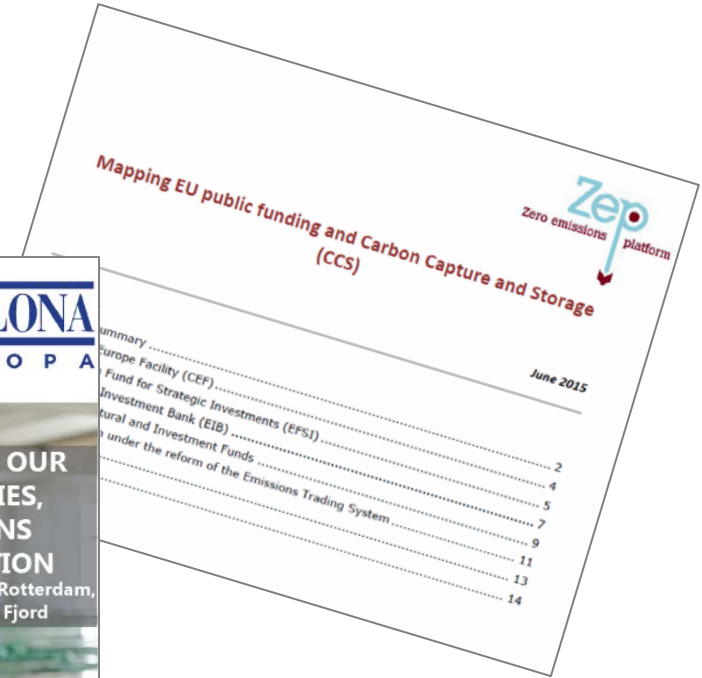
## GATEWAY implementation plan





# Background and introduction

- Other similar work/complementary work:
  - Annex 3 of ZEP's Executable Plan for CCS in Europe: Mapping EU public funding for Carbon Capture and Storage (June 2015)
  - Bellona's mapping of EU funding schemes to develop first infrastructure and storage projects (October 2016)
  - Element Energy commissioned by the European Climate Foundation to develop a roadmap of possible European funds for industrial CCS clusters (expected end of May 2017)





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# The Berlin Model

- The Berlin Model was first presented at a German SET-Plan conference in Berlin in 2012
- The Model suggests a **bottom-up approach** on how to organize and **synchronize funds** for large projects as an alternative to the existing (funding) instruments
- Based on a three-step procedure to identify, coordinate and implement joint projects between MS
  1. Potential project partners from different member states identify a joint research project and present a draft proposal to their respective National Funding Agencies (NFAs).
  2. Upon positive evaluation of the draft proposal by all NFAs, project partners submit a full proposal (in line with the different funding rules of the participating countries).
  3. After the decision of the full proposals by the NFAs or Governmental Bodies, project partners ask European Commission for additional support to incentivize the collaboration and coordination.



# The Berlin Model

- The Berlin Model topic appeared in the H2020 2014/2015 Work Programme
  - *LCE-19-2014-15 Supporting coordination of national R&D activities (a Coordination and Support Action and the foundation for the current GATEWAY project)*
- Quiet since then. And very few know about the Berlin Model concept



# Berlin Model issues

- **Issue #1: the EC legal department's issues with the Berlin Model** (and thus the removal of the Berlin Model topic from the Energy Work Programme 2016/17), which in practice makes it impossible to carry out the third step of the original Berlin Model Concept. This lack of commitment from the EC has a discouraging effect and makes the threshold and experienced risk too high.
- **Issue #2: the lack of a common framework with "rules of the game"**, templates for proposals, coordinated deadlines and evaluation criteria between the MS. Without these things in place, the process takes too much time, and the probability of success is very low. What was originally intended as a faster and non-bureaucratic method turned out to be more complicated in practice.
- **Issue #3: lack of previous examples / success stories**. There have been (and still are) attempts to pursue the idea, but with varying methods and results, and thus it is not straightforward to label the project as a Berlin Model Project. How do you measure success? Does all three steps of the Berlin Model Concept need to be fulfilled? In most cases, it boils down to bilateral cooperation, with minimal intervention from the Commission.



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# European public funds

- **European stimulus packages**

- The European Economic Recovery Plan (EERP)
- The European Energy Efficiency Fund (EEEF)

- **European grants**

- Connecting Europe Facility (CEF)
- Funding foreseen under the reform of the Emissions Trading System (ETS)
  - Reallocation of NER300 funding
  - The ETS innovation fund
  - The modernization fund
- The European structural and investment fund (ESIF)
  - The EU Regional Development Fund (ERDF)
  - The Cohesion Fund (CF)
- H2020
- Research fund for coal and steel

- **European loans and other financial incentives**

- The European Investment Bank
- The European Fund for Strategic Investments (EFSI)
- The LIFE programme



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**CEF** is the the main funding pool available to PCIs. Project promoters must undergo an application process to obtain CEF funding. Next CEF call for grants is expected after the formal adoption of the PCI list (end of 2017). Can apply for grants for studies and grants for construction work, funding up to 50% of the relevant costs. Project specific support ranges from EUR 100k to several EUR 100m.



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**H2020** grants are intended for research and innovation. But CSA actions are highly relevant for projects like GATEWAY, as the scope supports design studies for new infrastructure. Each CSA grant typically EUR 0.5-2.0m. Next relevant call is expected in early 2018.





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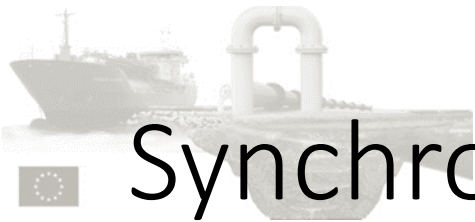
The **ETS Innovation Fund (or NER400)** is intended to be the main funding mechanism of low-carbon technologies during the next phase of the ETS (phase 4, 2021-2030), ~ EUR 10 billion. Some funding could be available before. Most likely up to 50% of relevant costs could be covered. Open to all MS, co-financing possible. Further details expected in early 2018.



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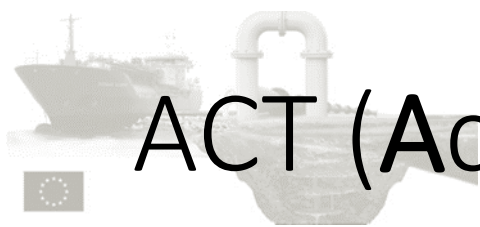


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# Synchronized national funding

- Some European governments have set aside funding for CCS projects
- To make the most out of the national funds, synchronized funding of a joint project between Member States would be the most effective way – similar to the Berlin Model concept
- Example: ERA-Net Cofund ACT (see next slide)
- Other pathways, addressing already committed MS:
  - NSBTF
  - EERA JP CCS
  - ETIP ZEP
  - Mission Innovation
  - SET-Plan steering group

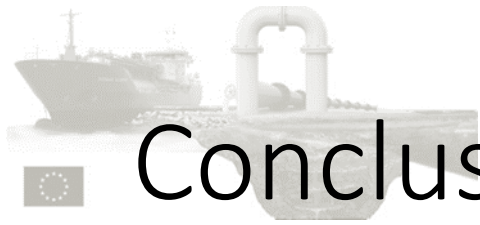


# ACT (Accelerating CCS Technologies)



- ACT is the only ERA Net Cofund on CCS.
- It is coordinated by the Norwegian Research Council, and was developed together with Germany and a consortium of additional 7 countries.
- The European Commission has granted € 12.2 million to ACT in addition to the contributions from each nation's existing R&D programmes, adding up to € 41.2 million for the first joint call.
- The ACT-consortium aims to fund up to 5 projects (up to a total of € 20 M) and a handful of smaller projects (less than € 3 M) in the period 2017-2020.

| Country         | Partner  | Contribution |
|-----------------|--|--------------|
| Germany         | Forschungszentrum Jülich GmbH Projektträger Jülich (FZJ/PtJ)                               | €6 M         |
| Greece          | Centre for Research and Technology Hellas (CERTH)  | €0           |
| The Netherlands | Ministry of Economic Affairs/Rijksdienst voor Ondernemend Nederland (RVO)                  | €4 M         |
| Norway          | The Research Council of Norway (RCN) and Gassnova SF (GN)                                  | €6 M         |
| Romania         | Executive Agency for Higher Education, Research and Innovation Funding (UEFISCDI)          | €1 M         |
| Spain           | Spanish Ministry of Economy and Competitiveness (MINECO)                                   | €0.3 M       |
| Switzerland     | Swiss Federal Department for the Environment, Transport, Energy and Communications (DETEC) | €4 M         |
| Turkey          | The Scientific and Technological Research Council of Turkey (TUBITAK)                      | €2 M         |
| United Kingdom  | Department of Business, Energy and Industrial Strategy (BEIS)                              | €5.5 M       |



# Conclusions



- Many European funding pathways, but not all of them are relevant for CCS projects and a CO<sub>2</sub> infrastructure.
- Of the EU grants, the most promising for GATEWAY per today is the CEF grants, H2020 CSA grants and the ETS innovation fund.
- The original Berlin Model concept is currently not a convenient solution, but the idea of a bottom-up, simplified approach and synchronized funding can still be used to leverage national funding and efforts.
  - ERA Net ACT is one way
  - Also addressing committed MS through forums like EERA JP CCS, ETIP ZEP, NSBTF, Mission Innovation and the SET-Plan steering group



## Acknowledgements

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# GATEWAY

ECOFYS

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FORSCHUNGSZENTRUM



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TNO innovation  
for life

Horizon 2020  
European Union funding  
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