



Nordic leadership in aviation emissions reductions  
Market driven opportunities through regional innovation initiatives

# ANNE DORTHE FETHERS



## Head of Innovative Tenders | CLEAN

- Speciality in innovation policies, innovation models and intelligent public demand. Head of Innovative Tenders at the Danish cleantech cluster CLEAN.
- Co-author for the Danish Government report on Intelligent Public Demand.
- Former Senior Policy Advisor at the Ministry for Economy and Business and at the policy think tank FORA. External advisor for OECD and UN.

# AGENDA

1. UN's sustainable development goals for innovation
2. Market driven opportunities through local and regional innovation initiatives
3. Intelligent public demand and innovative tenders



# UN's SUSTAINABLE DEVELOPMENT GOAL FOR INNOVATION

Sustainable development goal # 9.

We must build a resilient infrastructure, promote sustainable industrialization and foster innovation.

I call it: Innovative solutions to global challenges.



# WHAT IS THE MEANING OF UN's SUSTAINABLE DEVELOPMENT GOALS

The goals have been adopted at the UN General Assembly and the UN will follow up on the goals (like the climate goals)

A global sense has been created that the goals will be realized

Politicians, businesses and consumers begin to act on the basis that the goals will be realized

# GOALS FOR THE AVIATION INDUSTRY

The aviation industry aims to stabilise CO<sub>2</sub> emissions at 2020 levels requiring airlines to offset the growth of their emissions after 2020.

One of the measures required is increasing the use of sustainable jet fuel.

Norway is about to introduce a 1% blending mandate for sustainable aviation jet fuel from 2019.

# RECOMMENDATIONS TO BE CONSIDERED

1. Explore opportunities public-private partnerships to establish fund, grant, pilot/demo plants.
2. Encourage corporate, private and public use of sustainable jet fuels (a Nordic Fly Green Fund?)
3. Include sustainable jet fuel in public procurement with sustainability criteria (military (fuel) and public entities (flights))
4. Develop a joint Nordic tender process for sustainable jet fuels
5. The Nordic region as a pioneer in sustainable jet fuel



# WORKING DIVISION BETWEEN NATIONAL, REGIONAL AND LOCAL LEVELS

The national level sets targets, determines taxes and formulates rules applicable at a national level.

Will there ever be a master plan that shows who needs to do what to achieve the goal?

No! Not like it happened with the energy planning in the 1970's where the goal was to become independent of imported oil from the Middle East.

The current task of switching to sustainable jet fuel is too complex for a national master plan to be made.

# WORKING DIVISION BETWEEN NATIONAL, REGIONAL AND LOCAL LEVELS

The local level must implement concrete initiatives in accordance with national goals and rules.

Can the goals be realized alone by local initiatives?

No! The goal for sustainable jet fuel can only be realized by exploiting synergies between energy, waste and transportation.

Need for local cooperation, that is, use for the regional level. Can a master plan be drawn up at a regional level? No!

Innovative experiments in the market through intelligent public demand is needed.

# INTELLIGENT PUBLIC DEMAND

A societal challenge is identified that needs to be solved and those who have to solve the challenge declare themselves willing to participate in an innovation project – the problem owners. If there are no problem owners, there is no project.

The solution is provided by competent innovative consortia / teams in a mix of competition and innovative cooperation in dialogue with the problem owners.

The problem owners (contracting authorities) ensure that the best solution is implemented.



# THE CLEAN INNOVATION MODEL

1. An innovation platform that identifies the challenge. Covering barriers. Confirming with problem owners and developing the terms for the tender.
2. Procurement is made with a limited number of innovative consortia / teams are prequalified.
3. The prequalified consortia / teams enter into a dialogue phase with the problem owners (the contracting authorities) and prepare an offer.
4. The best offer is chosen by the problem owners (contracting authorities) that ensure that the proposal is implemented either by completing it themselves or by entering a contract for implementation with the winning consortium / team.

# THE CLEAN MODEL



# EXAMPLES OF USE OF THE CLEAN INNOVATION MODEL

1. Big data for smart cities. Create a marketplace for trading of big data. The winner was a consortium led by Hitachi in a competition with two other consortia led by IBM and Accenture. The problem owner were the City of Copenhagen and the Capital Region.
2. Recycling of building materials. The winning consortium consists of RGS90, DJ Miljø- og Geoteknik and Søndergaard Nedrivning. The problem owners were Kolding municipality, Faxe municipality and Amager Ressource Center.
3. Sorting and reprocessing of plastic waste, which ensures better recycling than previous seen. The tender is in progress. Problem owners are 40 municipalities and the Capital Region.



Big data for smart cities. Create a marketplace for trading of big data. The winner was a consortium led by Hitachi in a competition with two other consortia led by IBM and Accenture. The problem owner were the City of Copenhagen and the Capital Region.





Recycling of building materials. The winning consortium consists of RGS90, DJ Miljø- og Geoteknik and Søndergaard Nedrivning. The problem owners were Kolding municipality, Faxe municipality and Amager Ressource Center.





Sorting and reprocessing of plastic waste, which ensures better recycling than previous seen. The tender is in progress. Problem owners are 40 municipalities and the Capital Region.





# A STEP TOWARDS SUSTAINABLE JET FUEL. A CLEAN SUGGESTION TO THE NORDIC COUNTRIES

1. Goal: That the Nordic region will become a World pioneer in the production and usage of sustainable jet fuel, which will lead to stabilising CO2 emissions for the aviation industry.
2. The capital regions, capital cities and the major airports in the Nordic countries (problem owners) secure the infrastructure by identifying and tendering potential biomass for future production of sustainable jet fuel.
3. An offer is being made where consortia compete to make the best proposal for production of sustainable fuel for the aviation industry.
4. The winner is awarded a contract to supply sustainable fuel to the aviation industry in the Nordic countries.

THANK YOU!

Anne Dorth Fethers  
mail: [adj@cleancluster.dk](mailto:adj@cleancluster.dk)  
mobile: +45 26251394  
skype: Anne2207

