

Green Transition of the healthcare sector in the Region of Southern Denmark



An estimated 4,4% of the global emissions of GHG's are caused by the healthcare sector, of which 71% happens in Scope 3 (Karlner et al., 2020).

In the Region of Mid Jutland an estimated 70% of emissions happen in Scope 3 (Klimaregnskab, 2019).

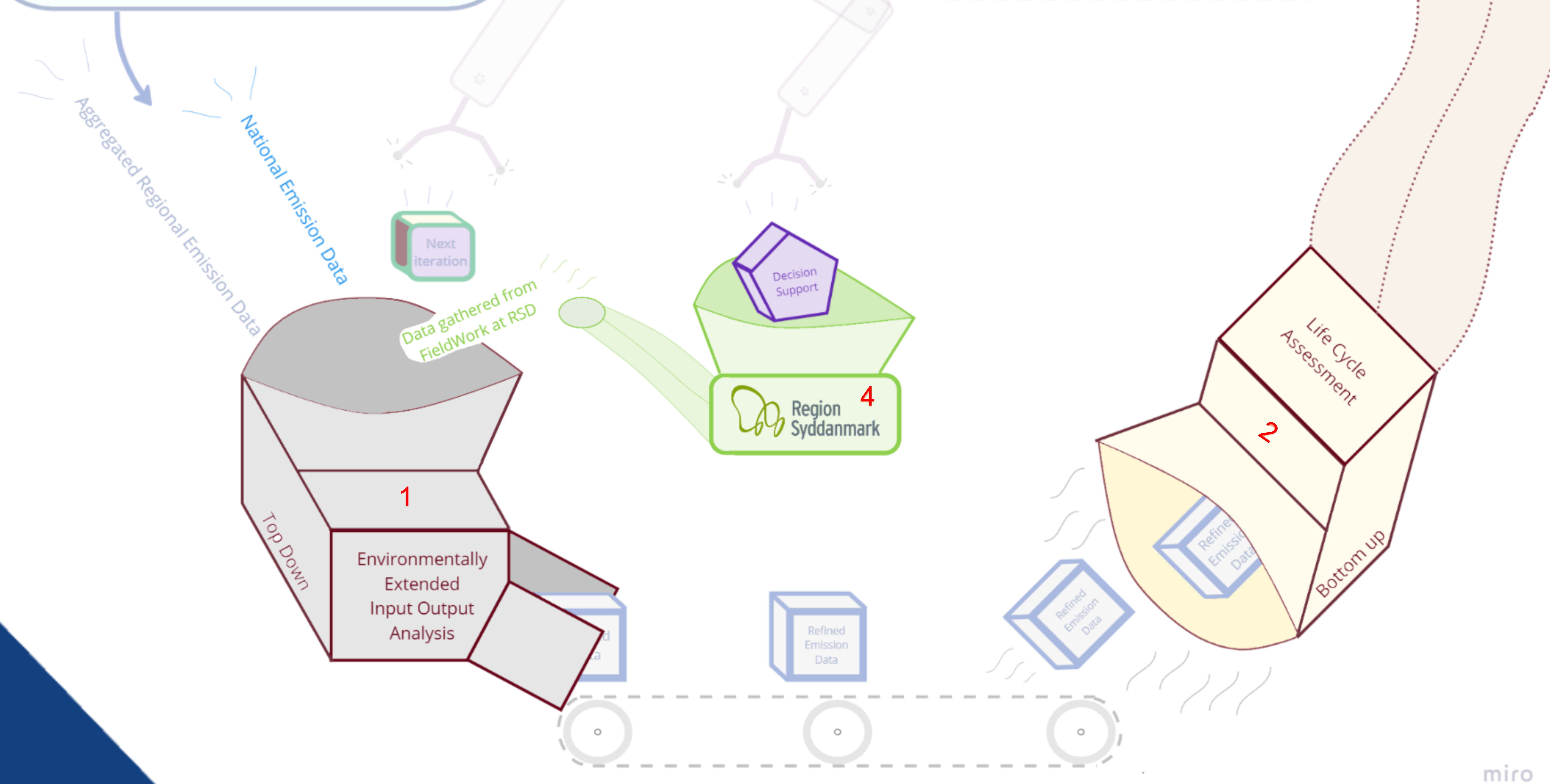
This, combined with the Danish Government's goals for reducing CO2 emissions by 70% in 2030 and becoming CO2 neutral by 2050 (Climate Act, 2020), is the background for a full scale analysis into how to measure and reduce emissions of the Region of Southern Denmark (RSD).

1. Low resolution, high scale. EEIOA will provide a bird's eye view of the emissions from the Region. This can be utilized as a hotspot analysis to uncover opportunities of significance.

2. Medium resolution, medium scale. LCA will be used as a tool to determine emissions of different technical solutions or otherwise significant areas (e.g. time-, energy-, or resource-intensive technologies or practices). Thus uncovering opportunities of specificity.

3. High resolution, low scale. Utilizing implementation- and co-design strategies can be costly in terms of time but will determine whether innovation can actually exist. Innovation-levels are not determined by how cool a technology is perceived, but how well it will be integrated and the likelihood of its functionality within the context where it is to be implemented. This perspective will uncover the realisticness of the opportunities discovered along the prior processes.

4. High resolution, high scale. Decision support towards future decisions and implementation strategies is at the crux of the project. Crucial feedback from discoveries along the way will be fed back into the system to improve future iterations. Secondary objectives include translating discoveries to similar sectors.



Goal

The main goal of the study is to uncover viable CO2 reduction paths for the healthcare sector in the Region of Southern Denmark (RSD)

Approach (in steps):

- Map and review literature on best practices for reducing GHG emissions from a Healthcare sector.
- Develop an accounting model for RSD using a hybrid approach combining EEIOA and LCA tools. The model features include ways to assess how Green Transition strategies will impact the future.
- Develop emission reduction paths for the Region to use as decision support. Reduction paths will be modelled in future 'Development Scenarios' for 2030 and 2050, respectively. Reduction paths will be aligned with regional, national and international policy targets.
- Include a Techno-anthropological perspective to make sure the changes align with the expectations of stakeholders, so innovation can take place. (Stakeholders include but is not limited to: patients, and healthcare-/ regional- personnel)

Literature:

Josh Karlner and Scott Slotterback, *HEALTH CARE'S CLIMATEFOOTPRINT*, Arup & Healthcare Without Harm (report)

Klimaregnskab, 2019 - *Klimaregnskab 2019 for virksomheden Region Midtjylland* (report)

The Danish Climate Act, 2020 - *Ministry of Climate, Energy and Utilities*, file no. 2019-2855

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