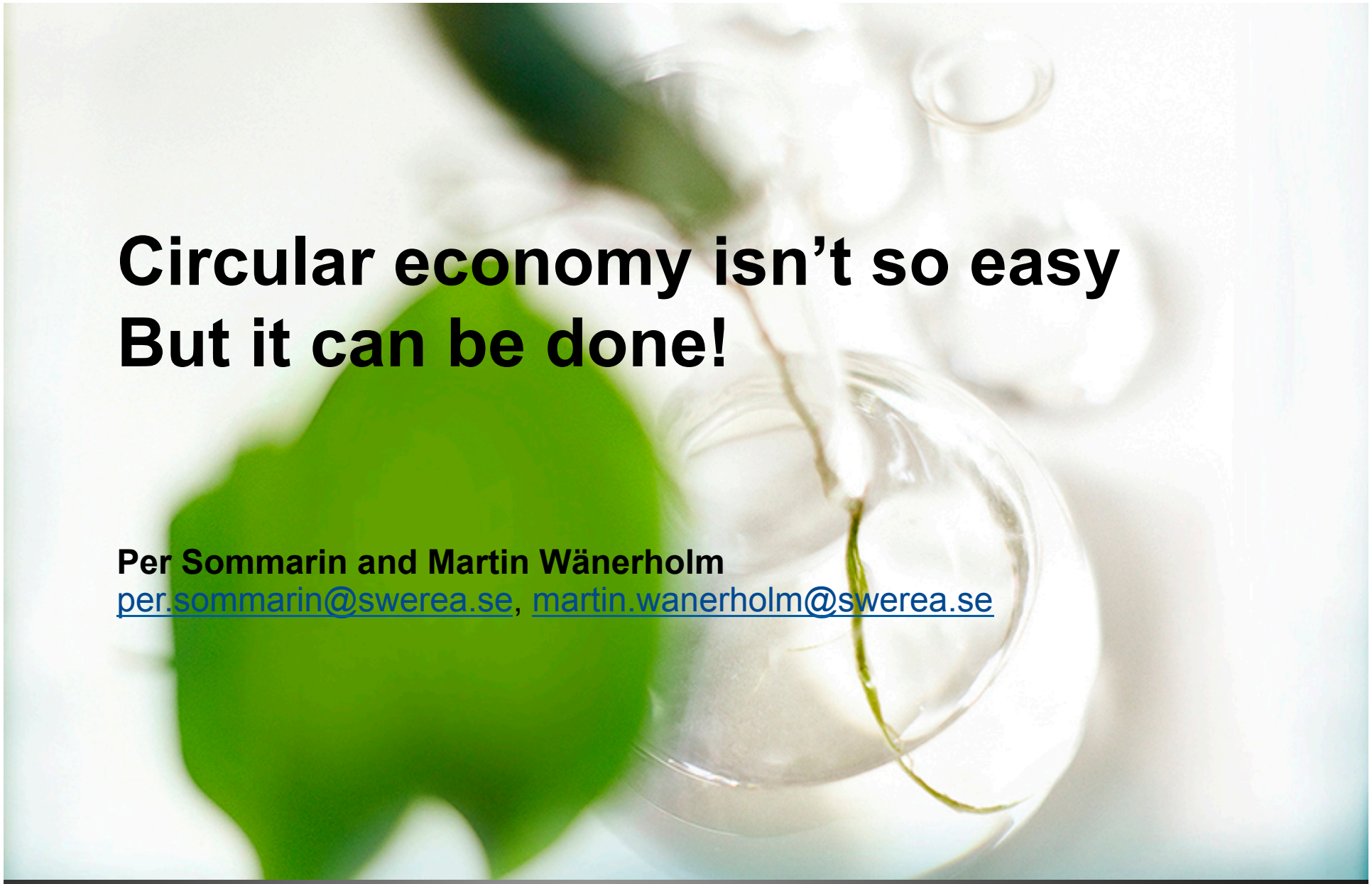

Circular economy isn’t so easy
But it can be done!

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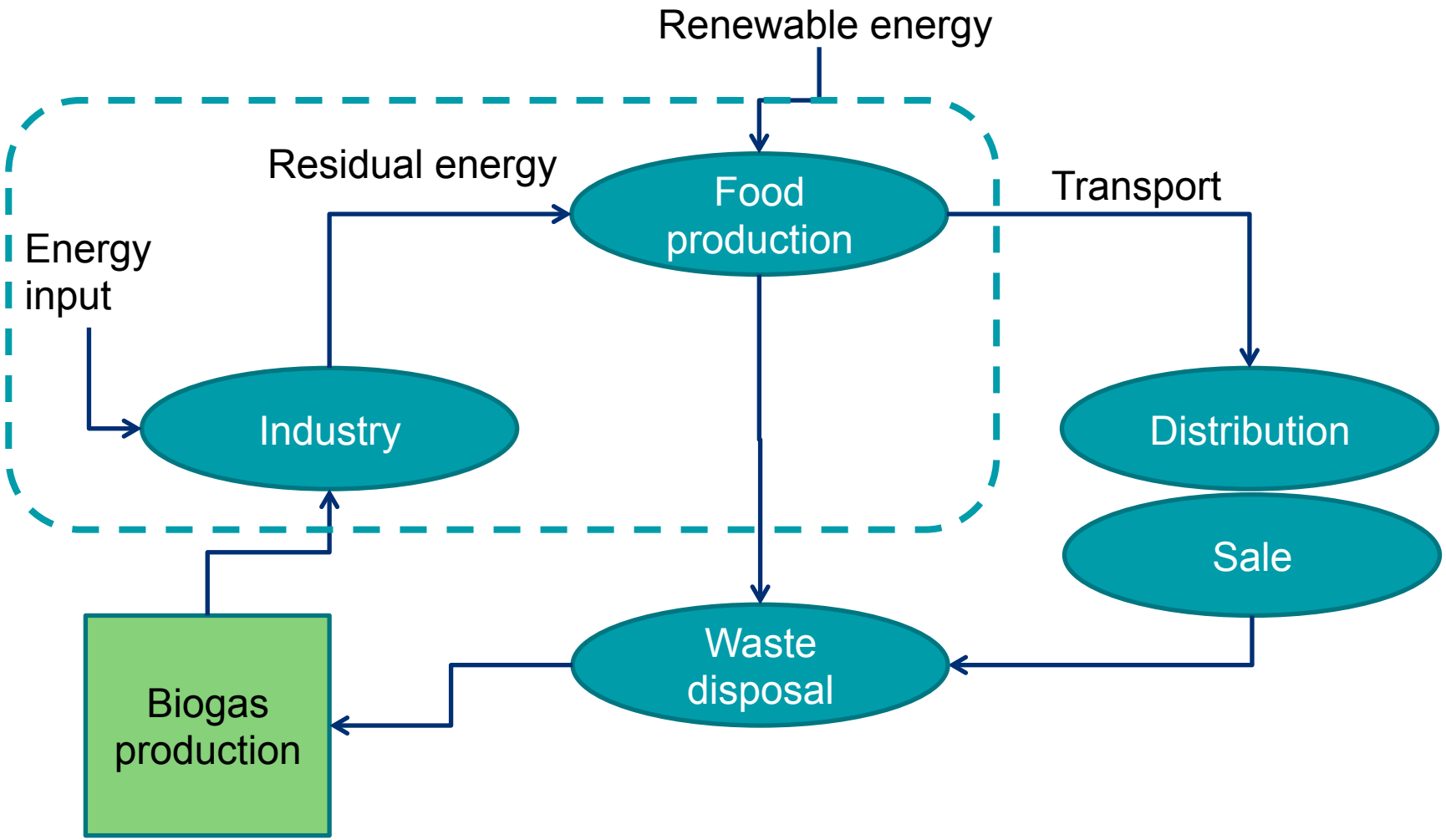
Our idea

- Investigate the conditions for a resource-efficient production of locally grown tomatoes and other vegetables in Sweden through the utilization of low grade industrial waste heat.

Scope of the pilot study



Questions

- What are the environmental, technical and economic potential of a waste heat exchange between an industry and a greenhouse cultivation of vegetables?

- What is needed to realize the waste heat exchange between an industry and a greenhouse cultivation of vegetables?

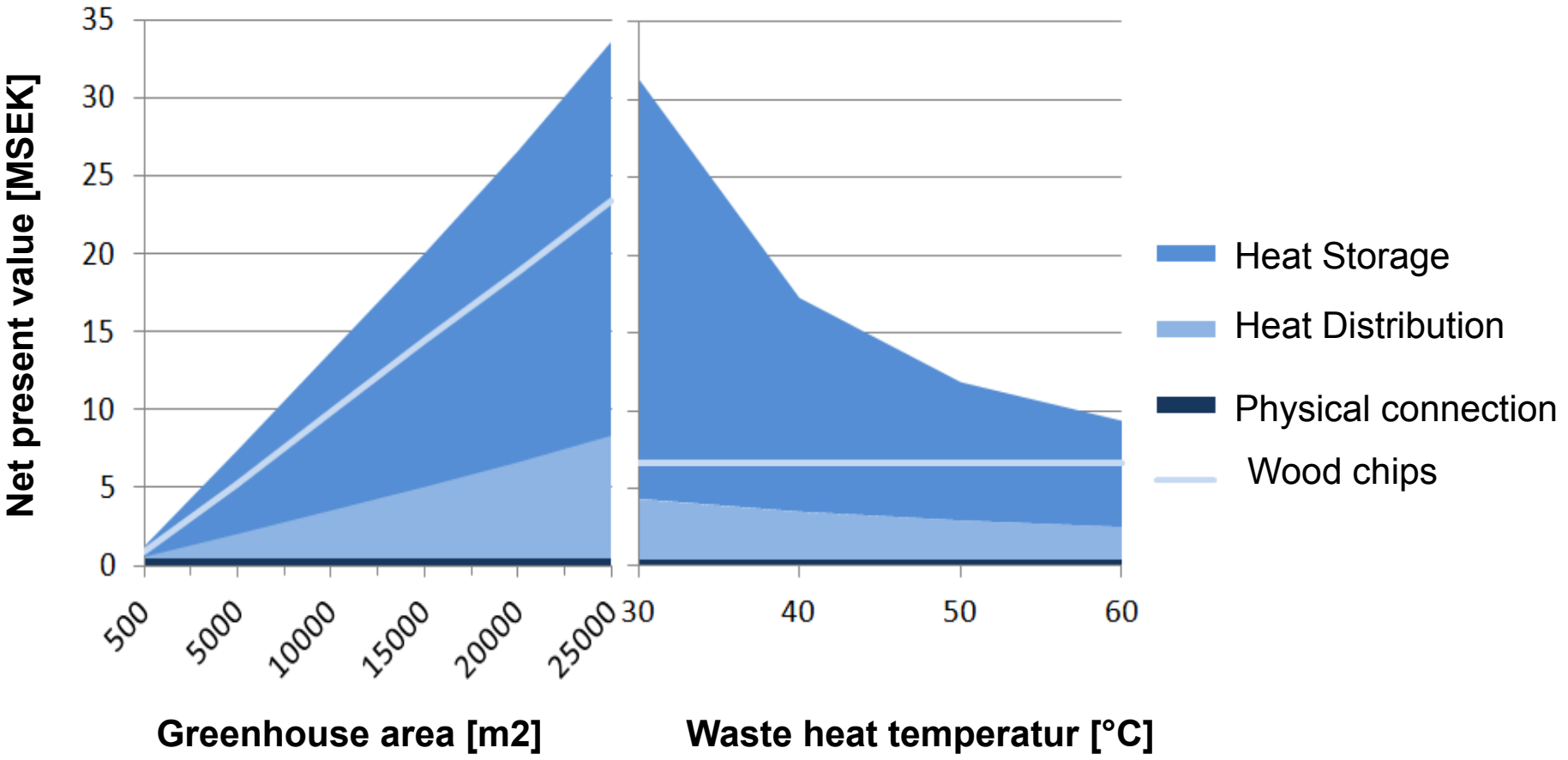
Environmental potential

- Replace tomato imports from Netherlands
- Emission reduction: 90,000 tons CO_2 eq
- This equal emissions generated by:
  - Gasoline cars running 11,000 times around the globe
  - Consumption of 4400 tons of beef

Technical potential

- There is enough of industrial waste heat in Sweden
- There is no technology adapted to Swedish conditions for the utilisation of low-grade waste heat
- Using the conventional technique is both expensive and impractical

Economic potential



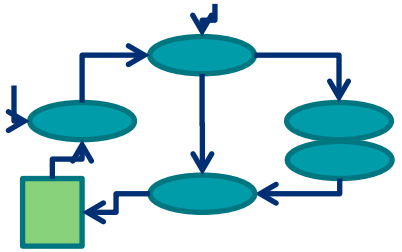
Barriers

- Limited opportunities for finance
- Short payback priority
- Partial lack of available land
- Lack of continuous waste heat flows(foundries)
- Lack of knowledge about the available amount of waste heat
- Uncertainty about the design of agreement

Driving forces

- Cost savings / increased revenues
- Concern for future legal requirements
- Reduced environmental impact
- Strong environmental profile

Further research from the pilot study



- How do we close the loop?
- How to develop technical solutions that are economically and technically justifiable?
- How to develop methods to create symbiotic relationship between several different actors?
- How to design new regulations to support the circular system?
- Develop new agreements and business models.

Scientific Work for Industrial Use
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