

Business model
innovation in the local
energy market of Umeå

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Ambitions

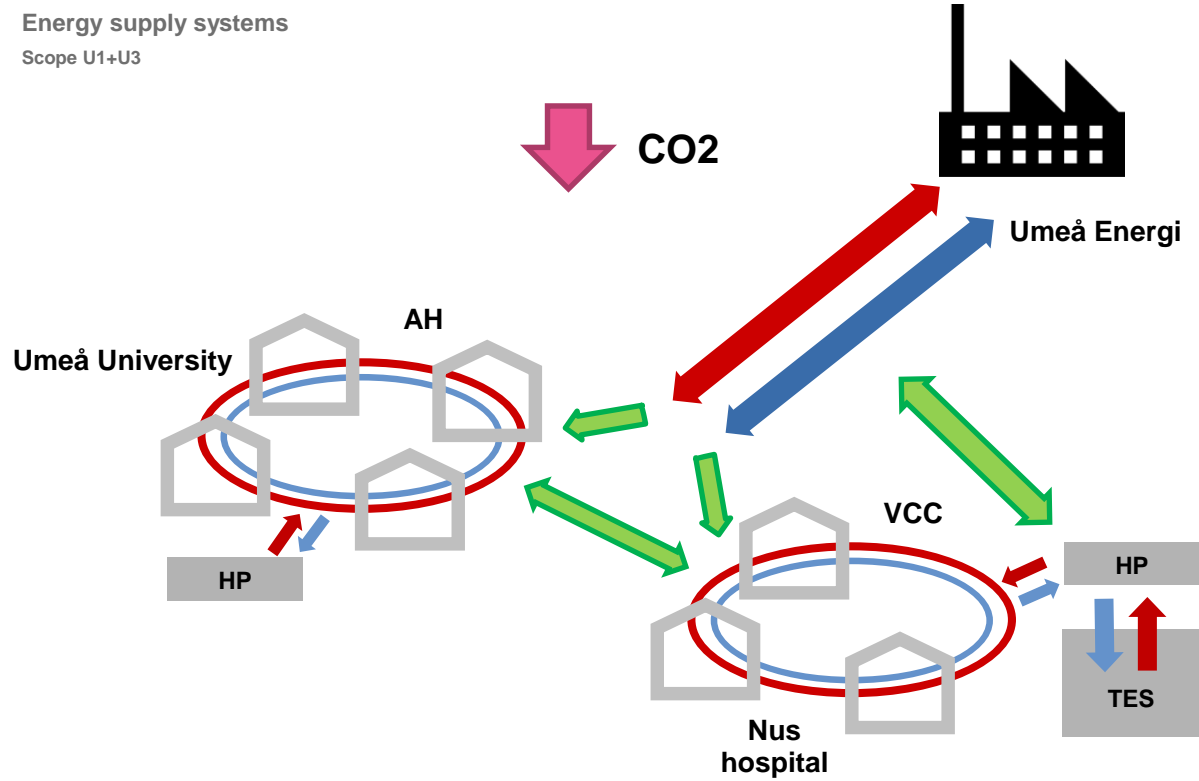
- Develop a new business model to promote sharing values of common value chains of energy
- Monitor and peak load shaving of energy in a Smart City hook-up
- Test Gamification to promote tenant awareness and reduction of energy usage.

=> lowered CO₂ emissions





Energy supply systems
Scope U1+U3





Results of Umeå (U1- U4a)

- U1- 3 BMI; Model of value sharing w value components => POC of Local market place of energy=> *could be generic*
- U2- Peak load shaving; 7-8% energy savings, > 20% peak load shaving => *replicable practically anywhere in EU*
- U4a- Gamification; Tests completed. Too expensive and too low interest of tenants (13%)=> *not applicable as such*



Impacts

- Reduced climate impact by energy efficiency**

- Measured by: CO2-ekv/annum (or others as such) –
- Obtained by:

1. Business actions on local energy market place(U1-3)
2. Peak load shaving of district heating during heating seasons. (U2)

- Deepened cooperations along project partners**

- Established Letters of understanding local partnerships
- Concepts- POCs- of mutual interests
- Prototyping in Gamification sprints

- Building knowledge (of BMI and tech cooperations)**

- Software engine developed for local marketplace of energy
- Understanding of peakload shaving potential
- Difficult to attract attention on Gamification application

table 1. Results of testperiod from 2018-12-28 to 2019-04-03 (see appendix 1 for details)

Item	Results	Note
Energy savings in buildings (%)	7,8 %	Mean of all building complexes
Peak load shaving potential (%)	23 %	At a duration of 2hrs and outdoor temp between -5°C/ +5°C
CO2eqv- reduction TOTAL (kg)	946 kg	CO2, N2O, CH4
CO2eqv- reduction per invested Euro (kg/€)	0,946 kg/€	At investment=10k€, annuity= 3years, discount rate= 8%

THANK YOU!

RUGGEDISED

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resilient cities for all



Jörgen Carlsson, Umeå Energi AB



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