



Pilot Implementation Grafing

Heat and Biogas storage in combination with combined heat and power and Power to Heat

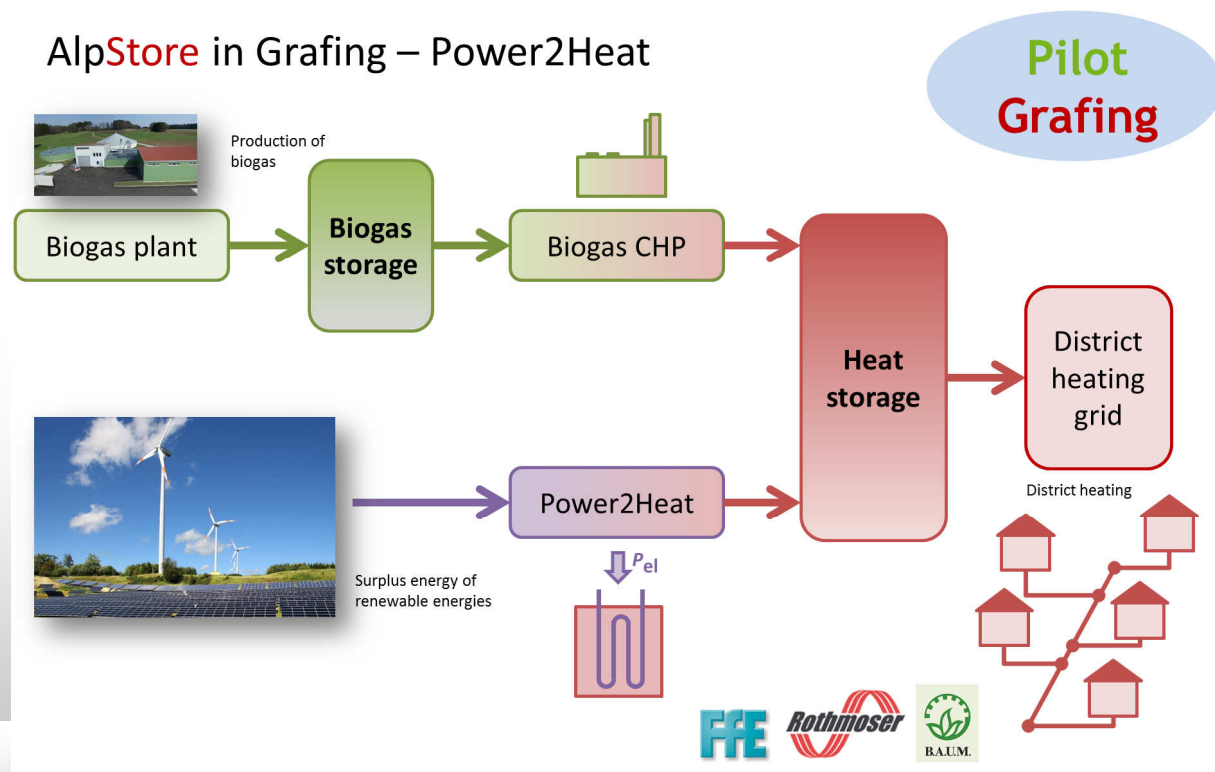
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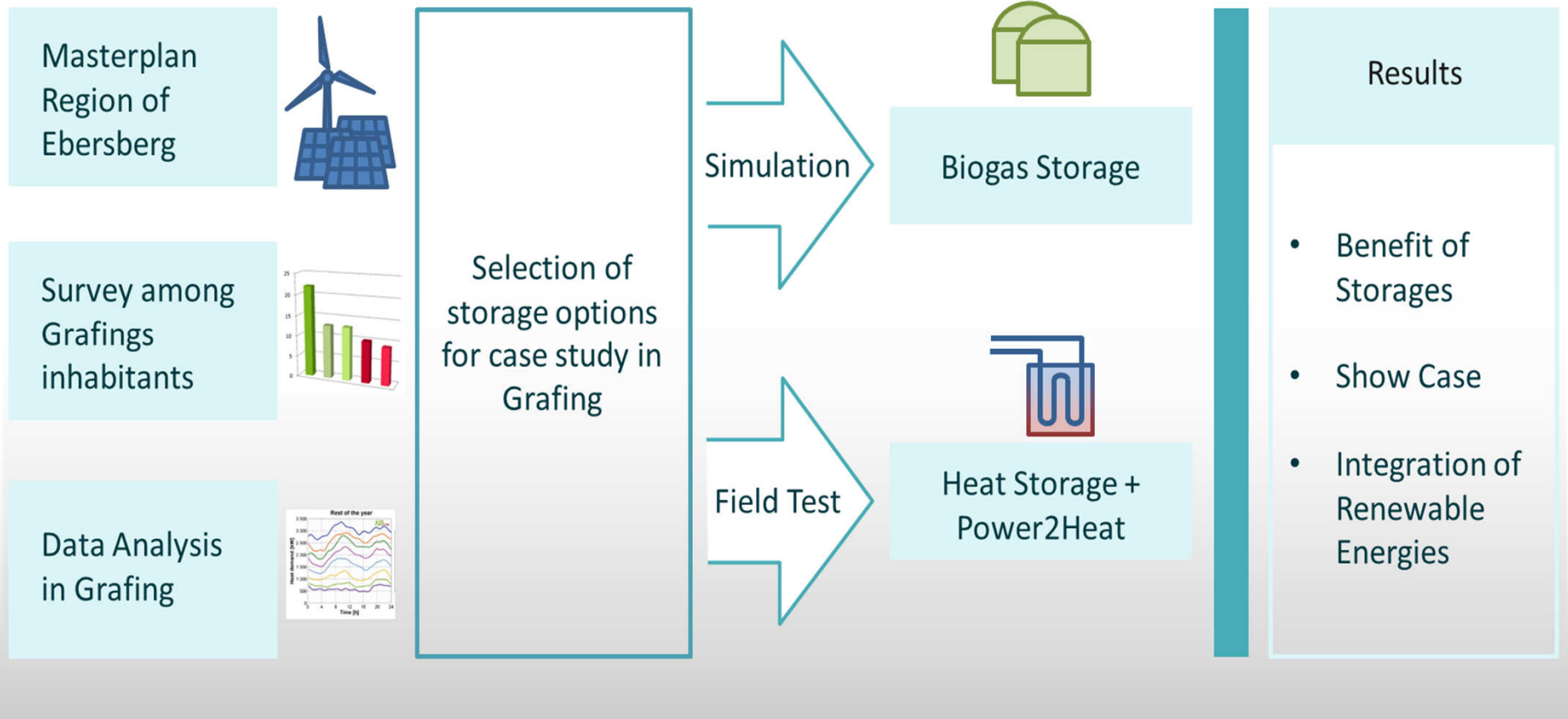
Before AlpStore: Our Challenges

1. Uncertainties on the acceptance of stores
2. Different possibilities to build central stores
3. Expected new renewables in the region

AlpStore in Grafing – Power2Heat



During AlpStore: Our Activities



After AlpStore: Our Achievements

- ✓ Masterplan storages for the region of Ebersberg
- ✓ Survey among citizens of Grafing
- ✓ Simulations on future storage needs in Grafing

- ✓ Installation:
 - ✓ Heat storage
 - ✓ Power to Heat



After AlpStore: Our Recommendations

1. Power to Heat units can help to integrate fossil fuels for heating with renewables such as photovoltaics and wind. Use them when you have huge heat consumers such as district heating networks.
2. The acceptance for heat stores is quite high, therefore try to implement them when other storage options are not accepted
3. Heat stores are relatively cheap, therefore you can use them as a first step towards stores in you region



First Experiences with the P2H Plant

- no problems so far from a technical point of view (fast response time, no electric problems)
- many calls happen during the morning (5-11 pm)
- all calls were short (1-10 min)
- not enough calls so far to support the district heating noteworthy
- number of calls depends on auction price

