

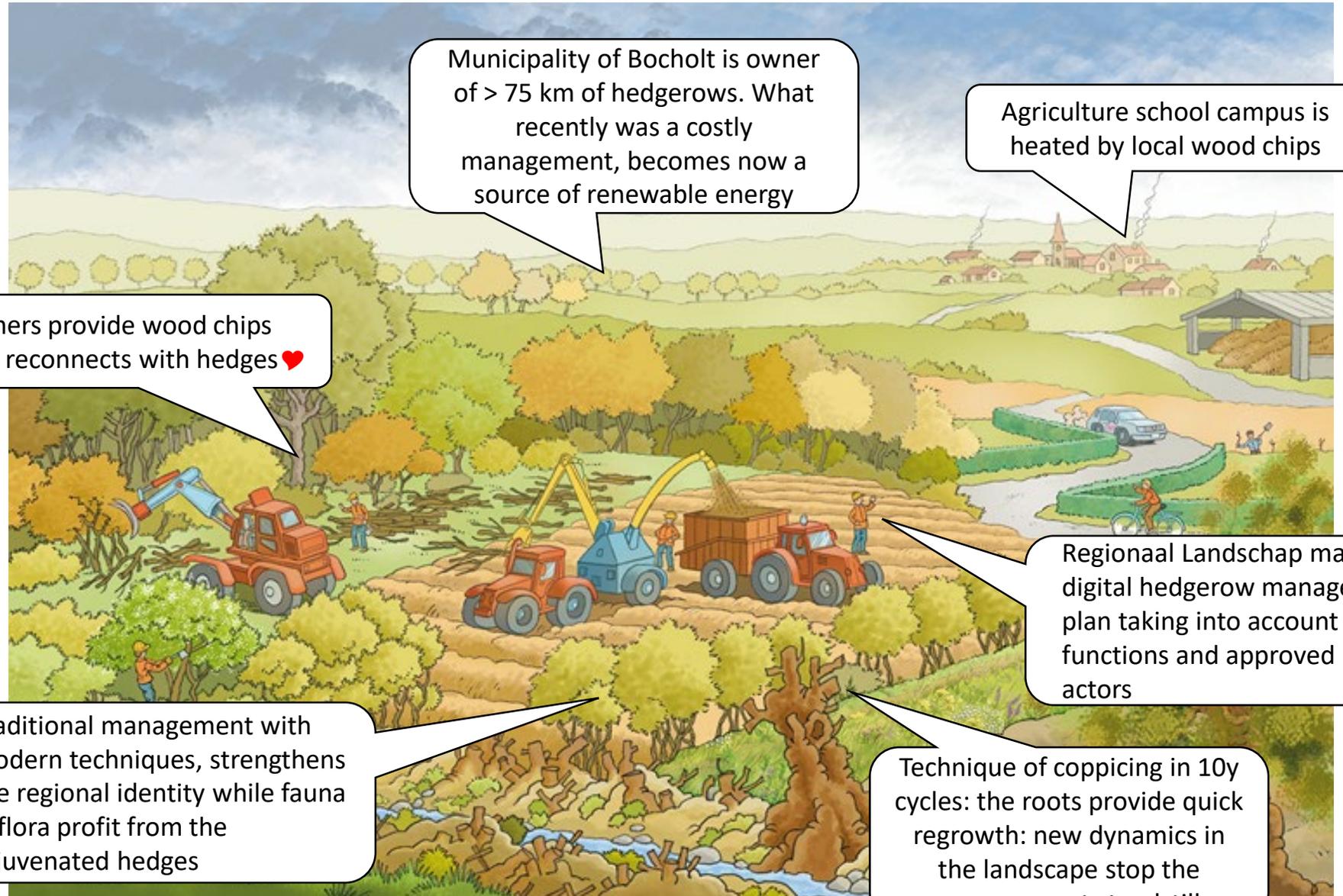
# Belgian pilot project: Renewable energy saves biodiversity

## The case of a local energy cooperative in Bocholt



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## The case of a local energy cooperative in Bocholt



Municipality of Bocholt is owner of > 75 km of hedgerows. What recently was a costly management, becomes now a source of renewable energy

Agriculture school campus is heated by local wood chips

Local farmers provide wood chips -> Farmer reconnects with hedges ❤️

Regionaal Landschap makes a digital hedgerow management plan taking into account all functions and approved by all actors

Traditional management with modern techniques, strengthens the regional identity while fauna & flora profit from the rejuvenated hedges

Technique of coppicing in 10y cycles: the roots provide quick regrowth: new dynamics in the landscape stop the management standstill



# Challenge: 'hedgerows' anno 2019 -> patients for the nursing home



## Since 1945:

- Coal, oil fuel, gas... replace energy wood
- Chemical fertilizers + machinery  
-> farmers detach from local ecosystems
- Economic value of hedgerows decreases  
-> hedgerows 'disappear' or are neglected

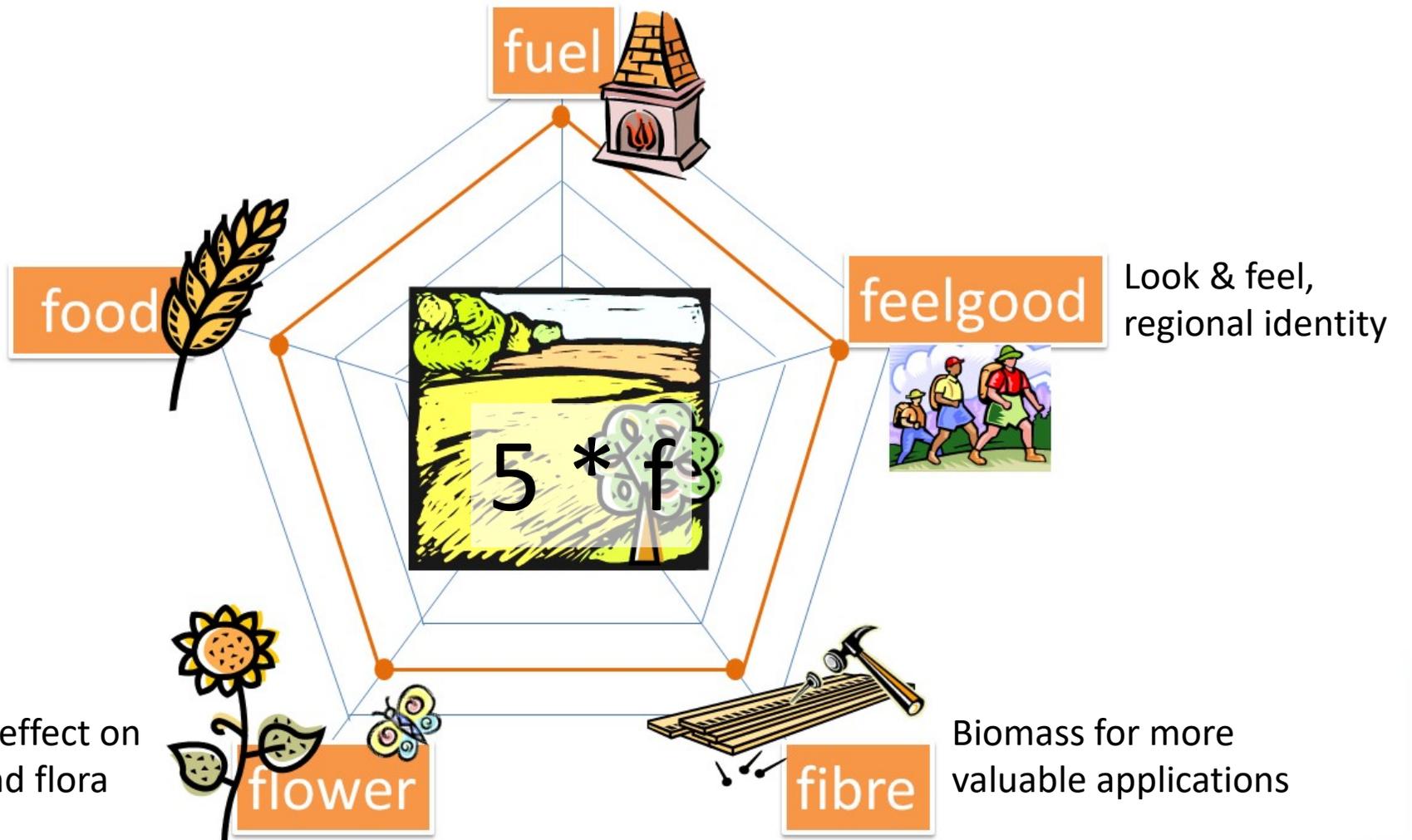
Agriculture used to benefit from hedgerows: giving healthy soil, draining, breaking wind, protecting crops from drought hosting natural enemies of pests, providing clear boundaries...

No management since 1945  
No rejuvenation  
Decay: high costs are coming  
Relation between hedge and farmer is not good

# Restarting hedgerow management = Keeping the balance between 5 functions

Renewable energy < 50 km's

No short rotation energy  
crops on farmland  
Rediscover benefits for  
farming



# Solution: Can we turn the tide ?



Yes we can ! Results after 2-3y

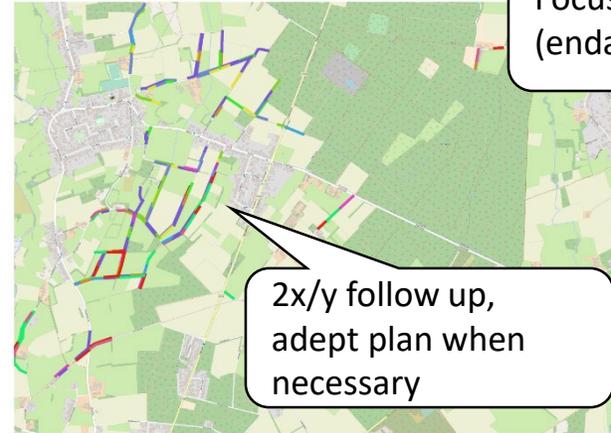


# How did we do this ? We combine: Green, Local, Social, Economical

Planning future management with all local actors in dynamic plan



Focus on optimal conditions for (endangered) species



2x/y follow up, adept plan when necessary

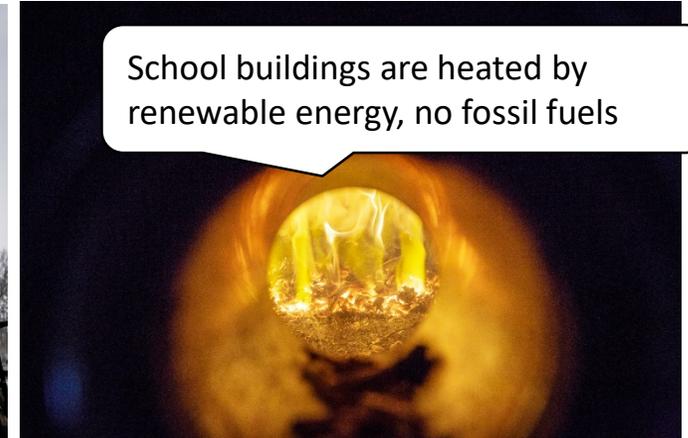


Yellow-hammer

Local farmers harvest and replant trees where commonly decided.



School buildings are heated by renewable energy, no fossil fuels

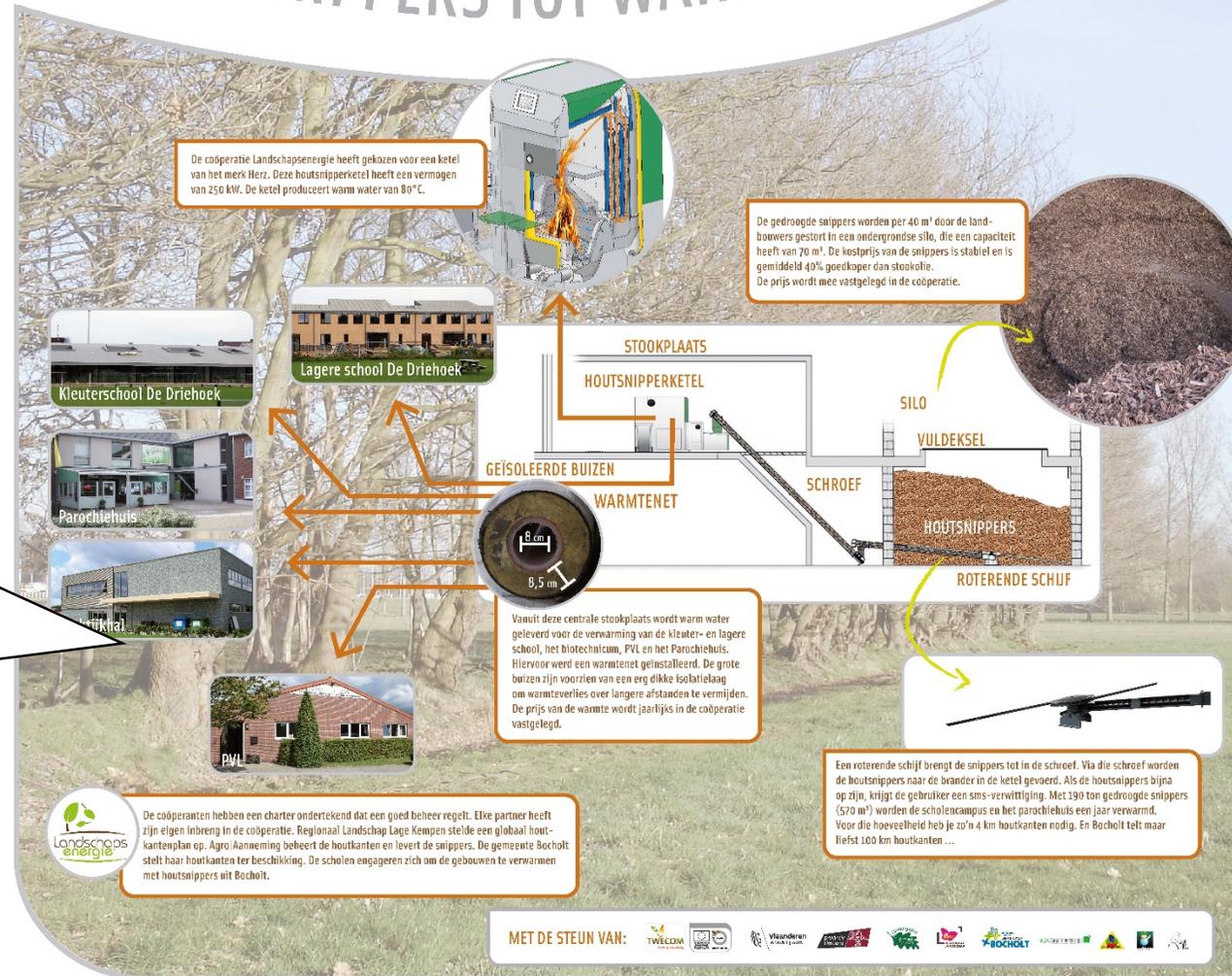


Farmers are paid by the school for the wood chips, so money for the heating stays in the local community

# Heat network connects the 250 Kwh boiler to 5 units on the school campus



## VAN SNIPPERS TOT WARMTE



BOILER and HEAT NETWORK are run by a local cooperative that includes all the local partners (the municipality Bocholt, the 4 schools, Regionaal Landschap Lage Kempen, farmers organisation ABC)



- lokale houtsnippers verwarmen gebouwen in de eigen gemeente -

# Finding support for energy from the landscape

Investigative journalism: the schoolkids find out why it is not such a bad idea after all...



Numerous guided tours, discussion meetings, visits to similar boilers, leaflets, film, fb, municipal gazette...

# The final piece of the puzzle: a central Biomass hub

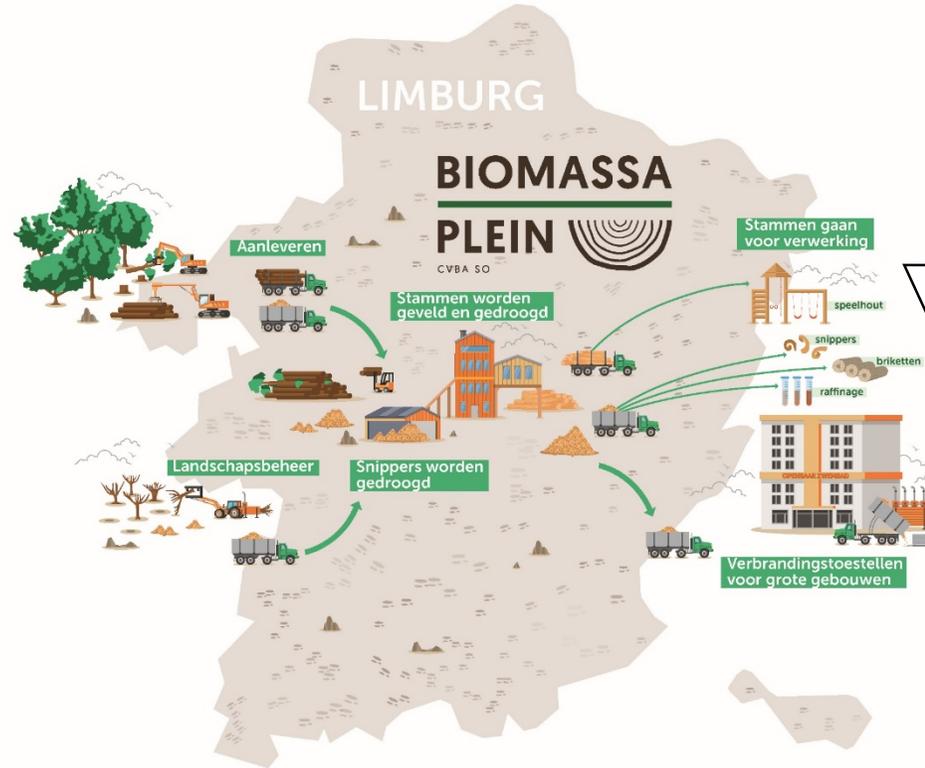


# BIOMASSA

# PLEIN



CVBA SO



1. Biomass is dried with waste heat from an incinerator
  2. Selection to highest possible value
- PRODUCTS NOW FEASIBLE**
- > woodchips for large high efficiency boilers with filtered emissions
  - > construction wood

## FUTURE DEVELOPMENTS

- > cellulose
- > lignin
- > polymers
- > medicine

Giving **value** to local biomass is difficult due to a too small and fragmented scale...

But when we collect, process and market **centrally** we can turn biomass 'waste' into products

Transport < 50 km's CO2