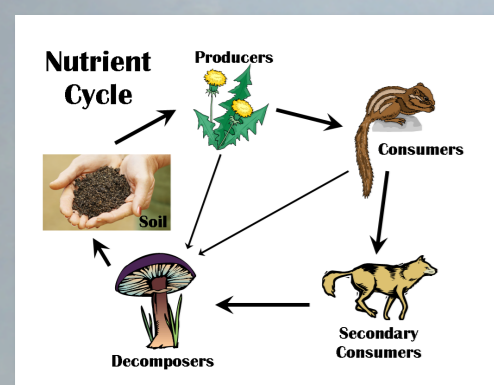


Cities like Forests

From coffee waste recycling to sustainability!



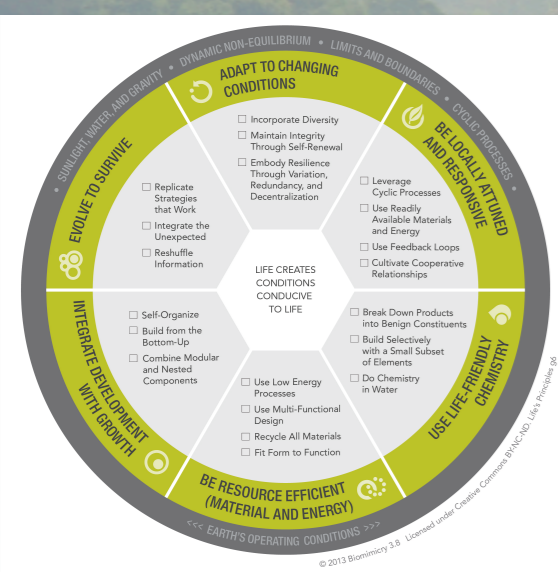
There is no waste in nature.
Image : www.rbnc.org

In a world of less energy and resources, Biomimicry uses Nature as a Mentor to solve actual problems. Cities may be considered as organisms and the study of its metabolism may lead to systems optimization and sustainability using an ecosystemic approach.

Coffee waste recycling used to produce high quality mushroom is the first step for the establishment of circular economy in urban environment. The objective is to establish a complete ecosystem fulfilling basic human needs (food, drinkable water, energy, oxygen,...).

The positive side-effects will be the establishment of innovative processes in urbanization. This will lead to a better comprehension on how ecosystems works, will help rehabilitating polluted places and promote sustainability. These advancements will also help for space exploration.

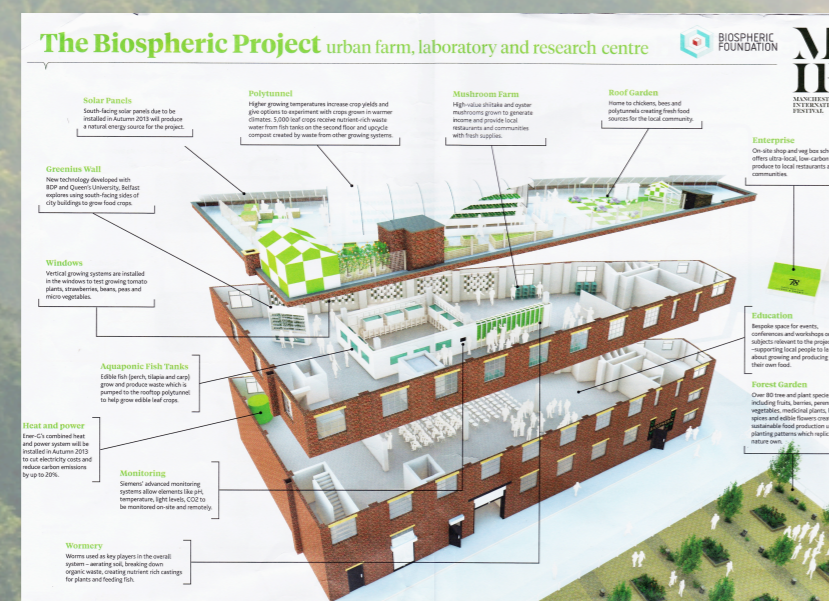
Coffee waste is actually used for the production of high quality mushroom (*Pleurotus ostreatus*). Production may be diversified and other organic waste tested. Champost is also actually tested for biomethanization, compost production and treatment of polluted soils. We are looking for partners.



Life principles :
Basis for ecosystemic solutions
Image : biomimicry 3.8



Permaculture principles
as design-tools.
Image : Holmgren's permaculture flower



Biospheric Project :
already existing building in Manchester
Image : Biospheric Foundation, Manchester, UK



Background Image : Forest scenery of Gede Pangrango, Indonesia in the morning. Credit CIFOR/R.Martin

Morpho-Biomimicry, B
GAL du Condruces, B
Centre de Technologie Agronomique, B
Haute Ecole Charlemagne ISla Huy, B
ADISIF, B
Winergies - Blue Economy, B
Biospheric Foundation, UK
Ryerson University, Ca



Morpho-Biomimicry
Green can be Gold



CENTRE DES TECHNOLOGIES AGRONOMIQUES



heCh
CHARLEMAGNE



Fungi Up!

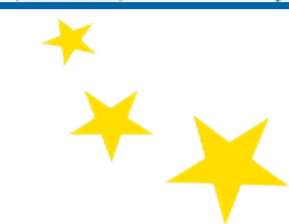
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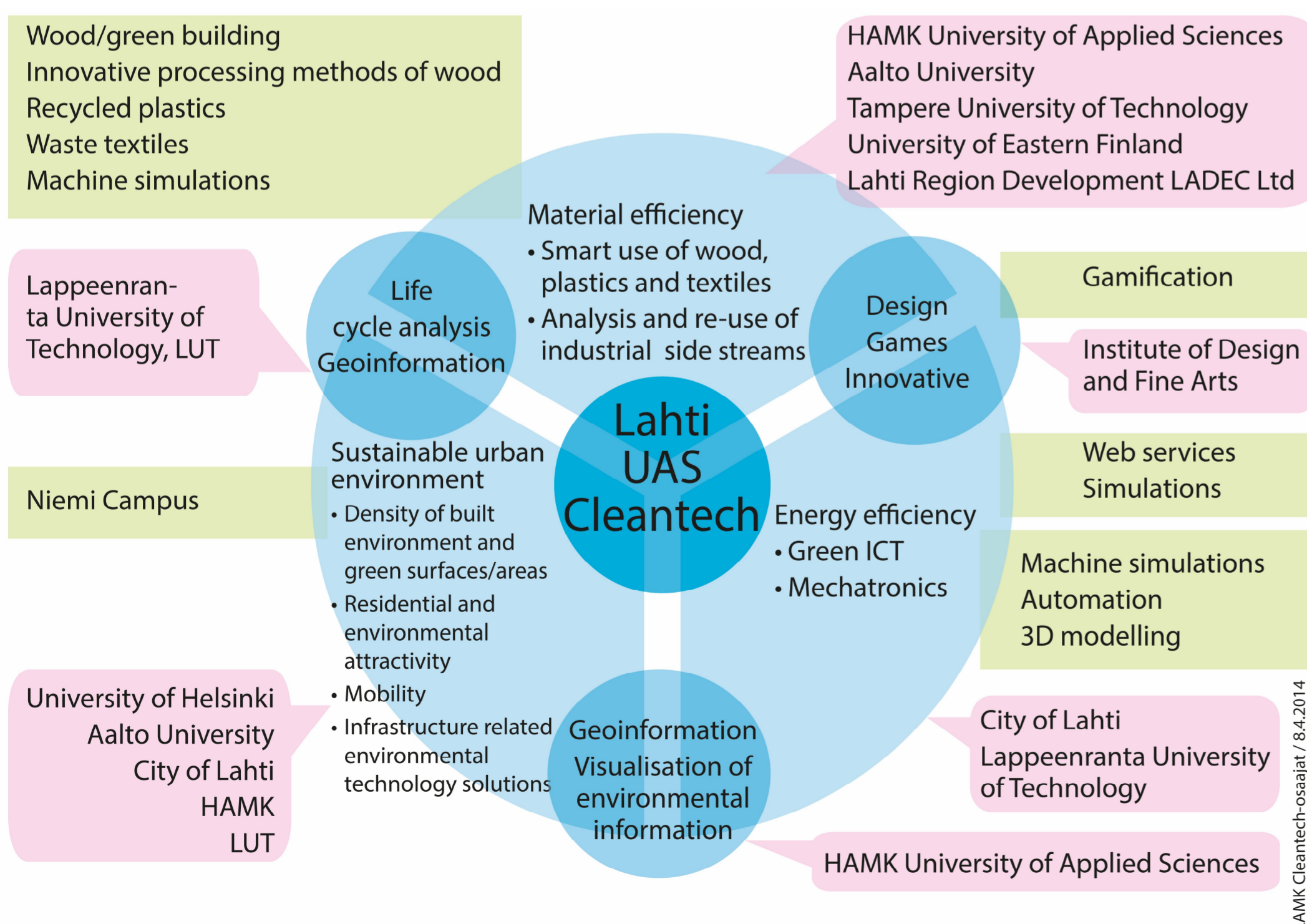
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Environmental research at Lahti UAS

Environment is one of the three focus areas of Lahti UAS. We aim at developing cleantech solutions, services, products and operations in three key interest areas, which are sustainable urban environment, material efficiency and energy efficiency (Figure). We have a long tradition in managing environmental projects funded by both national and international funding agencies and also long tradition in co-operation with companies, national and international partner universities and other stakeholders like municipalities and foundations.

Key interests: * Material efficiency * Energy efficiency * Sustainable urban environment *



Topics of funded projects:

- Energy and resource efficiency in SMEs, industrial sites and events
- Risk assessment of oil tanks
- Helping Finnish energy SMEs to enter African markets
- Waste water treatment and storm water management
- Developing of future environmental Campus

Lahti University of Applied Sciences (Lahti UAS)

Finland

Research areas

- Design
- Environment
- Wellbeing

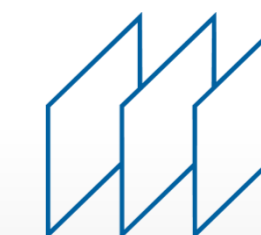
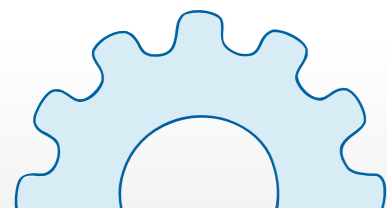
LAMK

Lahden ammattikorkeakoulu
Lahti University of Applied Sciences

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Project: Flexible and Green Hub

PARCEL DELIVERY IN URBAN ENVIRONMENTS IS WELL ORGANIZED.



And the Green Hub Additionally will offer:

- ... opportunity for Autonomous Parcel Delivery!
- ... combining People and Parcel Delivery!



ESPECIALLY IN...

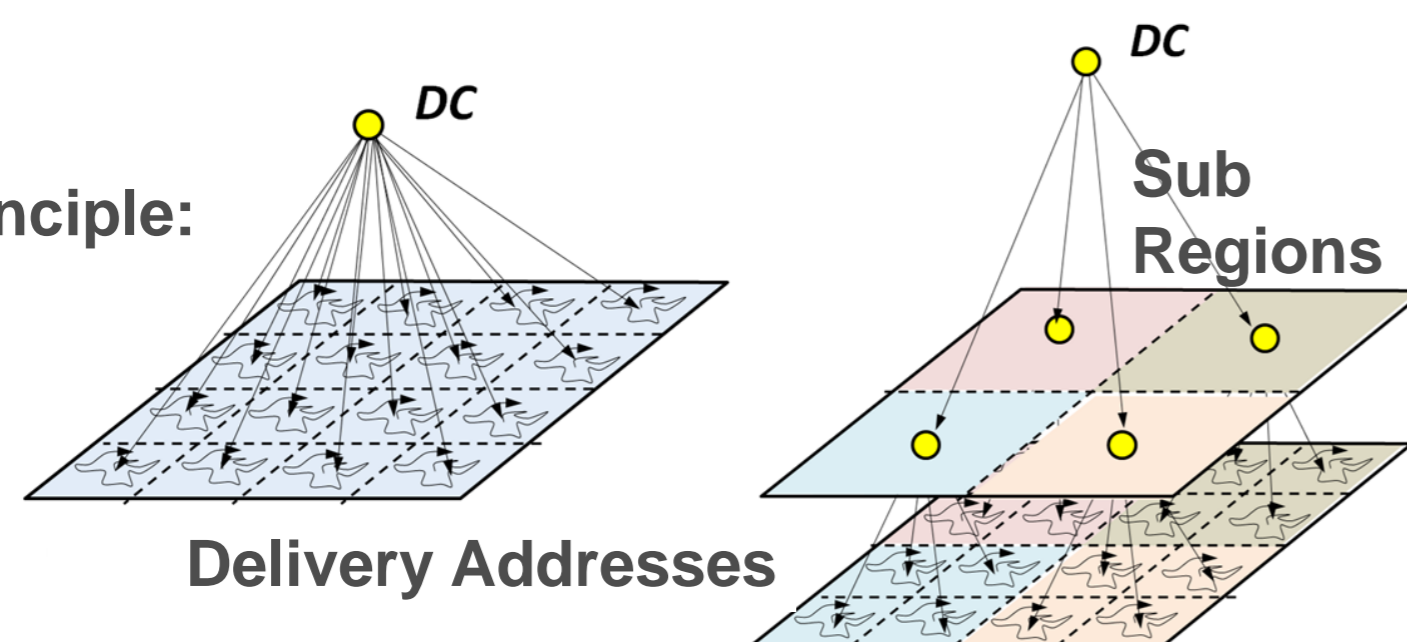
... medieval city centers



... sparsely populated rural area's



Basic principle:



OUR SOLUTION

Using mobile HUBs, positioned nearby small towns and cities or in rural areas, a new way of delivery could be realized: connected medieval towns and rural areas that will be supplied by sustainable, environmental friendly B2B and B2C delivery, within time frames tuned to the customer...

HAN University of Applied Sciences
City of Arnhem, The Netherlands

Research Area's:

- Automotive
- Biodiscovery
- Entrepreneurial Behaviour
- Logistics
- Personalized Learning with Educational Technology
- Social Transition for Rural Areas
- Sustainable Electrical Energy
- Talent Development
- Quick and Optimal Recovery



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