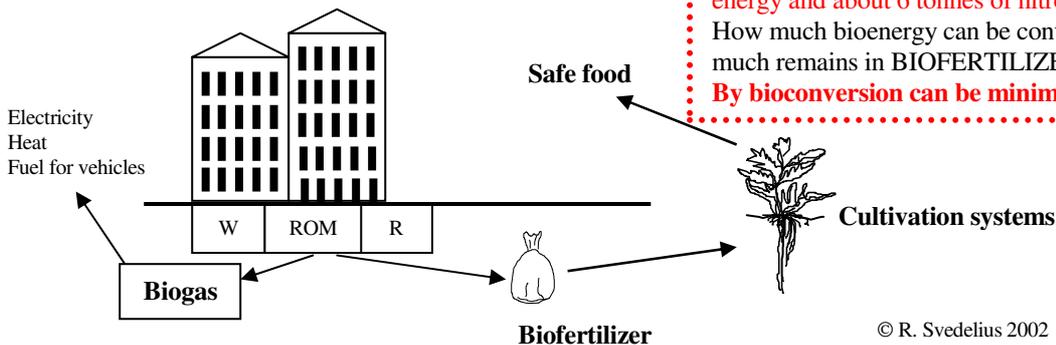


Do you want **safe food in sustainable city** and reduce negative impacts on the climate?

If YES then you have to support **safe cultivation systems** with access to **safe biofertilisers** that are produced in **facilities for production of biogas** and that are **adapted to the laws of biology**.

Imagine robotic system for microbial conversion of renewable organic material (ROM), which is in waste and wastewater, into biogas and biofertilizer. Thus, bioenergy, elements, beneficial microorganisms and humic substances from the ROM of the waste stream, will be recycled in an ecologically sustainable system of cycles adapted to the living.

Future Waste and Wastewater Management



100 000 people annually produce 43 000 tonnes of urine and faeces, and 30 000 tonnes of solid organic waste.
 73 000 tonnes of renewable contains approximately 300 GWh of energy and about 6 tonnes of nitrogen (worth about 11 000 €).
 How much bioenergy can be converted into BIOGAS and how much remains in BIOFERTILIZERS by refined technology?
By bioconversion can be minimized costs and losses.

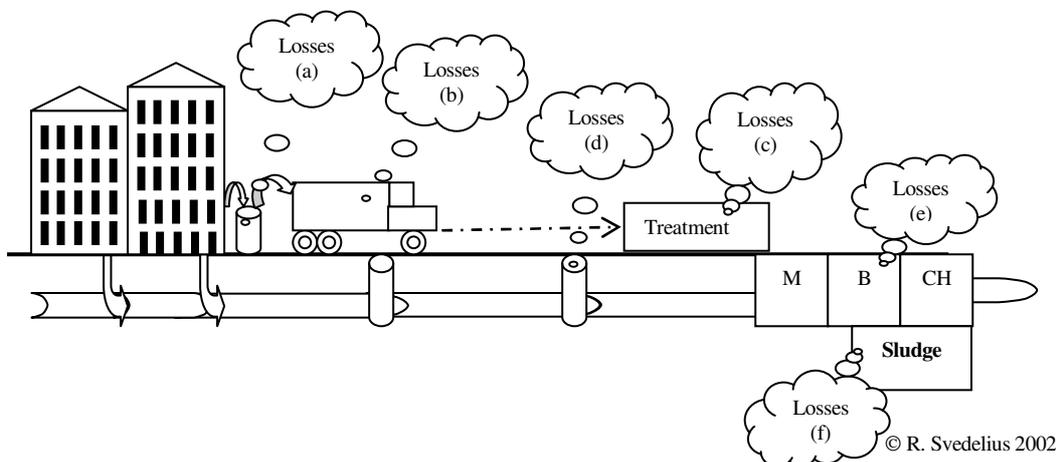
Future management of waste and wastewater “at source” in closed localised systems.

W - Grey water is treated biologically in “*Bio H2O*”.

ROM - Renewable organic material from solid and liquid waste is by microorganisms transformed to biogas and biofertilisers in “*G&G-System*” (Gas & Gödsel/fertiliser).

R - Mixed waste of inorganic and non-renewable materials such as glass, plastic, metal and toxic waste are sorted in “*Refuse House*” and then handled by specialists for reuse, recovery, destruction or burying on landfills.

Current Waste and Wastewater Management



Current management of waste and wastewater takes place in open and centralized systems. Emissions are costly losses that destroy the environment and adversely affect air, water, soil, food and health.

Emissions that are losses of energy and nutrients, and that negatively affects climate, appear:

- When renewable organic material in solid waste is **(a)** collected in dust bins where the decompositions starts, **(b)** transported and **(c)** treated in incineration plants, on landfills, in central composting plants and in biogas plants using outdated rotting methods; and
- When human excreta (urine and faeces) is diluted by pure water and **(d)** transported in sewage system, then treated mechanically (**M**), biologically (**B**) with **(e)** expensive losses of nitrogen - partly as Nitrous Oxide (N₂O) - and chemically (**CH**) in wastewater treatment plants and when **(f)** sewage sludge of doubtful quality cannot be used on cultivated soils. Synthetic fertilizers replace biofertilizers and increases levels of Reactive Nitrogen in the atmosphere.

Some of the losses are pollutants that are transported across international boundaries. Reactive Nitrogen contributes to eutrophication and increase of lung diseases. Costs for construction and operating sewage systems are huge. Most of the above treatment is essentially based on the old system, causing damage to the environment and is a health hazard.