Climate and values

Heating
Floor heating is considered most comfortable, as the warmth is distributed evenly. Also, temperatures do not need to be as high as compared to older heating systems.

Most energy is used for heating water, so solar collectors on the roof or facade facing south can reduce the largest amount of energy use. Insulation and the mass of the construction will aid in passive warming and cooling.

Ventilation
Openable windows with air-grids allow the residents to adjust ventilation and in- and outflow of warm/cold air. In addition, for the kitchen, bathroom and toilet, air can be refreshed via the ventilation shaft. Cold air is preheated by a heat-exchange unit.

Water
Rainwater can be used in the grey-water system, for example for flushing the toilets, showering or doing laundry. To what extent rainwater is used depends on what the residents find acceptable. Solar collectors can preheat water, saving on energy.

The above is only a basic concept, as for different residents different methods are desirable. Solar panels for example, can be seen as high status, something new, independence or being environmentally aware. Therefore it is not possible to at this stage to determine which methods to apply where. Because of that the climate concept remains basic, but in such a way that other methods can be added if the residents desire so. (e.g. energy saving methods, domestic technology, blinds/louvers, fireplaces, interior finishes)

Construction/Stability

Lenotec
Features
Lenotec is made of wood panels glued together at perpendicular angles. Therefore it can span in any direction (floor and wall-openings).

Construction
The panels are fabricated by computer which makes them easy to produce as any other building that has a regular grid.

Prefabricated panels are quick to build and need less space on the building site.

Building
Wood is a sustainable building material and is easier to adjust after it has been built than materials like concrete and steel. This gives the residents the possibility to finish their homes according to their tastes.

Materialisation
Type of material defines type of space (from brick - most public, to wood, to plaster - most private).

The pattern defines the individual houses, based on the values they are designed with (horizontality vs. verticality).

Floor-heating and passive solar heating (depends on orientation)

Openable windows and air-grids, mechanical ventilation with heat exchange unit

Grey-water system
Solar collectors (depends on values)