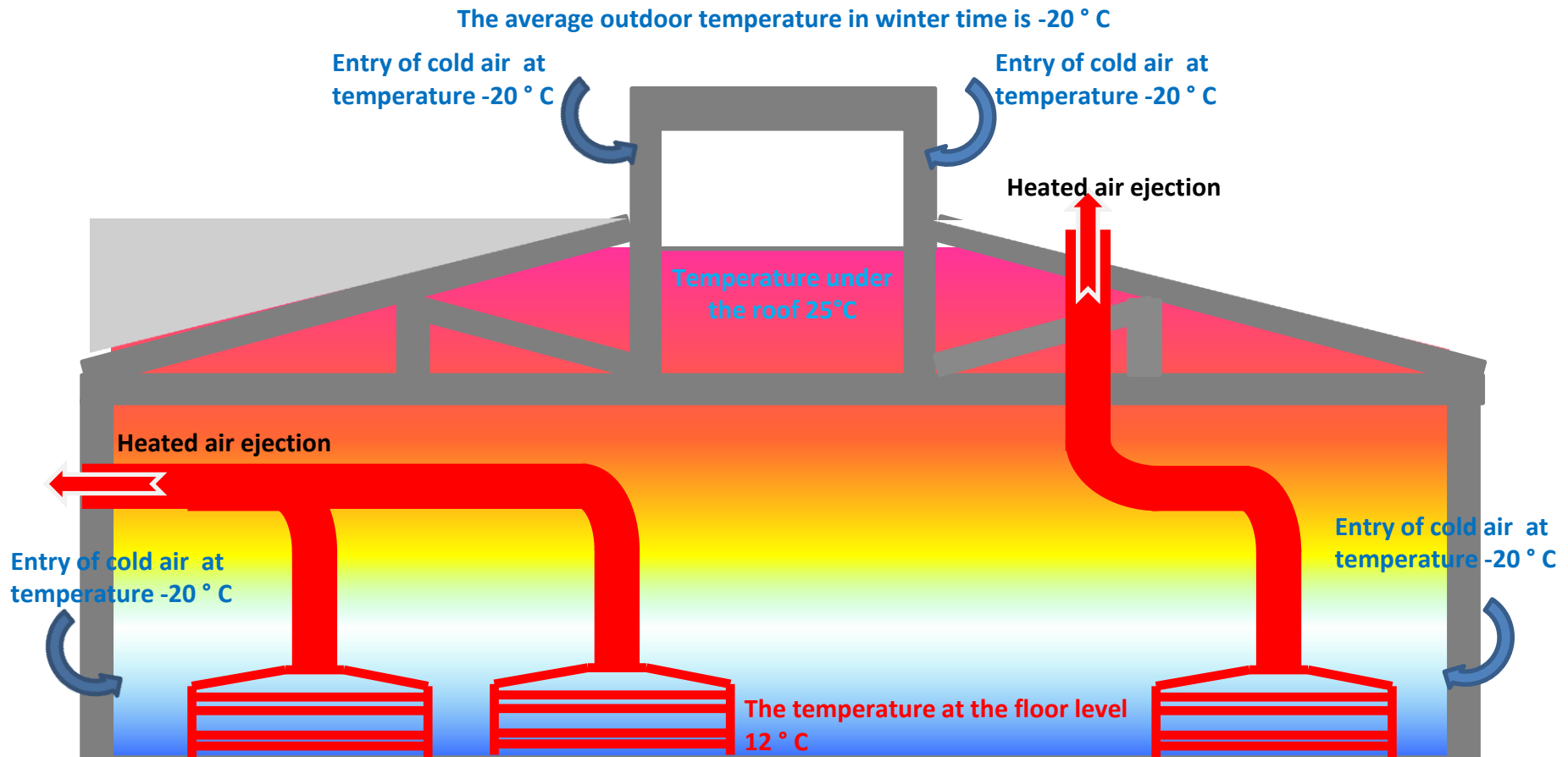
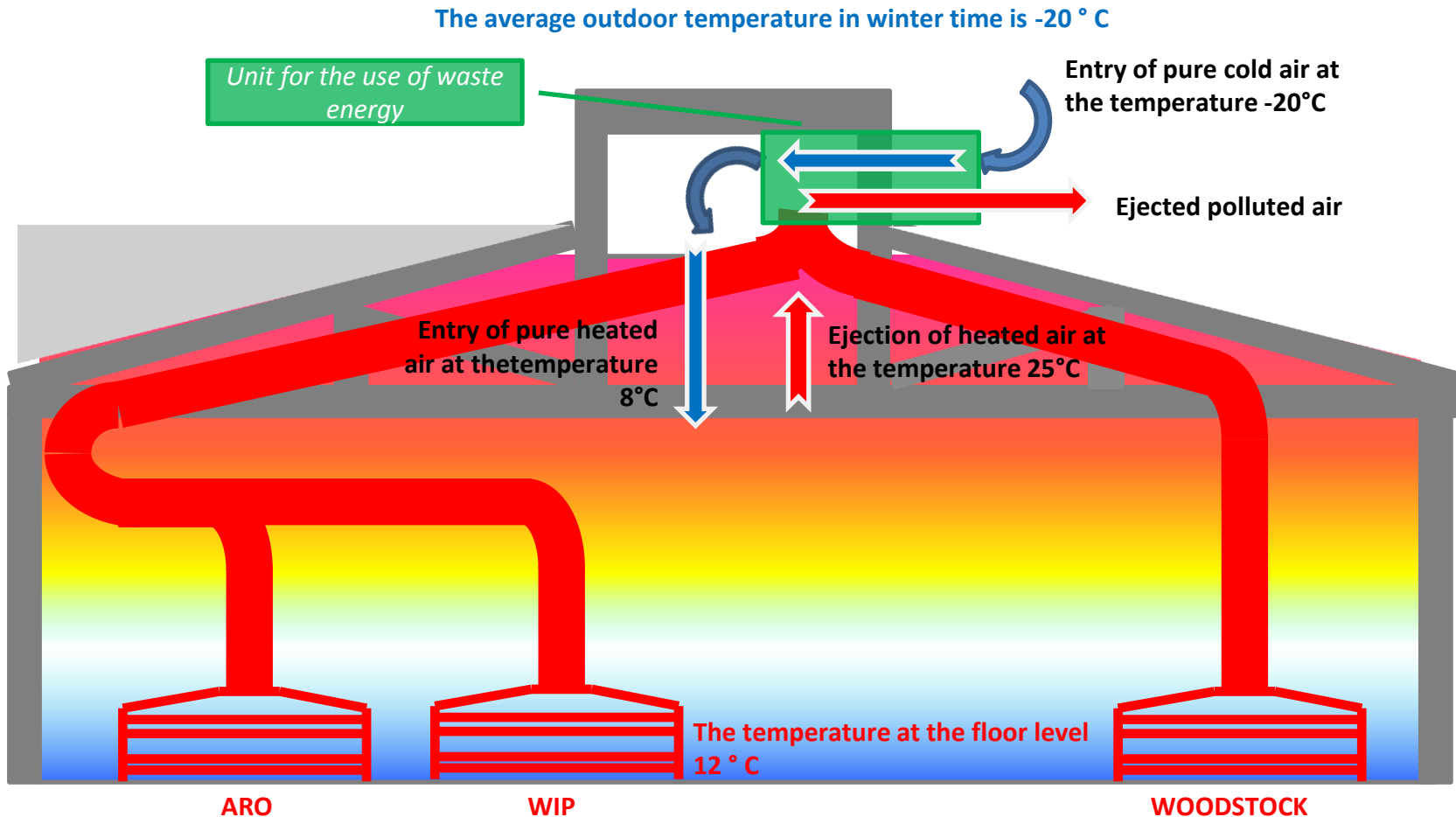


# Plant A - before (in winter time)



- Unclean heated air has been sucked out of the production hall. At the same time, cold outside air entered the hall through openings in the roof of the facility as „fresh“, clean air.
- The amount of emitted air was approximately  $50,000\text{ m}^3 / \text{h}$  which means that the total volume of the air in the building (around  $150.000\text{ m}^3$ ) was exchanged for three hours.
- Estimated average temperature, in winter time, at a height of  $1\text{ m}$  from the ground is  $12^{\circ}\text{C}$ , while the estimated temperature under the roof at the same time was about  $25^{\circ}\text{C}$ .temp

## Plant A - after (in winter time)



By installing units for the use of waste heat on the roof of the hall, the air from the furnace and air under the roof were directed to a heat exchanger which recovers heat from a polluted air and heats the outdoor pure cold air. A preheated air at the temperature of approximately  $5^{\circ}\text{C}$ , prepared in such way, is additionally heated by a compressor unit up to  $8-9^{\circ}\text{C}$  and injected into the hall.

The energy consumption for heating the hall in winter time is reduced by 70% compared to the previous condition. Based on the project of use of waste heat was achieved also a clean air in the premises of the hall in winter time.