Use heat from the human body as energy to heat the building

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The more the passengers at Stockholm Central Station move, the more energy they produce. In 2017, engineers at real estate company Jernhusen in Sweden found a way to take advantage of this excess energy to heat another building in the same area.

Using body heat to heat a building has been applied in crowded buildings such as shopping malls or movie theaters in the winter. What's different about Stockholm Central Station is the way engineers collect excess heat and transfer energy between the station and the 13-story Kungbrohuset office building more than 30 meters away.

The system at Stockholm Central Station works as follows. The heat exchanger is installed in the station's ventilation system. This device absorbs excess body heat and uses it to warm water in an underground tank. The water will be pumped through pipes to another building and integrated into the main heating system.

This system helps reduce the office building's electricity costs by 25%.

In other countries like the US there may not be a financial benefit to investing in insulation, pipes and pumps but in countries like Sweden where electricity is expensive and winter temperatures are very low it is effective. The results are very clear.

In addition, this method has some other limitations such as buildings must be located close together to avoid heat loss if it needs to be pumped over long distances.