



**SUSTAINABLE
PLACES 2020**
October 27-30, 2020
Digital Event



Hybrid
BioVGE



Hybrid Variable Geometry Ejector Cooling and Heating System for Buildings Driven by Solar and Biomass Heat

Sustainable Places 2020 – 29th October 2020

Szabolcs Varga

1. Start with a joke...

“climate change was a hoax invented by the Chinese to make the US manufacturing less competitive”
Donald Trump



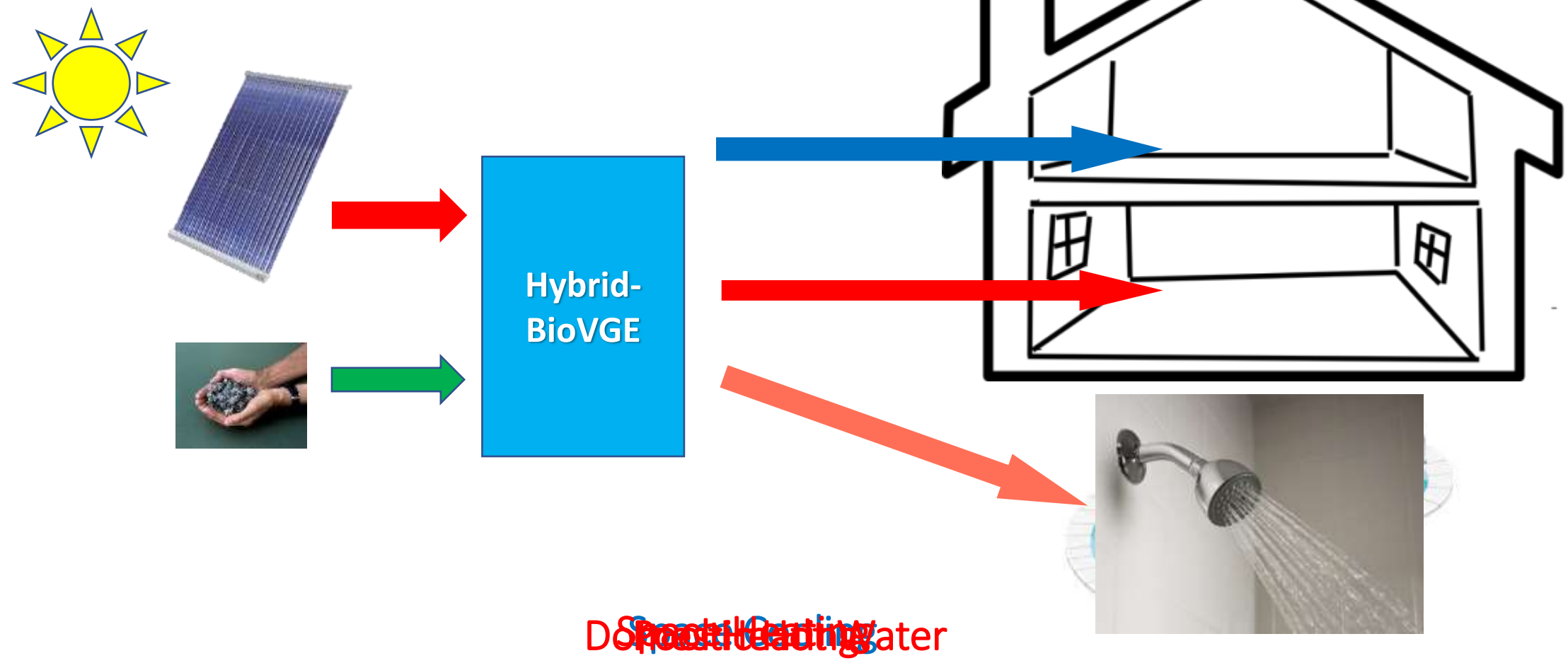
2. Keep it simple and to the point...

LACK OF AFFORDABLE INTEGRATED SOLUTIONS

- Renewable indoor space heating
- Renewable indoor space cooling
- Suitable control system
- Improved year around efficiency
- Increased compactness

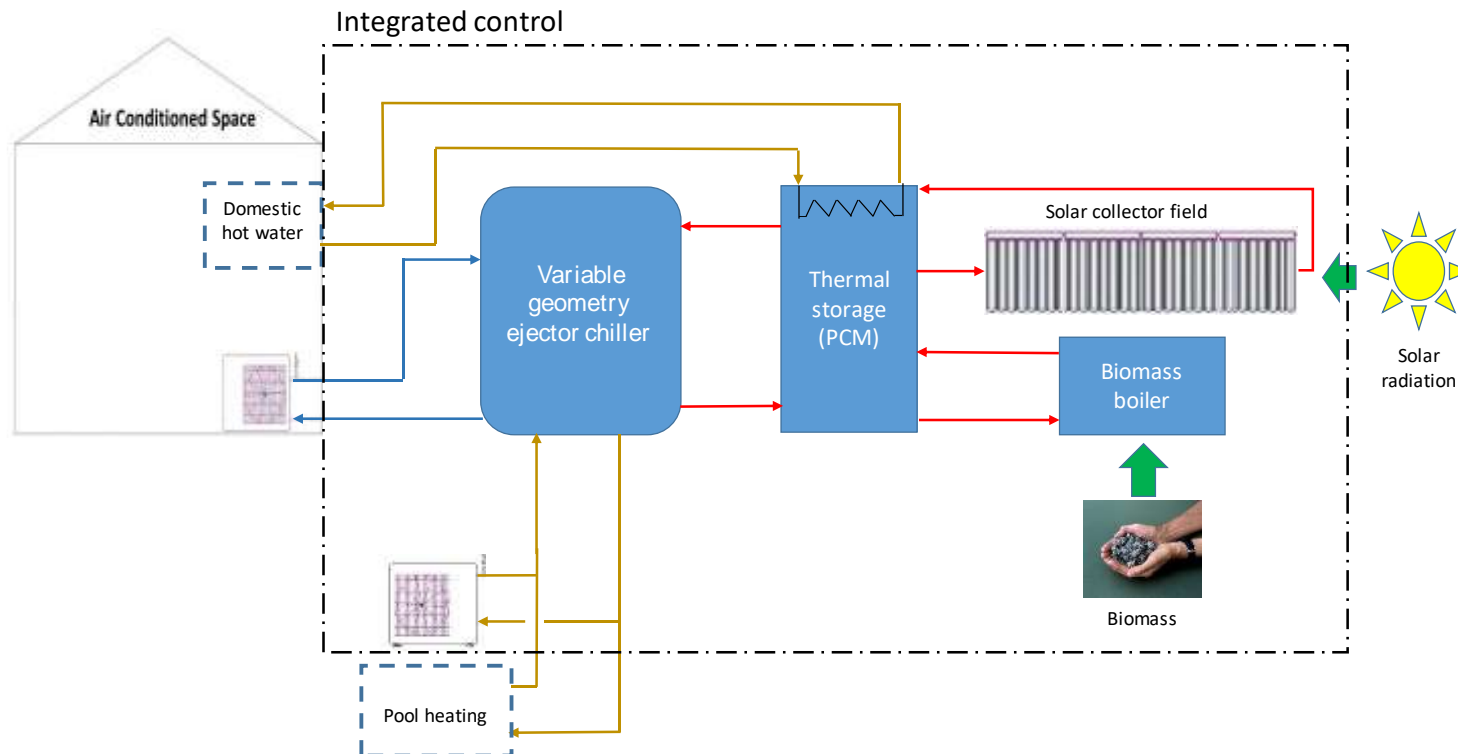


2. Keep it simple and to the point...



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- 3 prototypes: 2 units of ~ 5/15 kW cooling/heating and 1 unit of 20/50 kW cooling and heating



Main system components:

- Solar collector field
- Biomass boiler
- PCM thermal storage
- VGE chiller
- Heat distribution/dissipation
- Integrated control

2. Keep it simple and to the point...



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Academic partners:



Industrial partners:



3. Make you presentation short...



Thank you for your attention!

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