

SolabCool

presentation



Topics

- Introduction SolabCool BV
- Market drivers
- Heat driven cooling
- SolabCool product range
- SolabCool reference project

Introduction De Beijer RTB:

Profile:

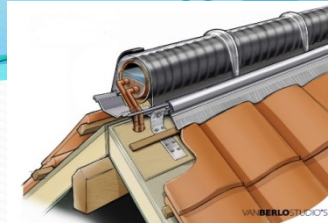
- Engineering company with 30 years of experience in renewable energy solutions and products.
- Many international cooperation's with institutes and universities.
- Various renewable energy products successfully launched to the market in the past.

Main activity:

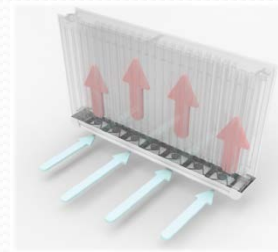
De Beijer RTB is mainly active in the field of Solar, thermo-chemical-energy storage and thermo-chemical conversion technology.

Main projects:

Development, cost-effective pre-production method for SolabCool and ClimateBooster. Market introduction. Development and the pre-production SunRidge and thermo-chemical energy storage



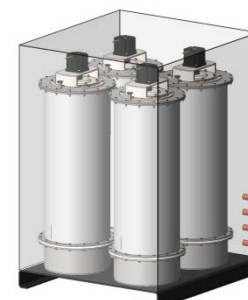
SunRidge



ClimateBooster



SolabCool

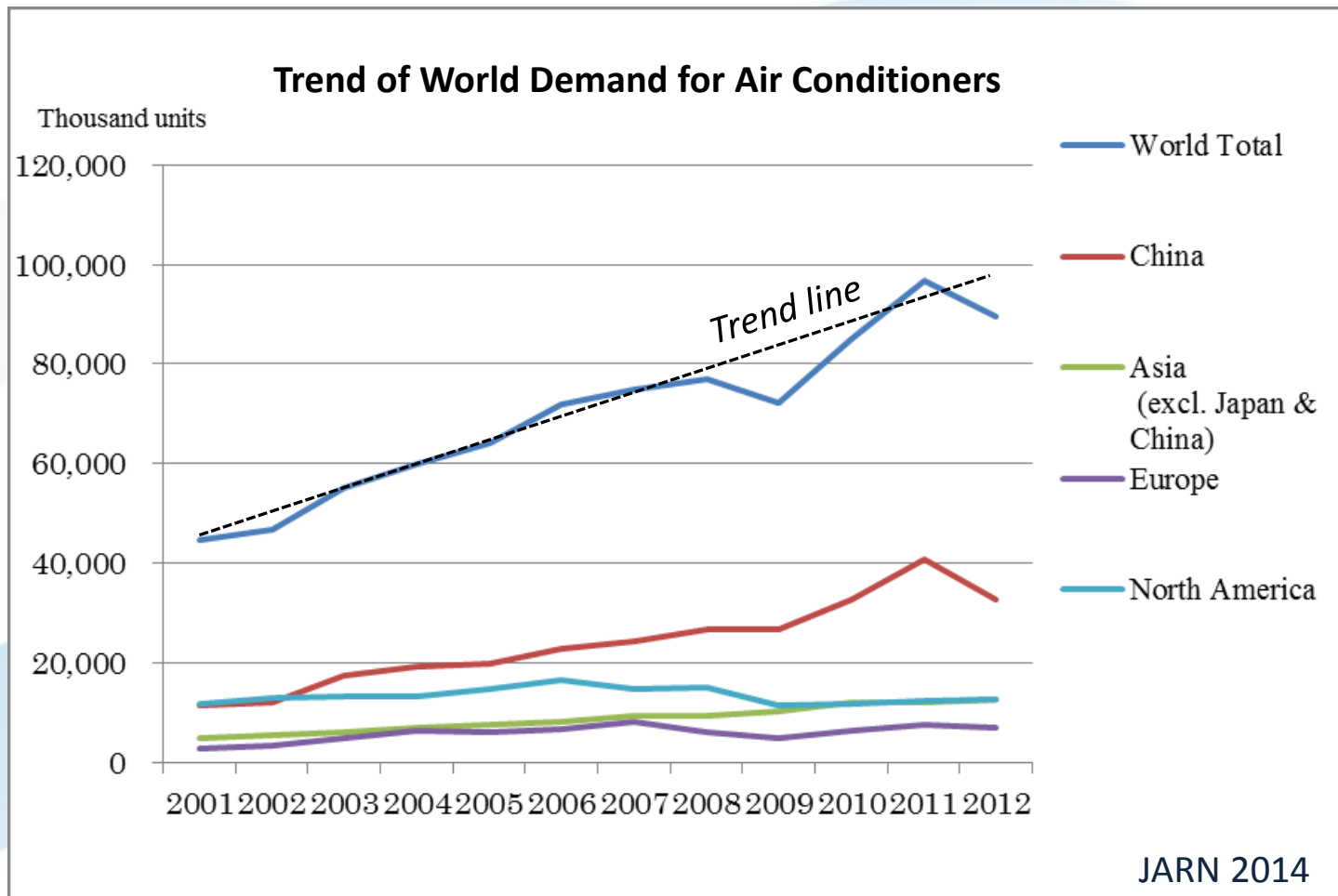


Thermo –chemical
energy storage

Carrier history



Growing Demand for air conditioning



market for space cooling



Lithium Bromide Absorption Chiller

The turnover of the global market for absorption chillers - or chillers - by 2020 is expected to **983 million** dollars. This turnover is favored by high environmental standards and the increasing demand for energy-efficient cooling systems (JARN 2016)

Airo marked (millions \$)

	Europe	America	Asia / Pacific	Rest	Total
2014	2.122	1.666	937	695	5.420
2013	2.137	1.560	881	672	5.250
2012	2.092	1.514	826	637	5.069
2011	2.133	1.522	852	583	5.090
2010	1.732	1.355	677	579	4.343
2009	1.821	1.528	777	587	4.713
2008	2.074	1.605	886	412	4.977
2007	1.838	1.558	793	353	4.542



Cooling is business

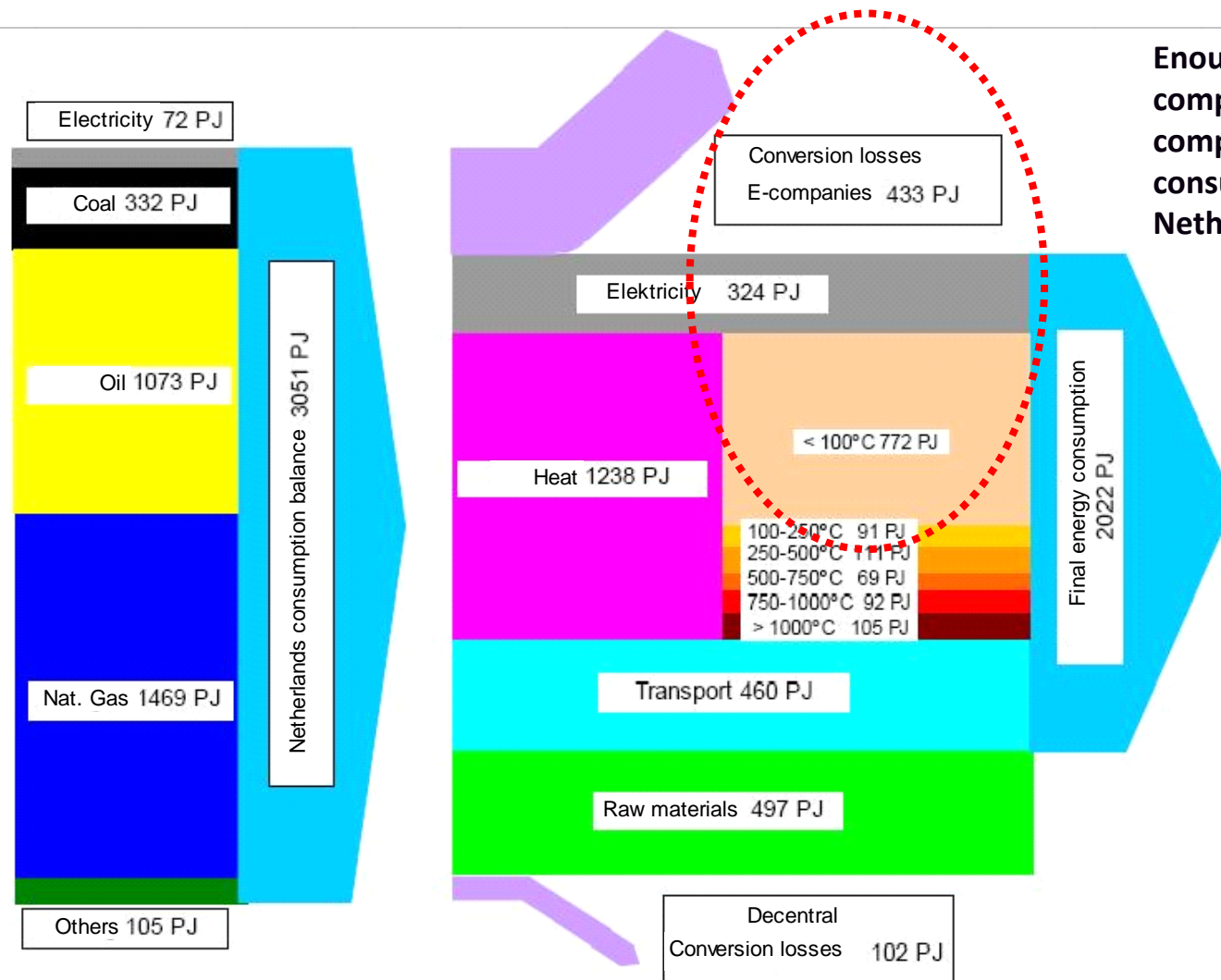
Cooling is a must

- Shifts in comfort culture, behavioural patterns, affordability and consumer expectation
- Perception that comfort cooling contributes to higher productivity
- Direct impact on rental value of commercial buildings
- Increase in internal loads (computers etc.)

Cooling is also business

- >10% of electricity used for cooling (global) and 16% in USA
- > 80% of commercial and institutional buildings in USA and Japan has air conditioning
- < 40% in EU, but expanding rapidly, 60% is expected by 2018

Energy Balance in the Netherlands



Source: ECN

Heat-driven cooling

Zonne-energie



Warmtenet

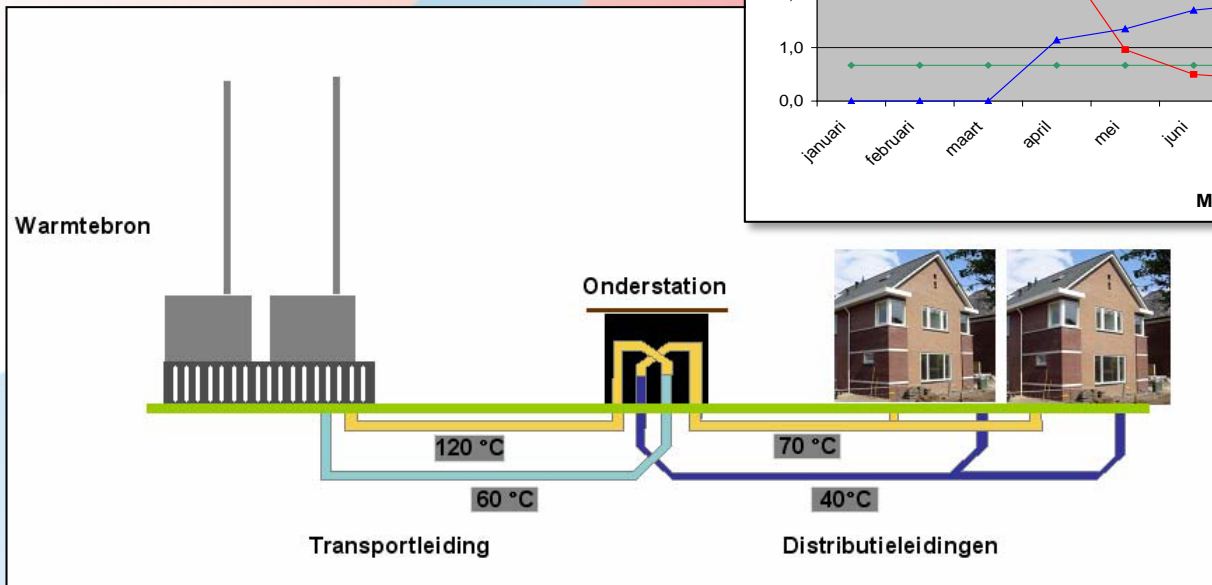
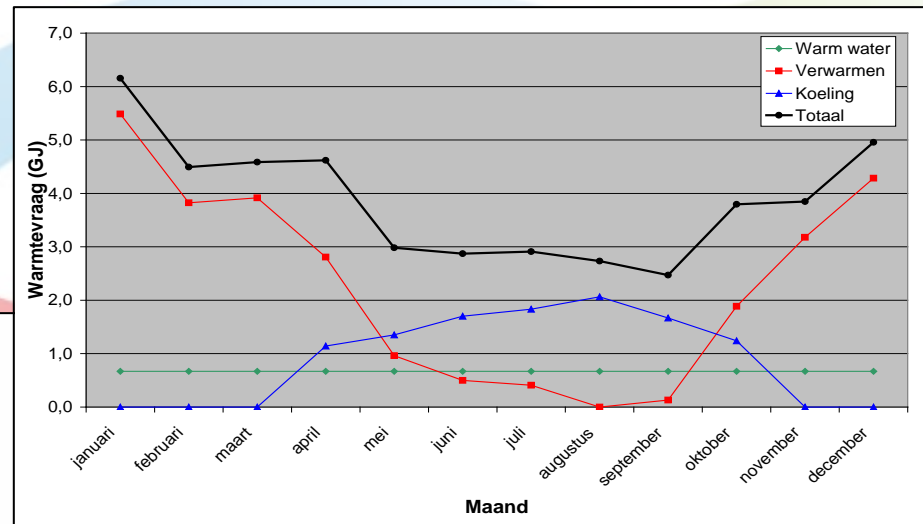


Warmtekracht-koppeling



A graphic element consisting of three overlapping, flowing ribbons in blue, green, and red colors.
SolabCool
The best comfort with pure energy

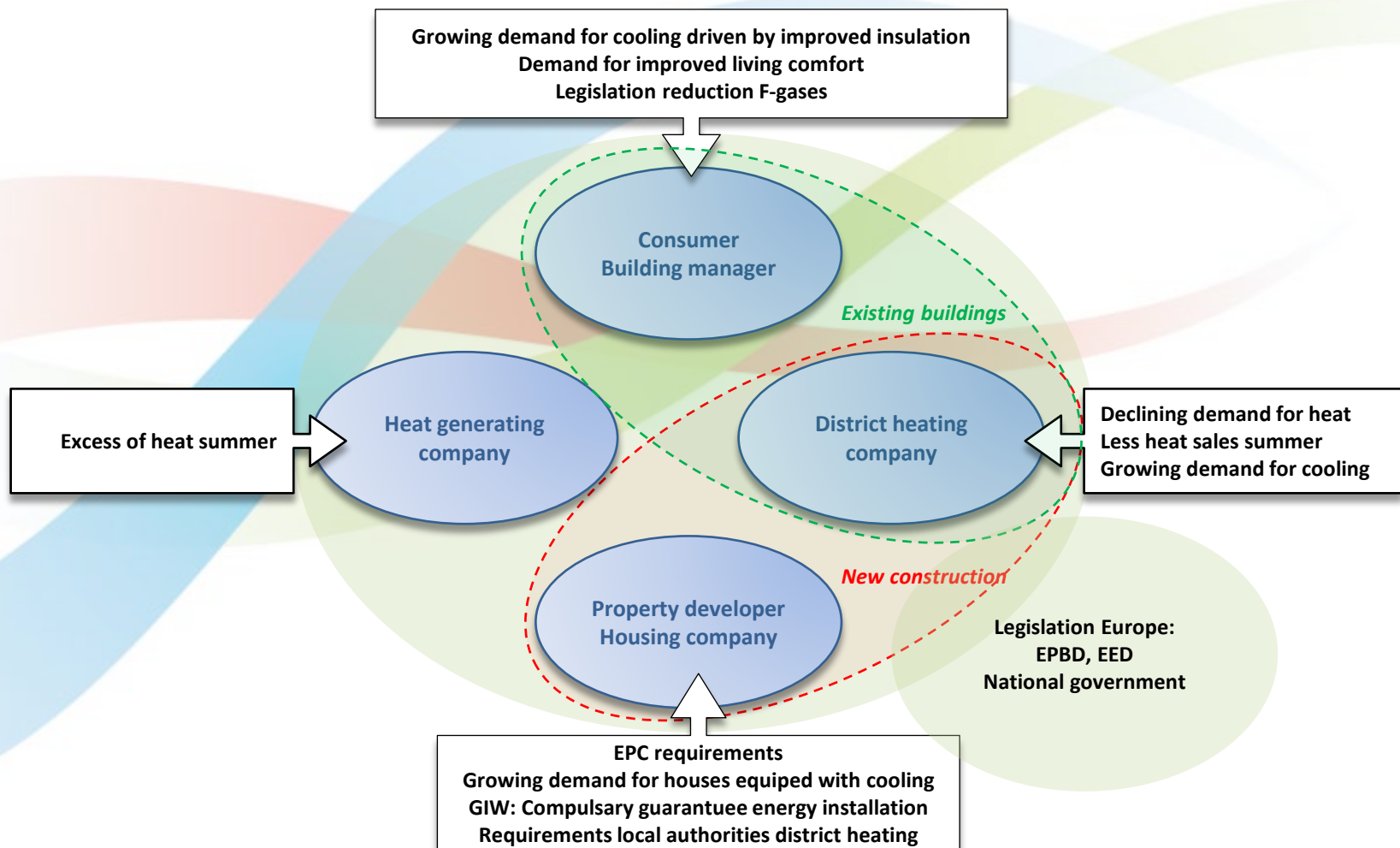
District heating: excess heat in summer



Solar island District Heating “Almere”

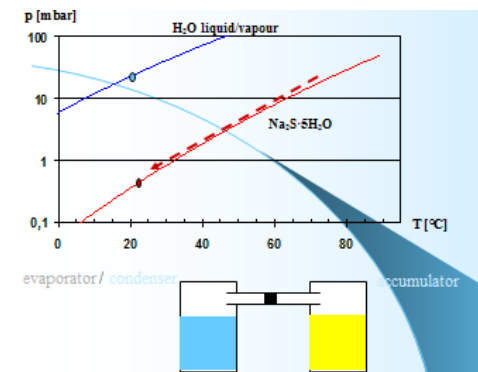
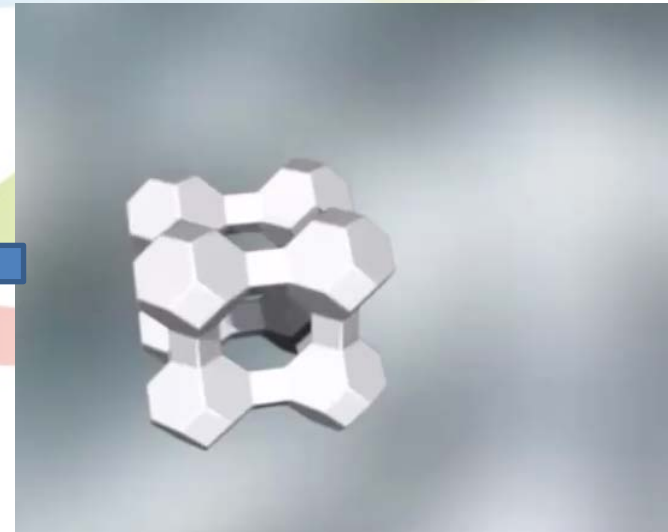
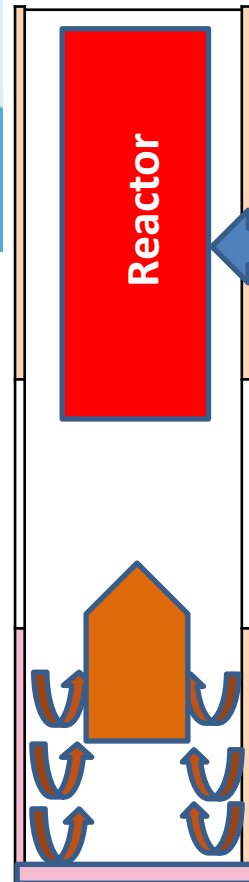
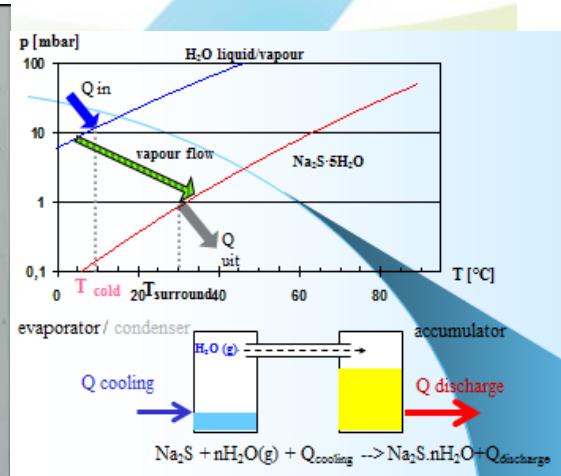
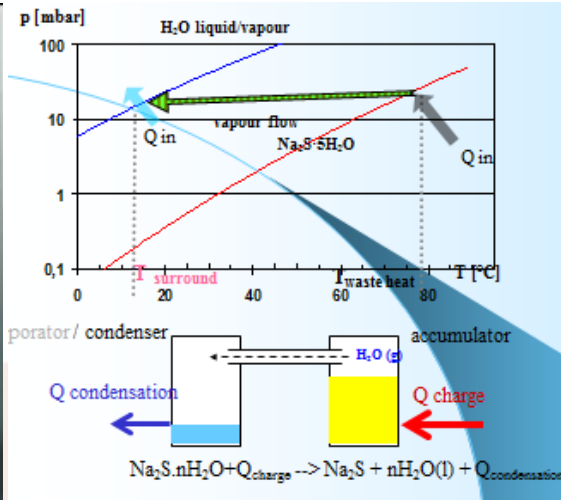


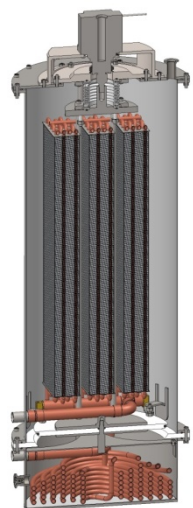
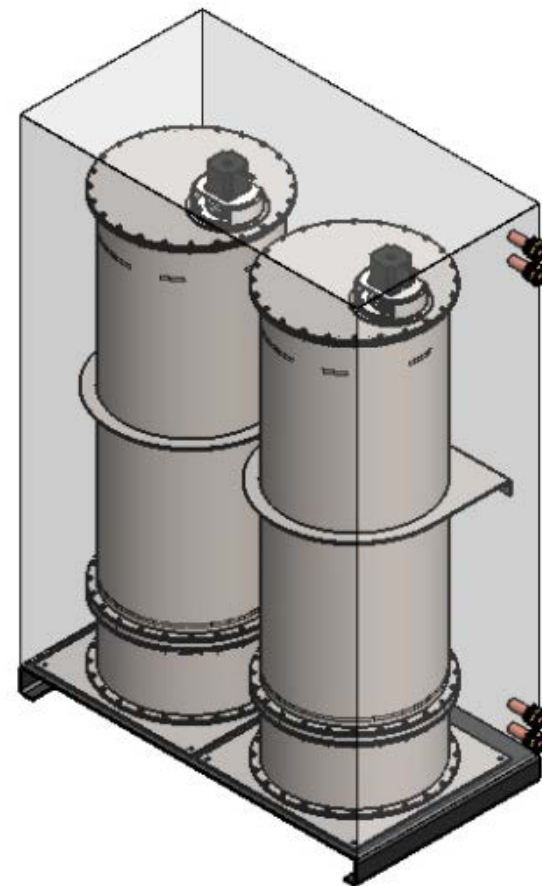
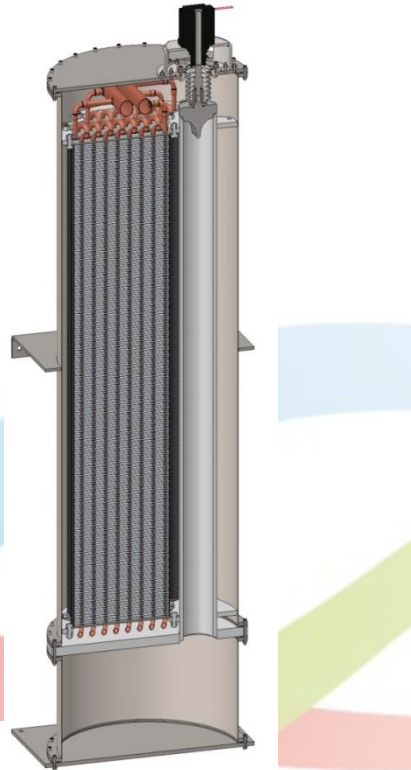
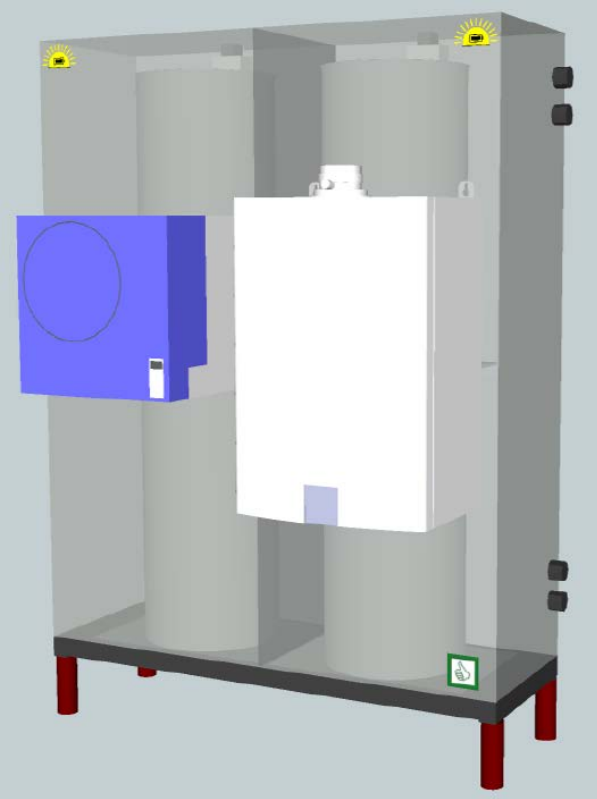
Key players and marketdrivers



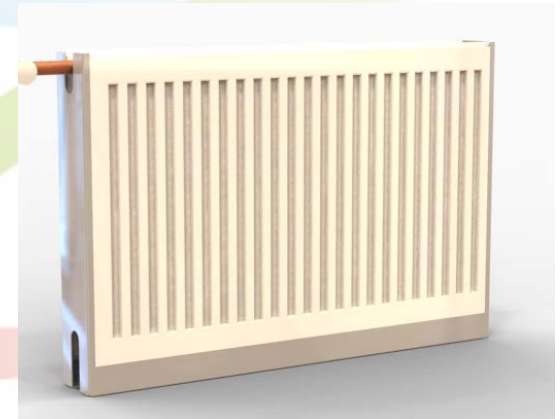
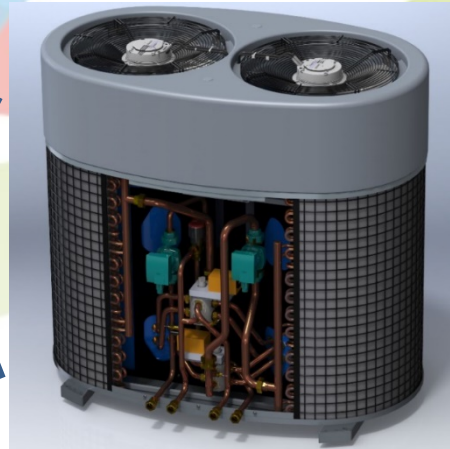
Energy storage and conversion

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Heat/cold distribution system



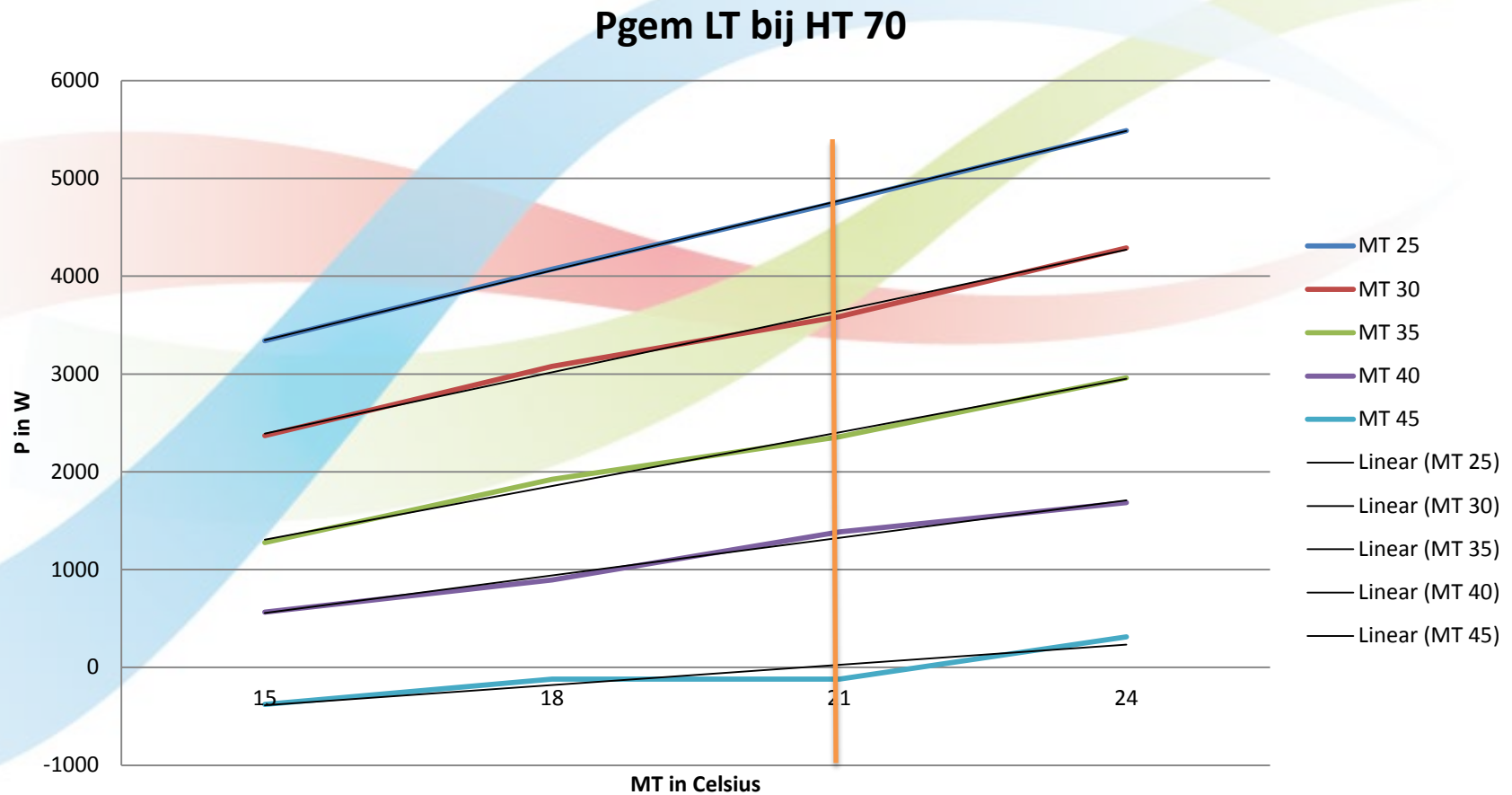
Maximum cooling power range



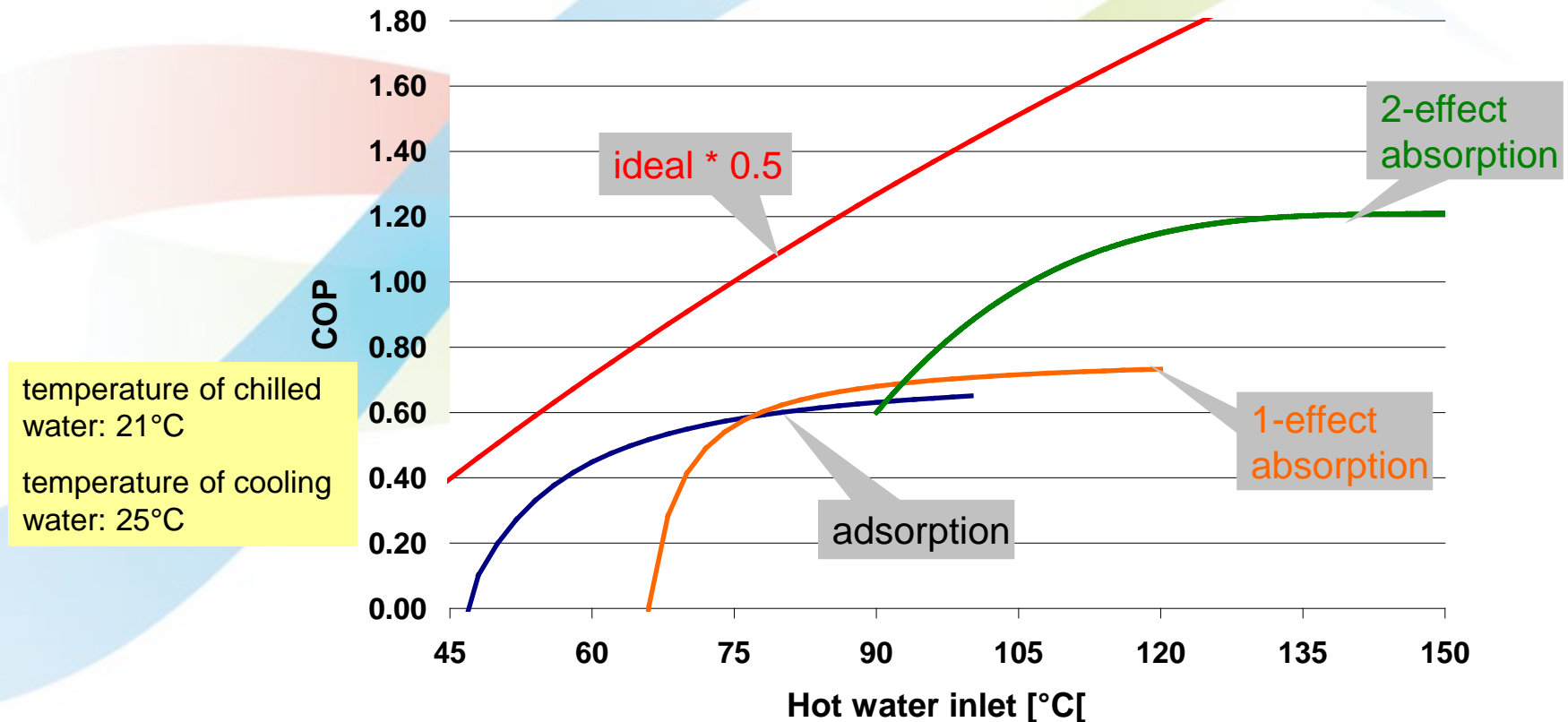
Residential



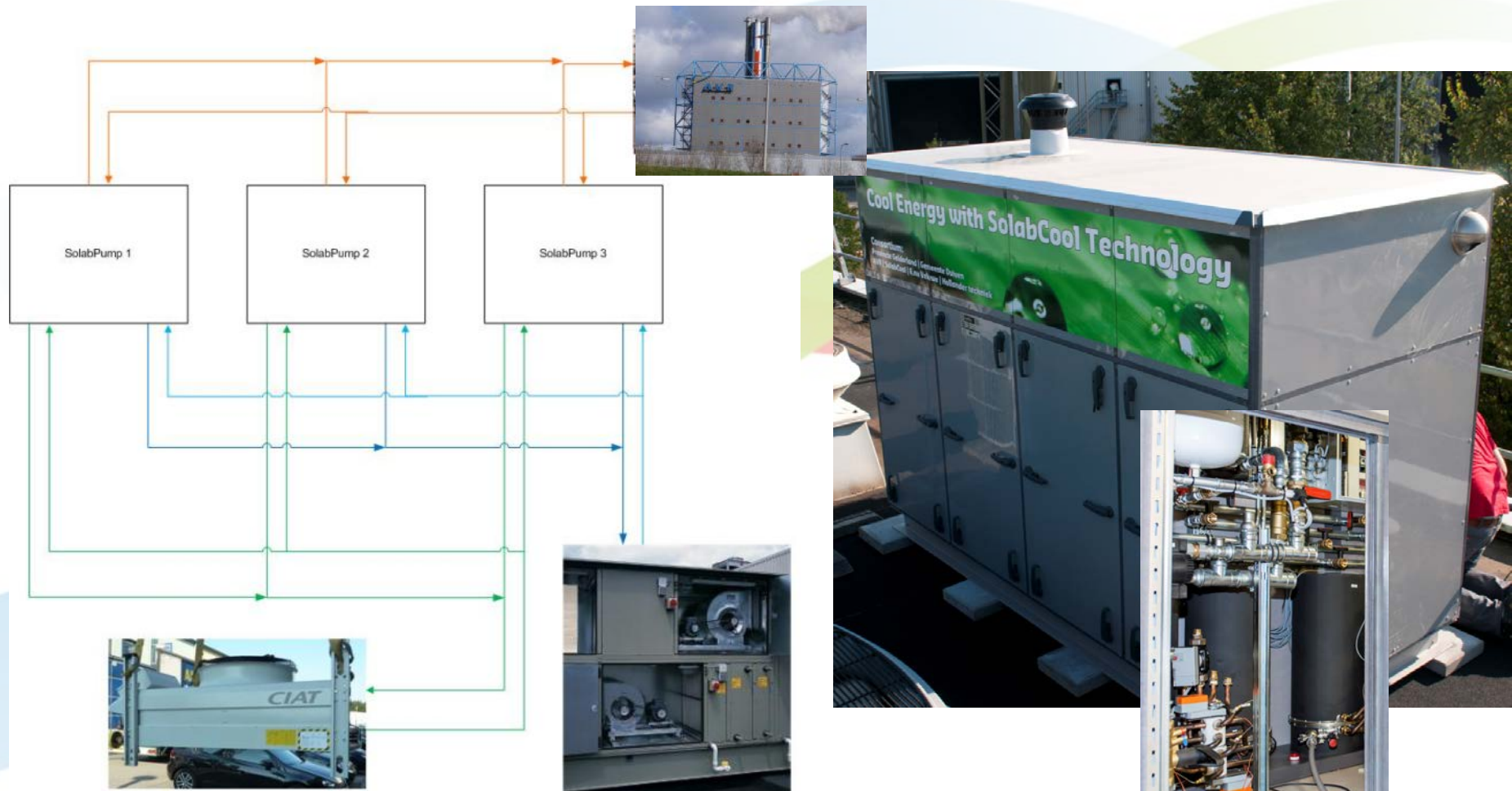
Power / temperature of the recool



COP of heat driven water chillers



Cooling office building incineration plant AVR



Benefits for you

- Optimal use of excess heat
- Up to 90% reduction of electricity use compared to conventional air conditioning
- Improved return heat grids due to heat sales summer
- Up to 90% CO₂ reduction depending on heat source
- Easy integration existing system heat/cold distribution
- Limited maintenance and long lifetime

Company 'Principles'

- ***Spirit***
- ***Reliability***
- ***Flexibility***
- ***Innovation***

- ***Fun***



It's our Competence that makes the difference

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