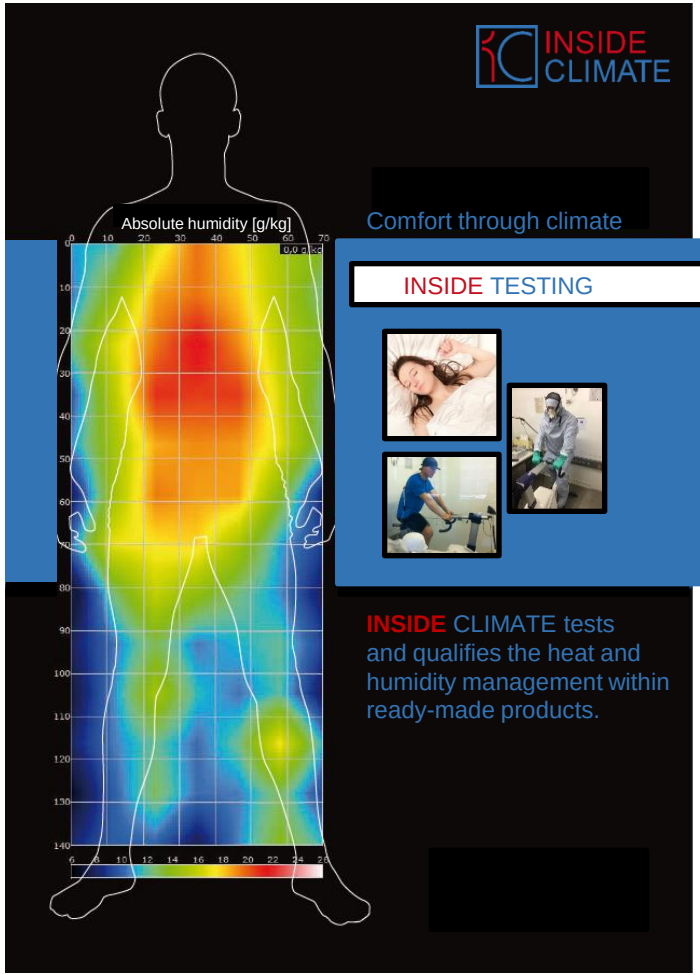

INSIDE CLIMATE

When skin meets fabric –
how thermoregulation impacts comfort

INSIDE COMFORT – Climate is key

Climate is an interaction between heat and humidity.

If you were asked to check mark a multiple choice.

How would your preferred climate be?

The answers are always the same.

warm and dry	✓	cool and dry	✓
warm and humid		cool and humid	

INSIDE COMFORT – Climate is key

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If you were asked to check mark a multiple choice.

How would your preferred climate be?

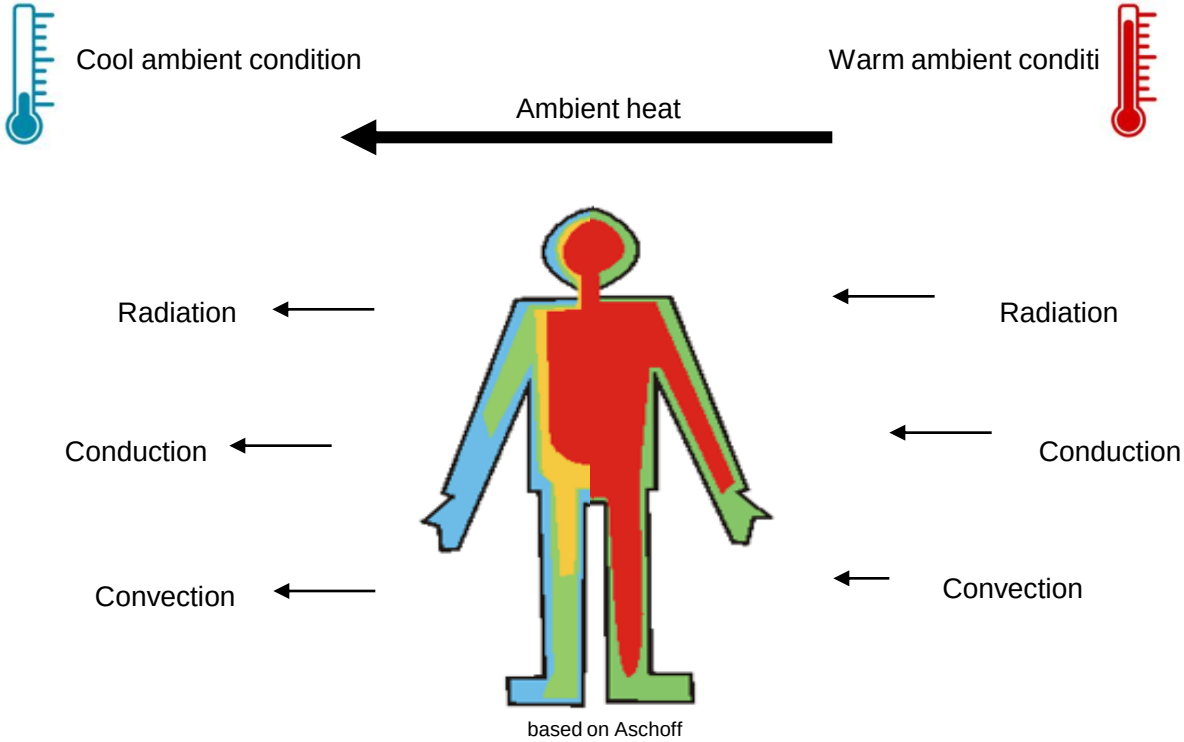
The answers are always the same.

warm and dry	✓	cool and dry	✓
warm and humid	○	cool and humid	○

Some humans prefer it **“warm”** some **“cool” –** the heat sensation is subjective.

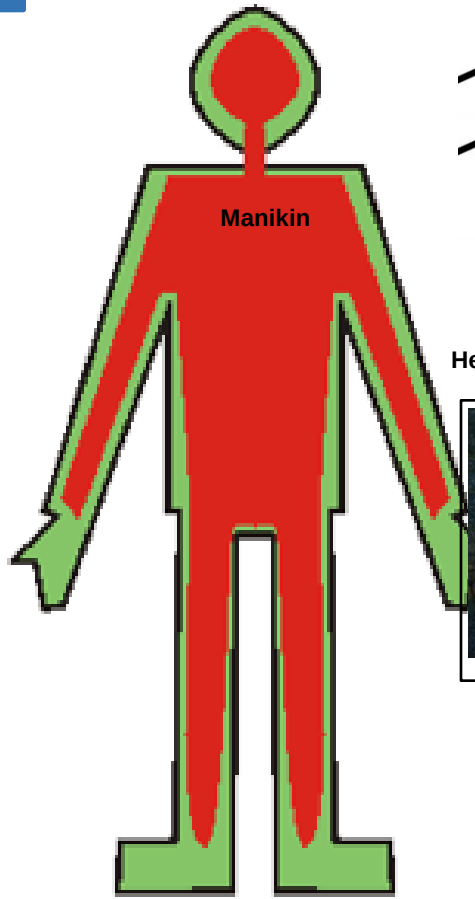
The common denominator is – **we all prefer it dry.**

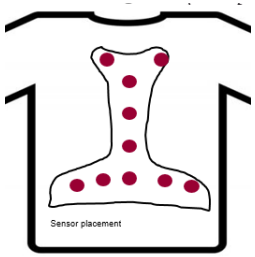
INSIDE COMFORT – “free” cooling and heating



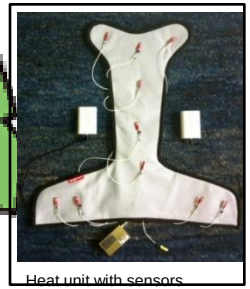
Heat moving methods – free to the body – subject to ambient conditions
heat flow follows physics

INSIDE TESTING – when skin meets fabric

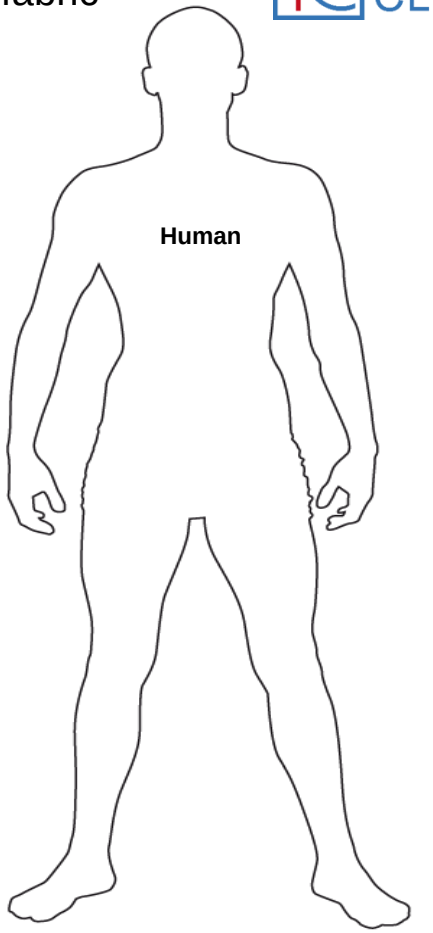




Heated outdoor apparel

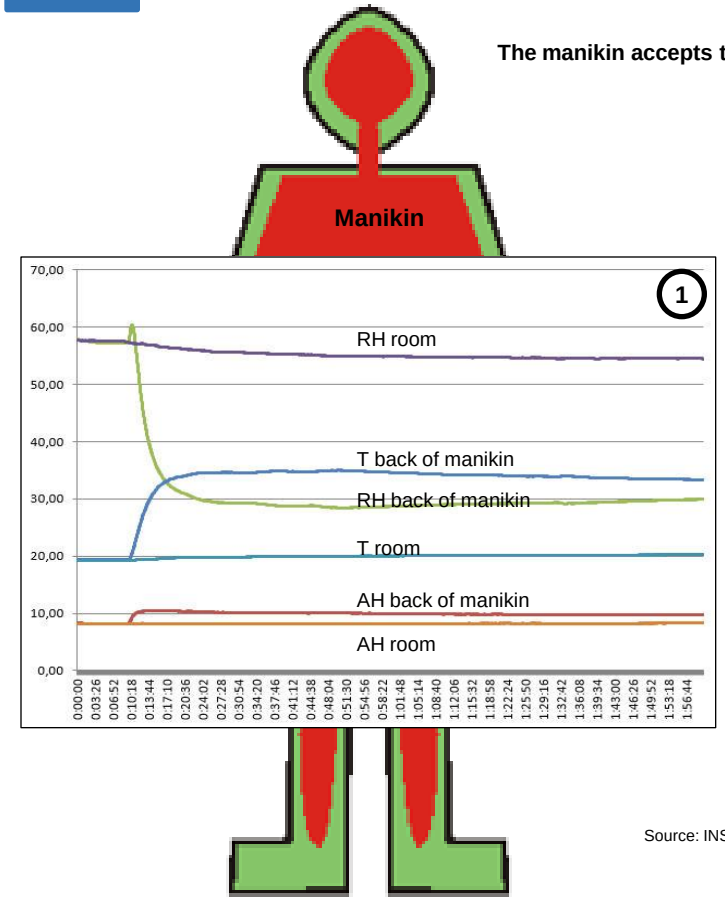


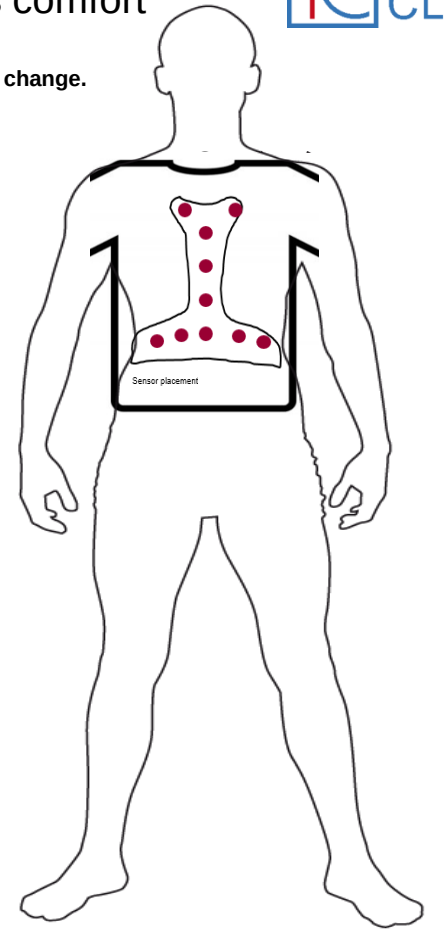
Source: INSIDE CLIMATE



INSIDE TESTING – Humidity defines comfort

The manikin accepts the thermal change.





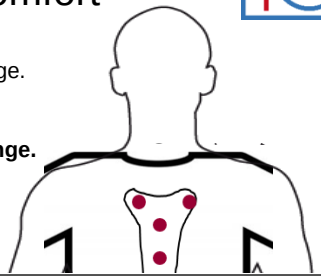
Source: INSIDE CLIMATE

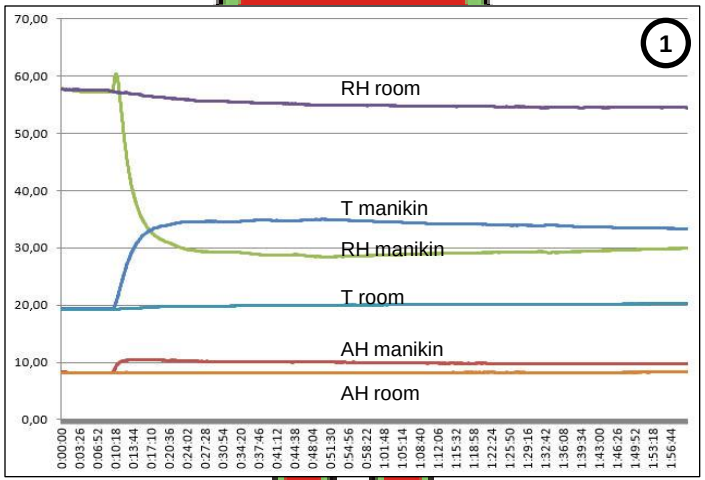
INSIDE TESTING – Humidity defines comfort

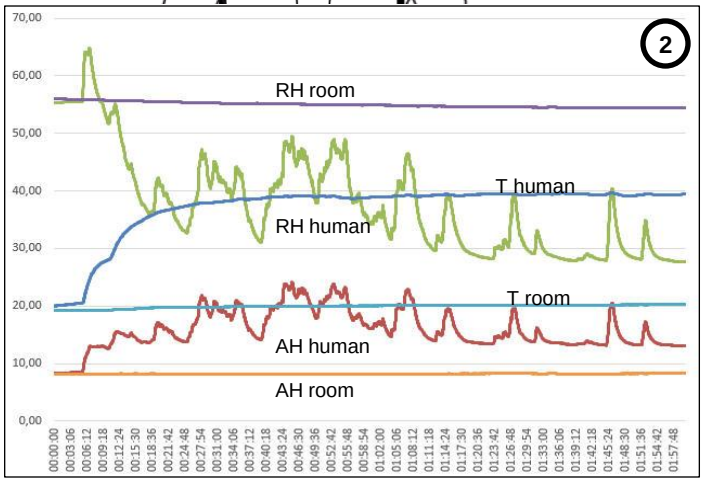
INSIDE CLIMATE

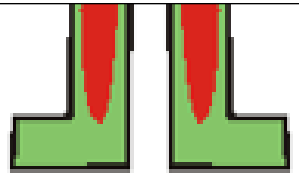
The manikin accepts the thermal change.

The human in contrast activates perspiration against the thermal change.



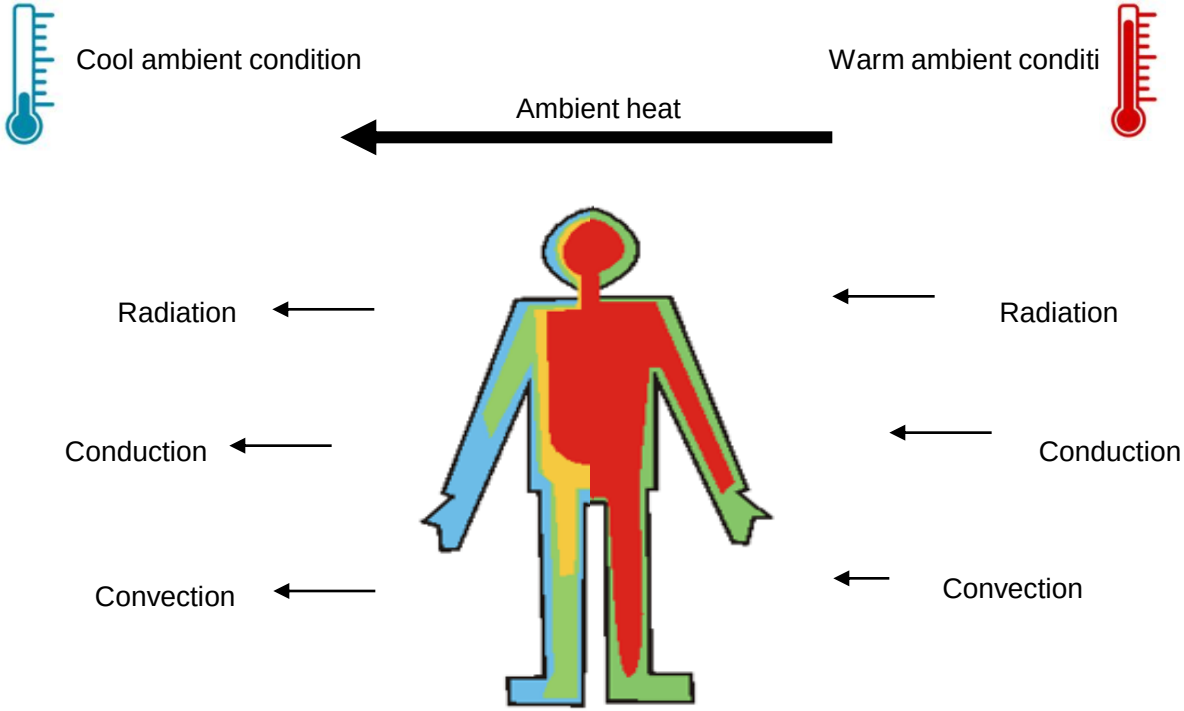






Optimal humidity management is the key to climate comfort.

INSIDE COMFORT – “free” thermoregulation

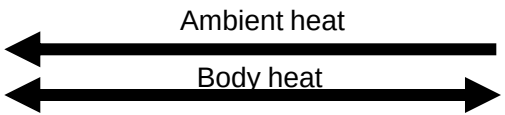


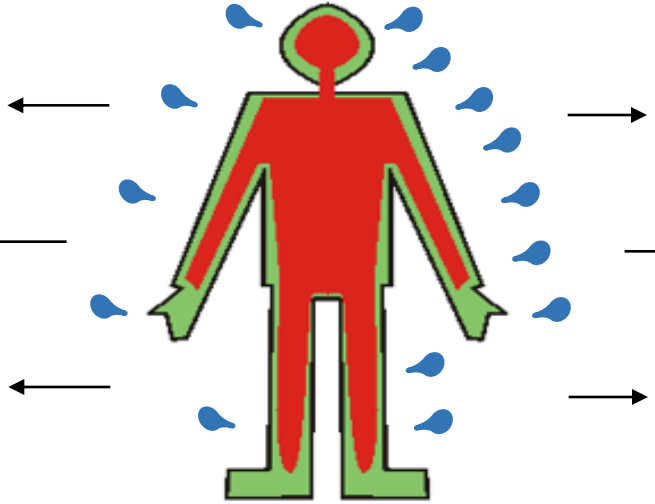
Heat moving methods – free to the body – subject to ambient conditions
heat flow follows physics

INSIDE COMFORT – “active” cooling

Cool ambient condition

Warm ambient conditi





Evaporation

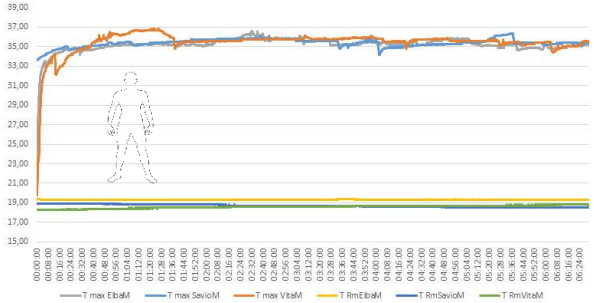
not „free“ anymore, demands physical labor

Evaporation

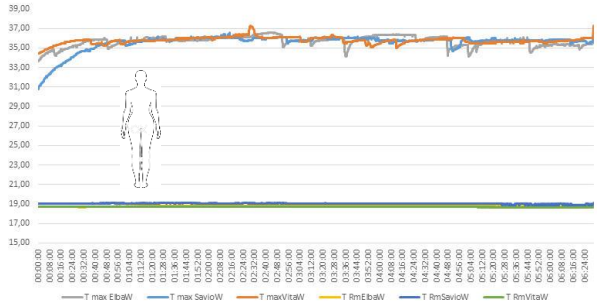
Sweating is the last body own methodology to cool the body.
In terms of microclimate it is the humidity which separates comfort from discomfort

INSIDE TESTING – human data - mattresses

T development ***male*** occupant – three mattresses



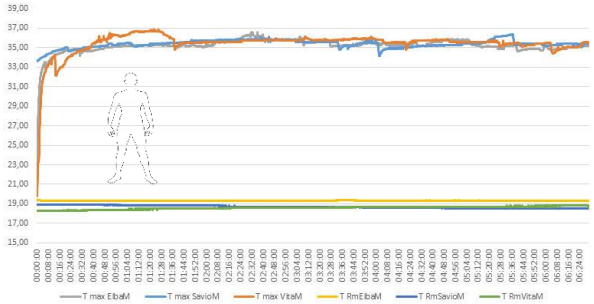
T development ***female*** occupant – three mattresses



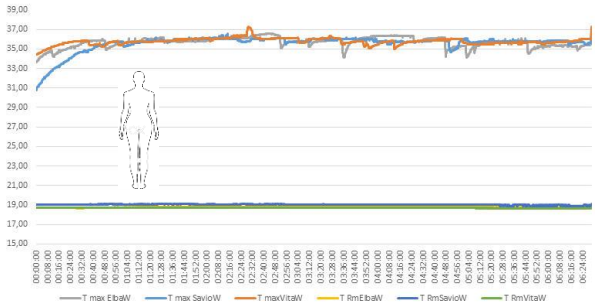
Both develop almost equal T on all products

INSIDE TESTING – human data - mattresses

T development ***male*** occupant – three mattresses

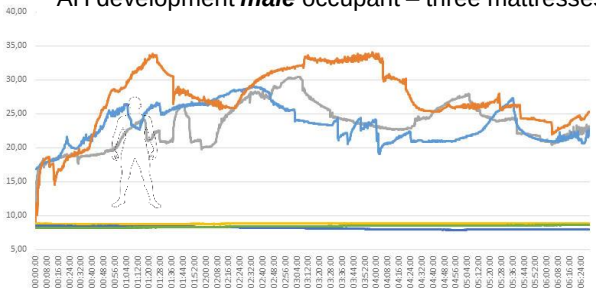


T development ***female*** occupant – three mattresses

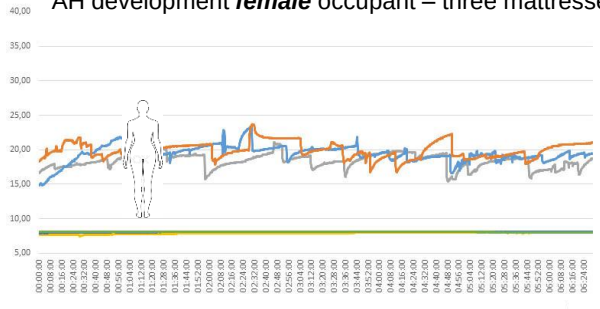


Both develop almost equal T on all products

AH development ***male*** occupant – three mattresses

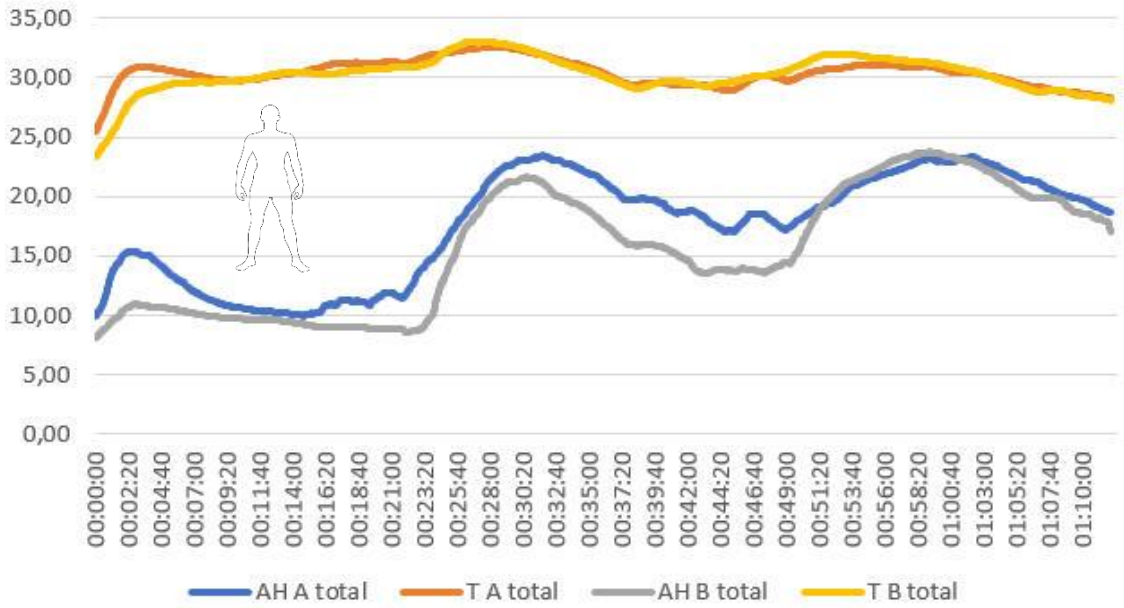


AH development ***female*** occupant – three mattresses



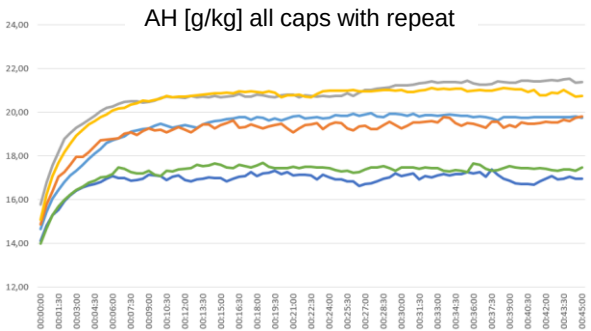
INSIDE COMFORT – Data examples

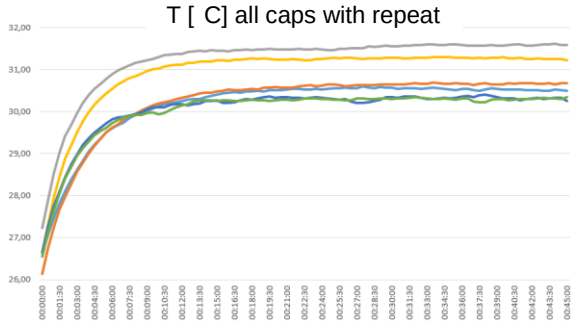
One occupant – two sets shirt and quilted jacket – one with thermoregulating treatment



INSIDE COMFORT – Data examples

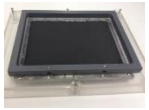
SWEATOR-Head – three bump caps in comparison





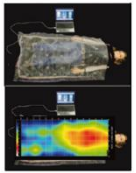
INSIDE CLIMATE – overview products - services

INSIDE SIMULATION



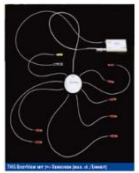
INSIDE DATA

SleepView

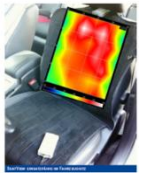


HeadView

BodyView



SeatView

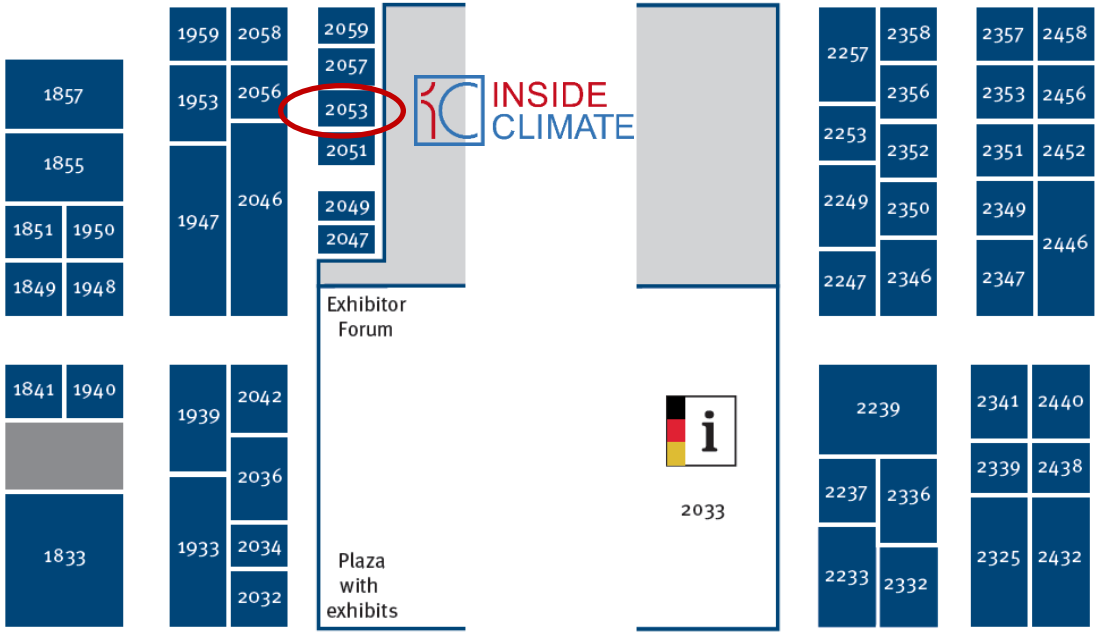


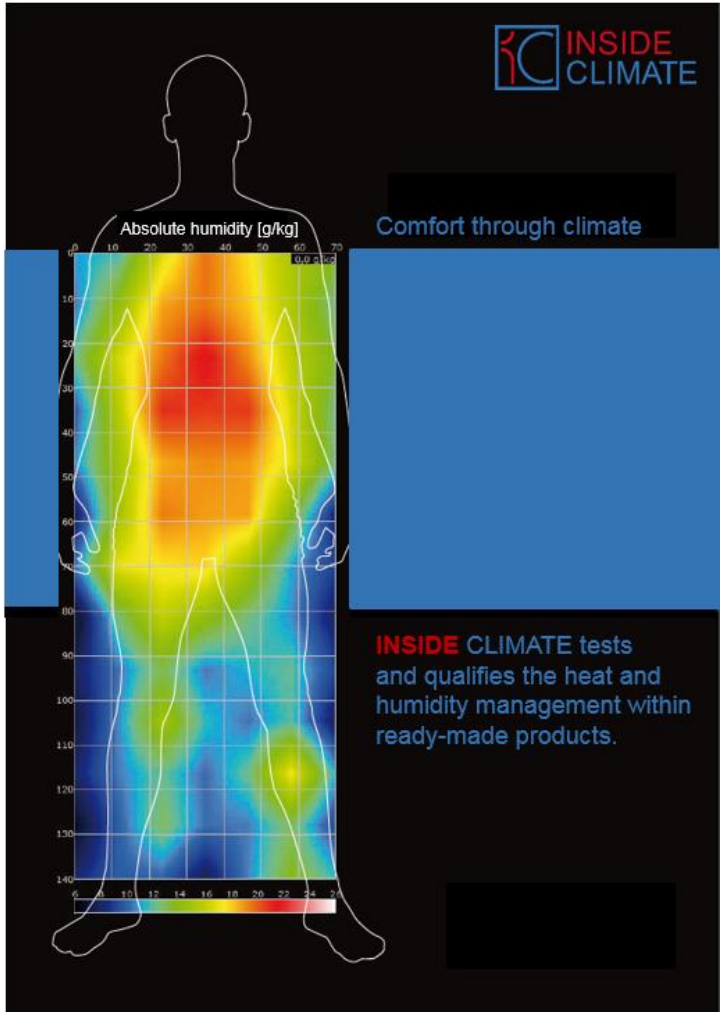
INSIDE TESTING

INSIDE DATA – more Q&A? We d be pleased!

INSIDE CLIMATE

You find us at: German Pavilion – booth 2053





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