

Edith CHASSEIN | IREES

# **AWARENESS RAISING ON ENERGY EFFICIENCY AND CARBON FOOTPRINT**

Results from the project THE4BEES



**ENERGY** IS CONSUMED *BY PEOPLE*  
RATHER THAN BY **BUILDINGS**



## SUSTAINABLE BEHAVIOUR



## Definition

### *Sustainable behaviour*

- meeting needs
- enhancing quality of life
- improving efficiency
- minimising waste
- taking a lifecycle perspective
- taking into account the equity dimension

source: Oslo Round Table on Sustainable  
Production and Consumption, 1995

## Dimensions

### *Sustainable behaviour*

- reflection of needs
- information seeking
- decision for investments or goods or the use of appliances

“[...] individual sustainable behaviours can contribute to sustainable development only if many people perform them.”

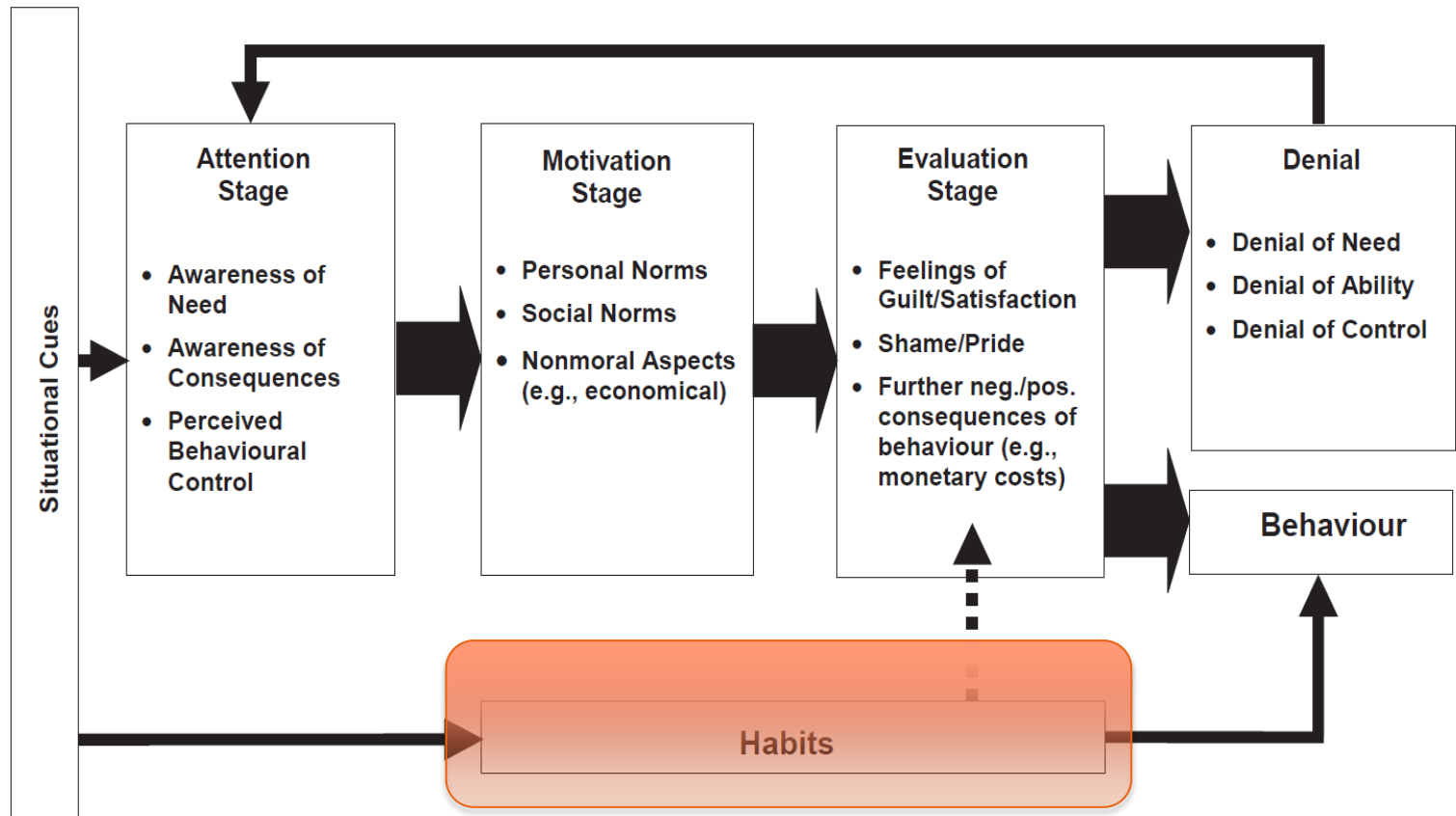
source: Homburg & Matthies, 2010; Böhm, 2010

## CHANGING BEHAVIOUR



## Extended model of normative decision making (Klöckner & Matthies, 2004)

HOW HABITS INTERFERE WITH NORM DIRECTED BEHAVIOUR



## Changing Behaviour

- Behavioural change is determined by habits and routines
- Tailor-made approach is necessary:
  - knowlegde about the target group,
  - analyses of potential for energy saving by behavior change (e.g. baseline of data),
  - choice of intervention methode,
  - support/mentoring during the intervention,
  - and measurement of result/success of an intervention



## Essential issues

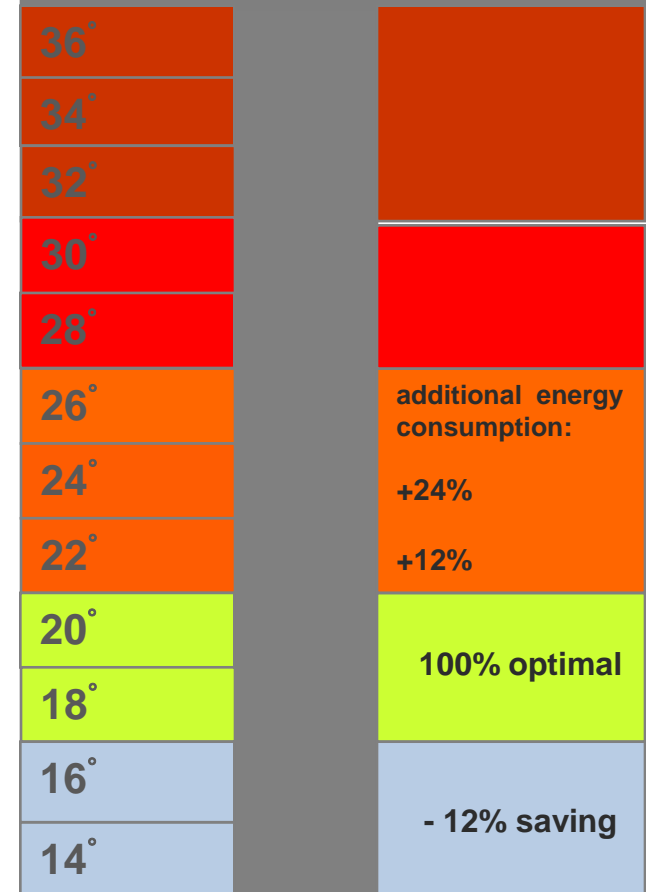
- **Information:** Feedback is essential. *I have spent 250 kWh this month.*
- Feedback is not enough.  
*And now? How to interpret this information?*

## Essential issues

- **Interpretation** by setting a benchmark: *The benchmark of comparable households is 200 kWh.*
- Interpretation is not enough. *Can I do something about it?*
  - No => no action;
  - Yes => *What can I do??*

*Just turn down...*

*...and save 6% energy consumption by each degree!*



## Essential issues

- **Action:** behave in a different way, take part in a challenge, share your experience with others etc.

➤ **Impact: Behaviour change, reduction of €/kwh/CO<sub>2</sub>, sustainability, good feeling, FUN**

## TARGET GROUPS



## target groups *of the project*

- Private Households
- Workplaces
- Educational Buildings
- Alpine Huts

## target groups *of the project*

- Private Households
- Workplaces
- Educational Buildings
- Alpine Huts

High control over  
energy consumption

Low influence on  
investments (tenants)

Low social control

High degree of habits  
and routines

## target groups *of the project*

- Private Households
- Workplaces
- Educational Buildings
- Alpine Huts



Medium control over  
energy consumption

Low influence on  
investments (employees)

High social control

Medium degree of  
habits and routines

## target groups *of the project*

- Private Households
- Workplaces
- Educational Buildings
- Alpine Huts

Medium control over  
energy consumption

Low influence on  
investments (students)

High social control

Medium-low degree of  
habits and routines



## target groups *of the project*

- Private Households
- Workplaces
- Educational Buildings
- Alpine Huts

Medium control over  
energy consumption

Low influence on  
investments (guests)

Medium social control

Medium-low degree of  
habits and routines

## Energy Saving Potential – Examples

	measure	operationalisation	Potential/a (Germany)	barriers
Household	Hot water saving	Shower instead of bath, short shower, lower temperature	10 TWh	Know-how, motivation, comfort, routines, proper sanitation
School	Adequate room temperature	Use of internal warming, switch off heating when no classes	0,5 TWh	Comfort, automatisisation
office	avoid stand-by losses	switch off appliances when not used, use of power management	> 1 TW	know-how, doubts about efficiency, organizational structure, motivation, No direct benefit for employees

<https://youtu.be/hMOQHsWfOB4>

## INTERVENTIONS AND INCENTIVES FOR BEHAVIOUR CHANGE



## Intervention and incentives

### *examples*

- tariffs depending on the time of day or amount of energy used
- fifty/fifty share of energy savings
- bicycles supplied by the company
- „ecoteams" with regularly knowledge and experience exchange
- social mechanisms through gamification or competition
- advice signs like "Climbing stairs burns nearly five times as much calories as using the lift"

<https://youtu.be/hMOQHsWfOB4>

## PIANO STAIRS THE FUN THEORY



## HEADER

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