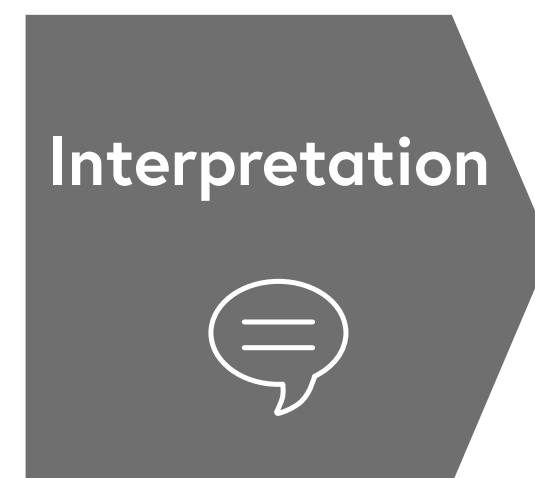
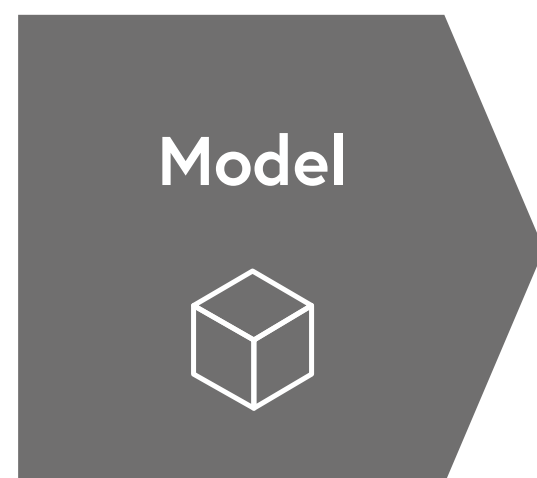
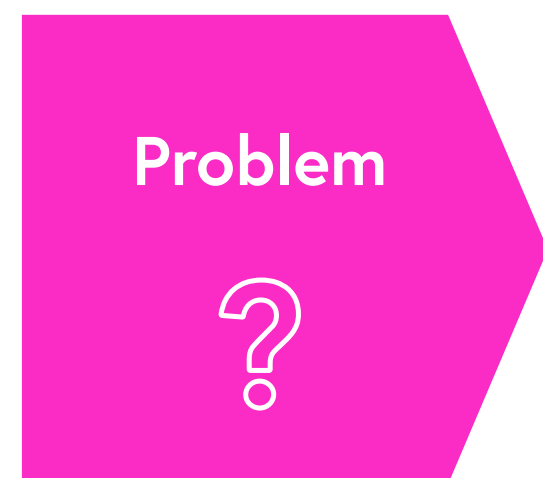


**University
of Basel**

In association with:



From *system* to firms



**Emission
Choice Model**
ECM

**Output Abatement
Choice Model**
OACM

**Input
Choice Model**
ICM

Models of firm behavior (Xepapadeas, 1997)

Emission Choice Model:

$$\max_{e_i \geq 0} B_i(e_i) - t \cdot e_i$$

Output Abatement Choice Model:

$$\max_{q_i, a_i \geq 0} p \cdot q_i - c_i(q_i, a_i) - t \cdot e_i(q_i, a_i)$$

Input Choice Model:

$$\max_{q_i, a_i \geq 0} p \cdot f_i(x_{i,1}, x_{i,2}, \dots, x_{i,m}) - \sum_{j=1}^m w_j \cdot x_{i,j} - t \cdot e_i(x_{i,1}, x_{i,2}, \dots, x_{i,m})$$

Emission Choice Model ECM

Input Choice Model ICM

Output Abatement Choice Model

OACM