

The diagram illustrates the Town Energy Balance (TEB) model structure. It is enclosed in a thick black octagonal border. At the top, the title "Town Energy Balance (TEB)" is centered. Below the title, the model components are organized as follows:

- Occupation fraction of the traffic**: A box at the top left, receiving a dashed arrow from the left and sending a solid arrow down to **Radiative impacts**.
- Radiative impacts**: A box within a light gray rounded rectangle, receiving a solid arrow from the left and a dashed arrow from the bottom.
- Wind induced**: A box within the same light gray rounded rectangle, receiving a solid arrow from the bottom.
- Tires friction**: A box within a dotted-line rounded rectangle, receiving a dashed arrow from the bottom.
- Latent and sensible heat released**: A box within the dotted-line rounded rectangle, receiving a dashed arrow from the bottom.
- Parameterised traffic impacts**: A box to the right of the dotted-line rounded rectangle, receiving a dashed arrow from the left.

At the bottom, there are two boxes representing input variables:

- Input 1**: A box containing the expression  $\overline{v^2}(\bar{v}), \overline{v^{1/4}}(\bar{v}), \bar{p}(\bar{v})$ . It sends solid arrows up to **Wind induced** and **Tires friction**, and a dashed arrow right to **Latent and sensible heat released**.
- Input 2**: A box containing the expression  $\overline{\eta_e}(\bar{v})$ . It sends a solid arrow up to **Latent and sensible heat released** and a dashed arrow right to **Parameterised traffic impacts**.

Speed  $\bar{v}$   
 Flow  $\phi$   
 Mass  $\bar{m}$   
 Height  $\bar{h}$   
 Length  $\bar{l}$   
 Drag  $\bar{C}_d$   
 Frontal area  $\bar{A}$

## Radiative impacts

Wind  
induced

Tires friction

Latent and  
sensible heat  
released

## Parameterised traffic impacts

$$\overline{v^2}(\overline{v}), \overline{v^{1/4}}(\overline{v}), \overline{p}(\overline{v})$$

$$\overline{\eta}_e(\overline{\mathbf{v}})$$

## Mechanical budget

Compute  
engine  
efficiency

$$\overline{\eta}_e(\overline{\mathbf{v}})$$

## Vehicles database

WLTC data (Low,Medium,High,Extra high)