Etude multi-échelle des transferts hygrothermiques dans le béton de bois

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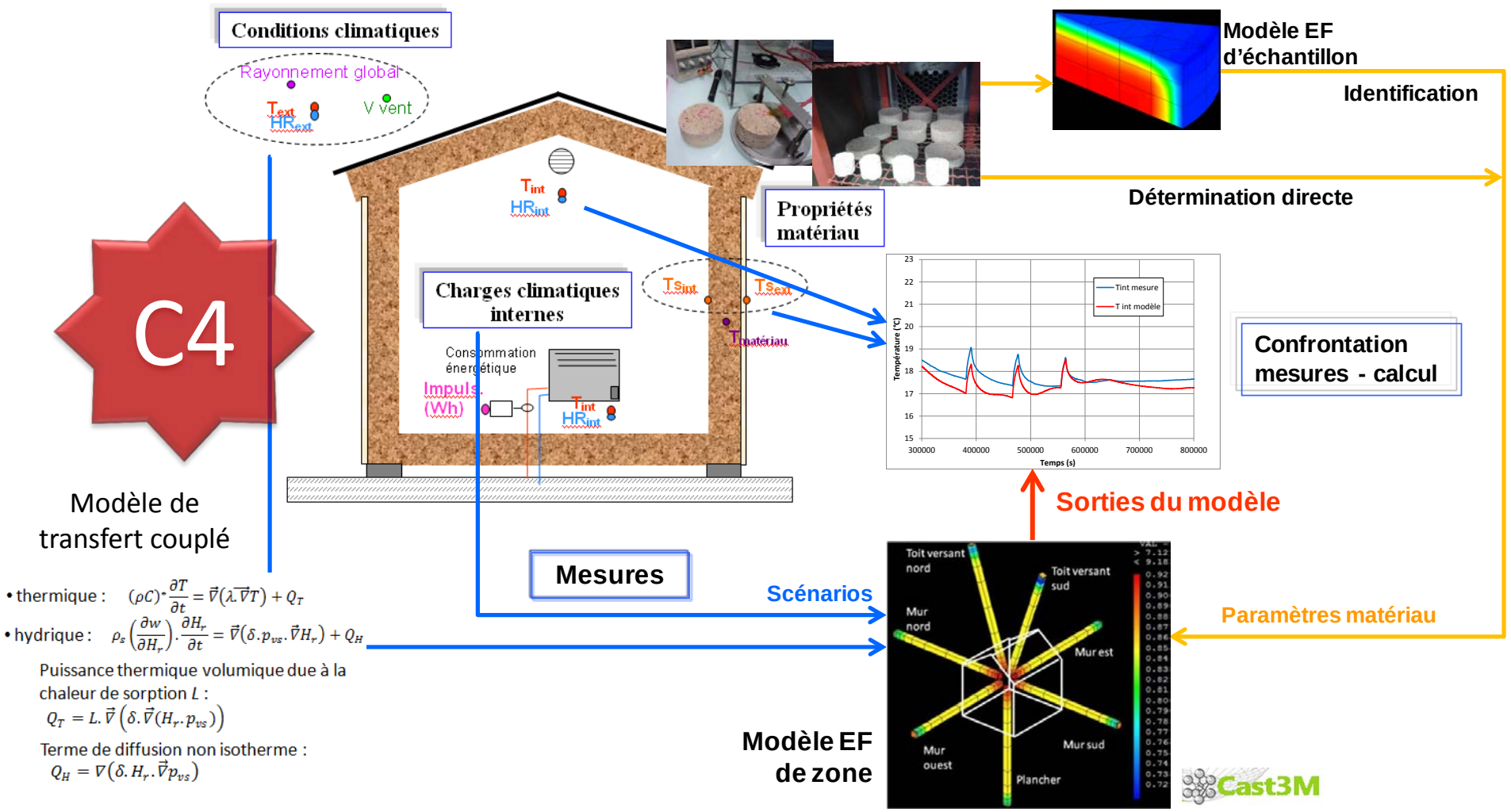
ABE



- thermique : $(\rho C)\cdot\frac{\partial T}{\partial t} = \vec{\nabla}(\lambda.\vec{\nabla}T) + Q_T$
- hydrique : $\rho_s\left(\frac{\partial w}{\partial H_r}\right)\cdot\frac{\partial H_r}{\partial t} = \vec{\nabla}(\delta.p_{vs}.\vec{\nabla}H_r) + Q_H$

Puissance thermique volumique due à la chaleur de sorption L :

$$Q_T = L.\vec{\nabla}\left(\delta.\vec{\nabla}(H_r.p_{vs})\right)$$

Terme de diffusion non isotherme :

$$Q_H = \nabla(\delta.H_r.\vec{\nabla}p_{vs})$$