

Colloque

BÂTIMENTS DÉCARBONÉS



Transition énergétique des plex et unifamiliaux : Solutions et soutiens politiques

INTRODUCTION PASSIVHAUS

**LE BÂTIMENT PASSIF
OU LA MAISON
PASSIVE?**

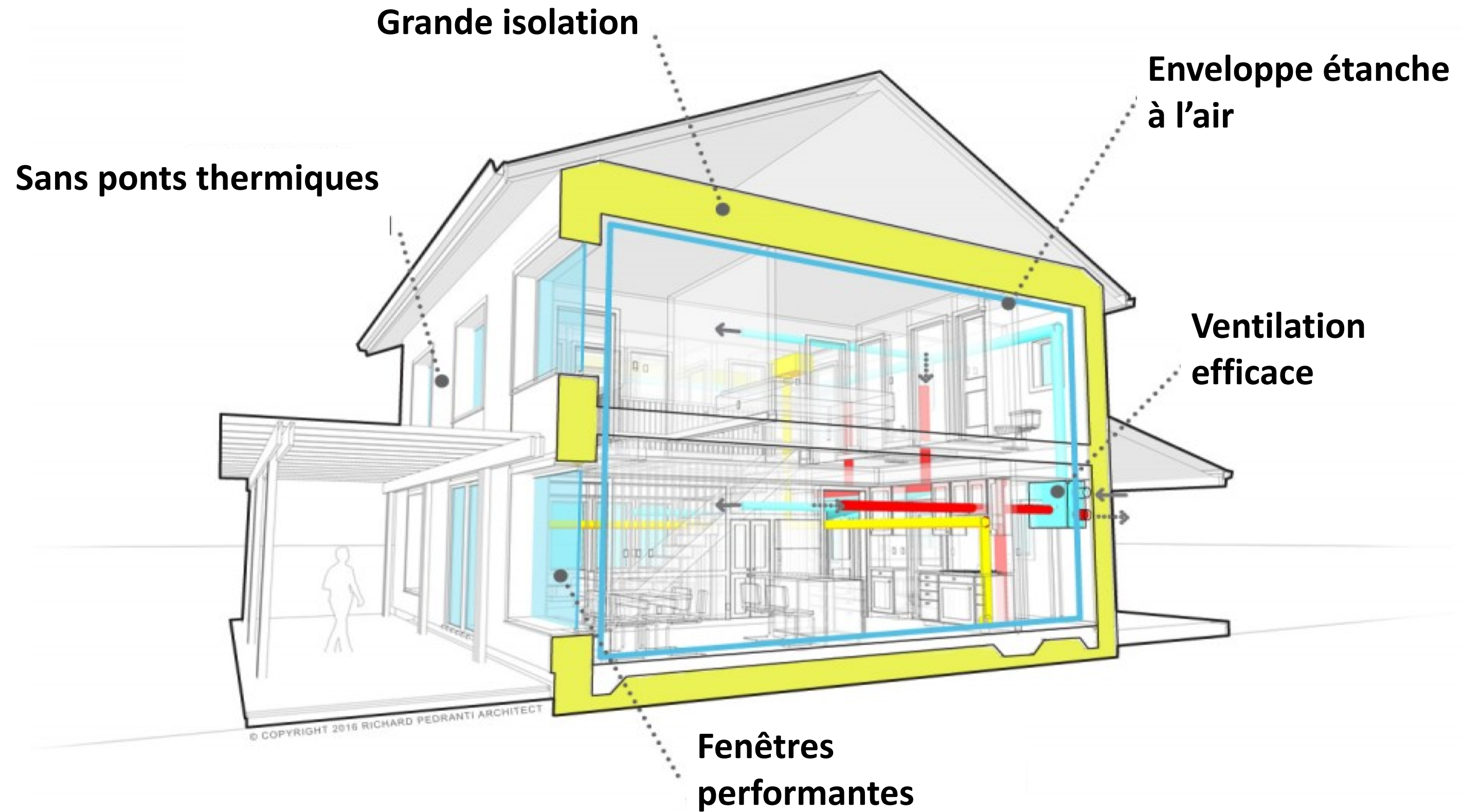
Passivhaus

Krankenhaus = hôpital

Rathaus = hôtel de ville

Parkhaus = garage de stationnement

LES CINQ PRINCIPES



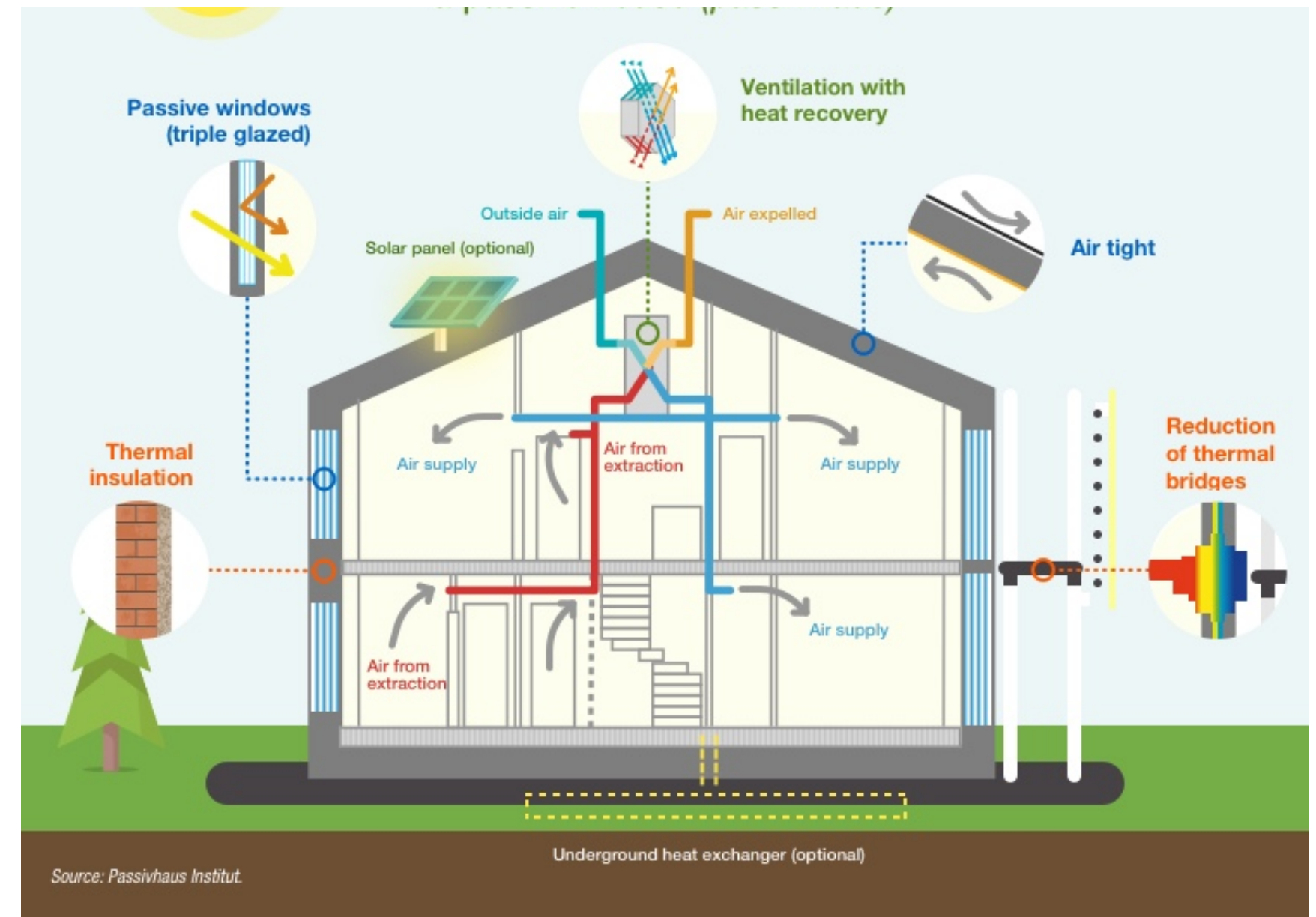
**LA NORME
PASSIVHAUS**

une norme
non-prescriptif avec

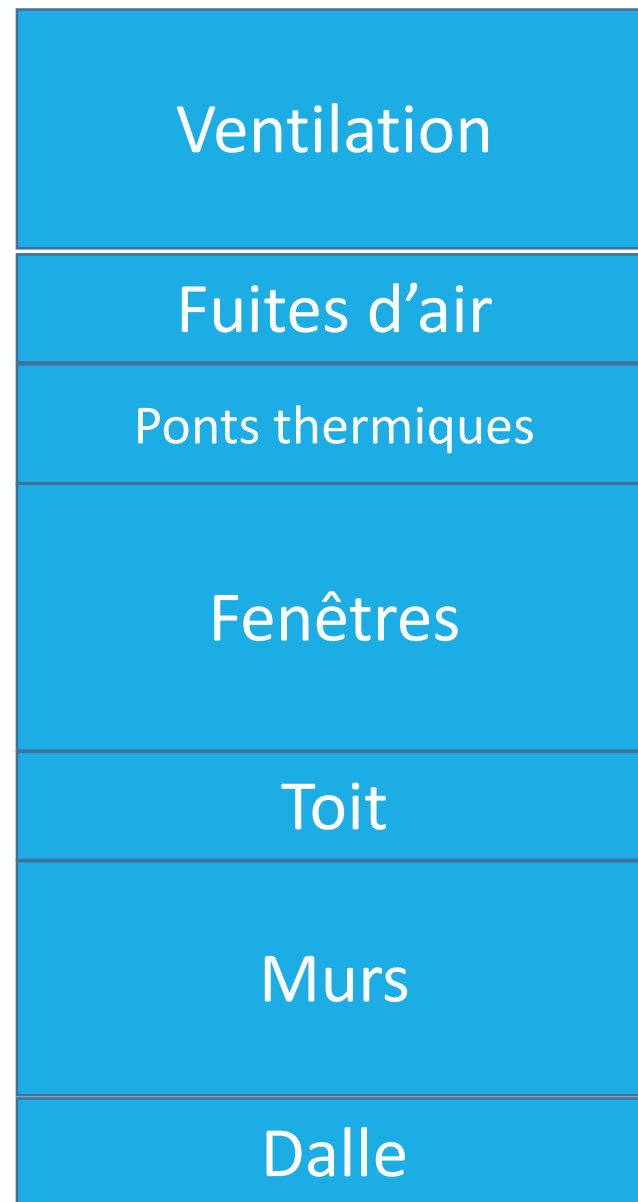
des critères de
performance à
atteindre

LES CRITÈRES PASSIVHAUS

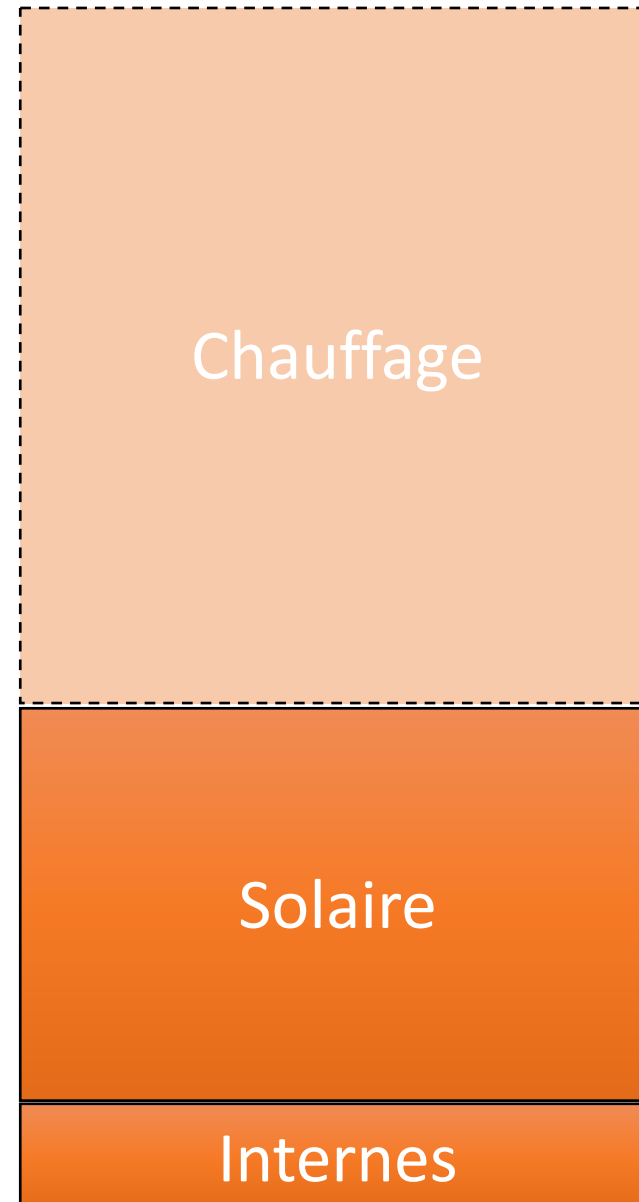
- **Énergie de chauffage**
 - $\leq 15 \text{ kWh/m}^2$ par an
- **Étanchéité à l'air**
 - test d'infiltrométrie de $n_{50} \leq 0,6$ /h
- **Consommation totale d'énergie**
 - $\leq 120 \text{ kWh/m}^2$ par an
- **Surchauffe**
 - $>25^\circ\text{C} \leq 10\%$ de l'année



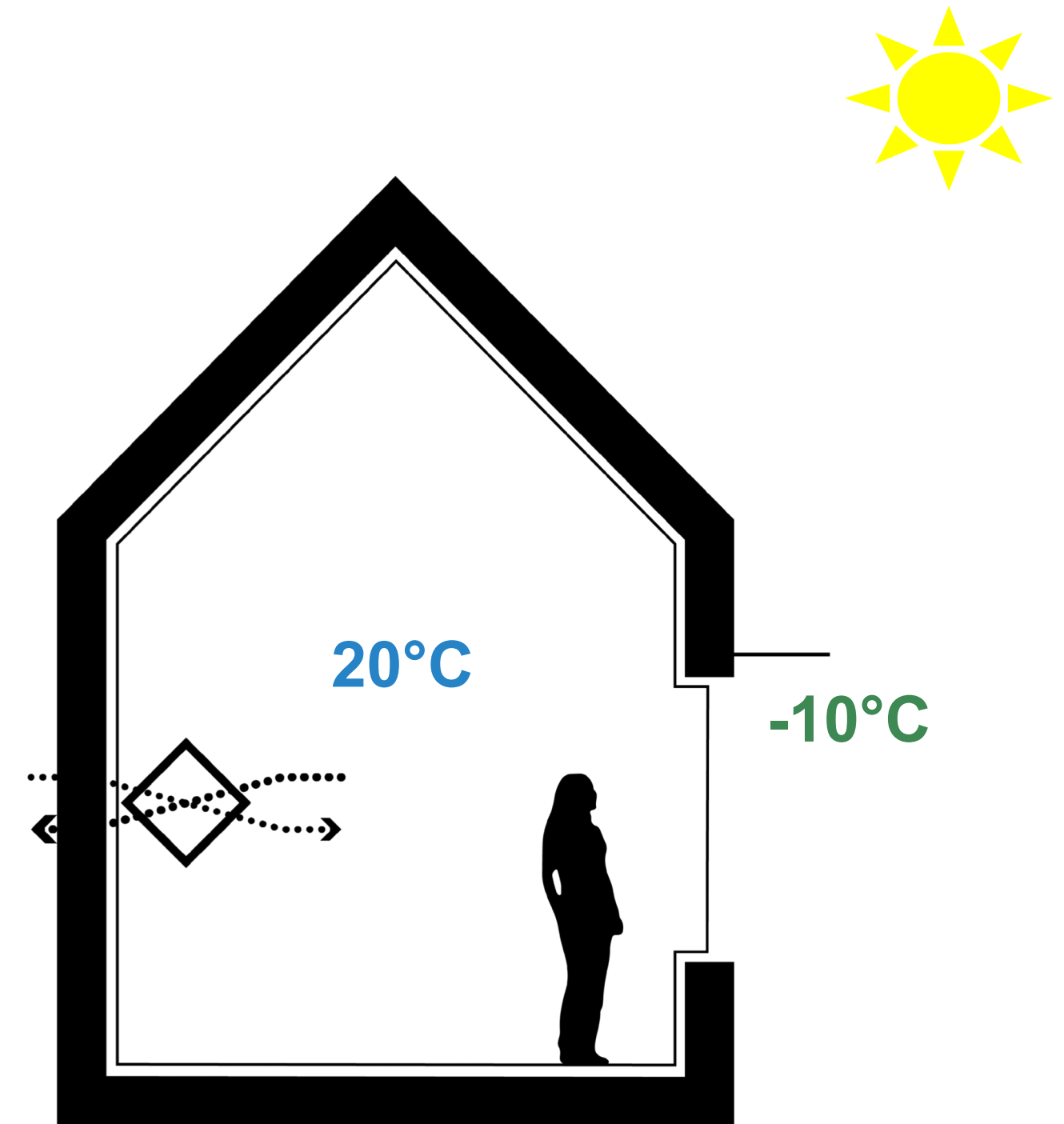
BILANS ÉNERGÉTIQUES



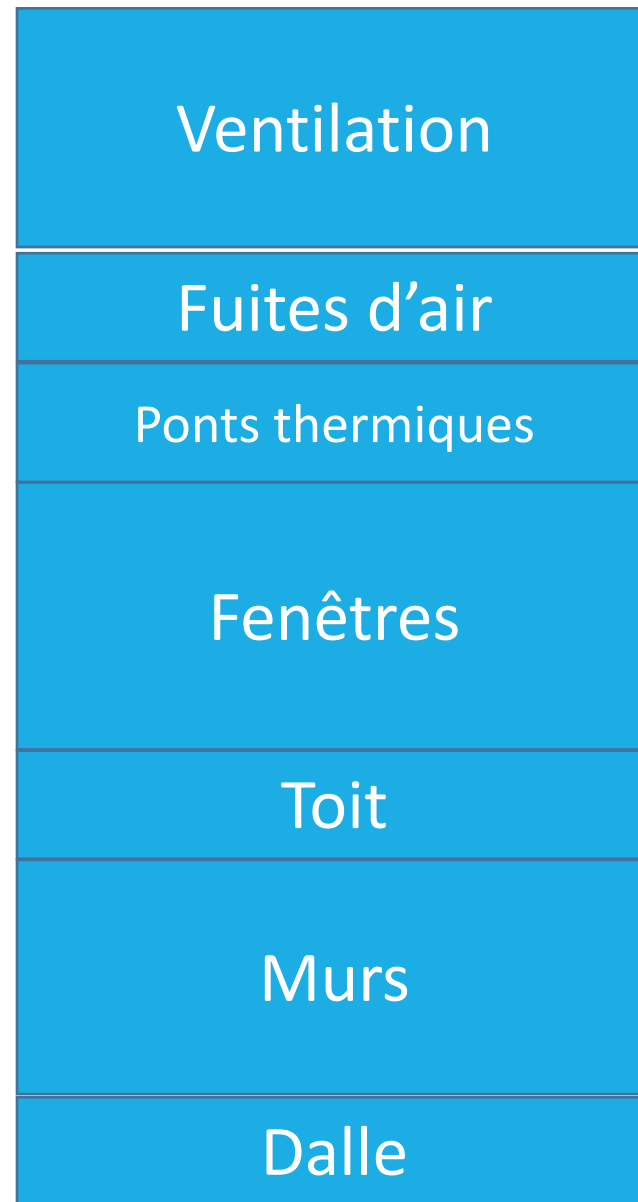
Pertes



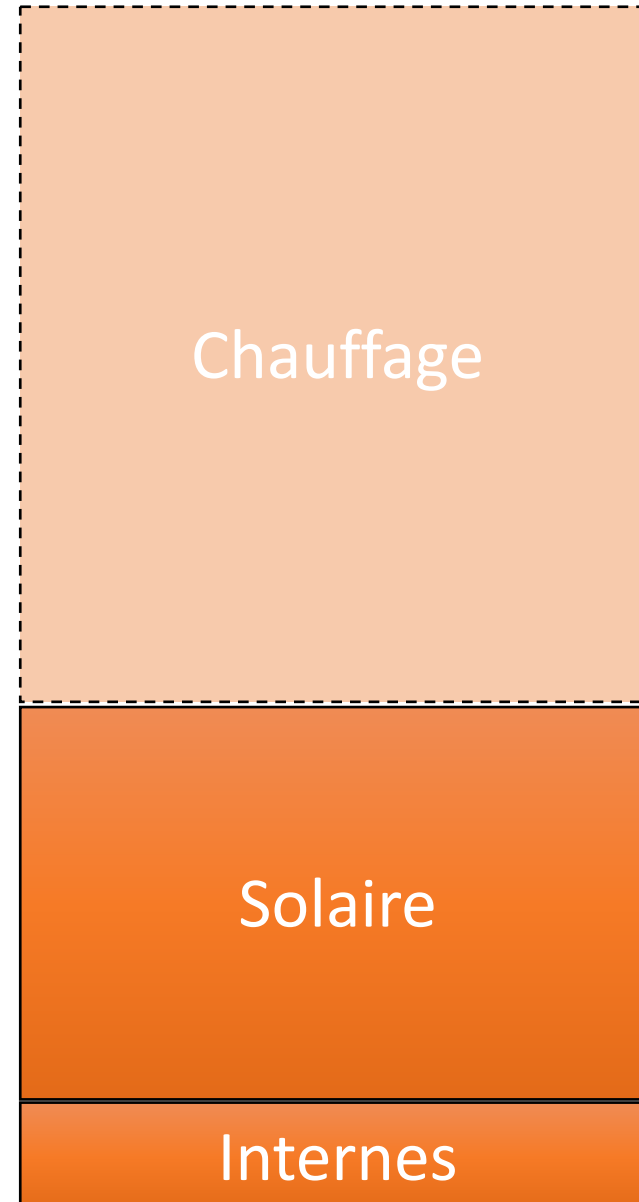
Gains



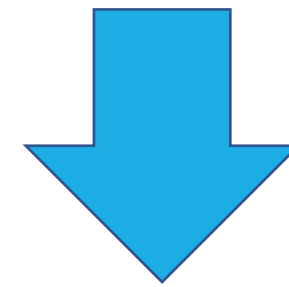
BILANS ÉNERGÉTIQUES



Pertes

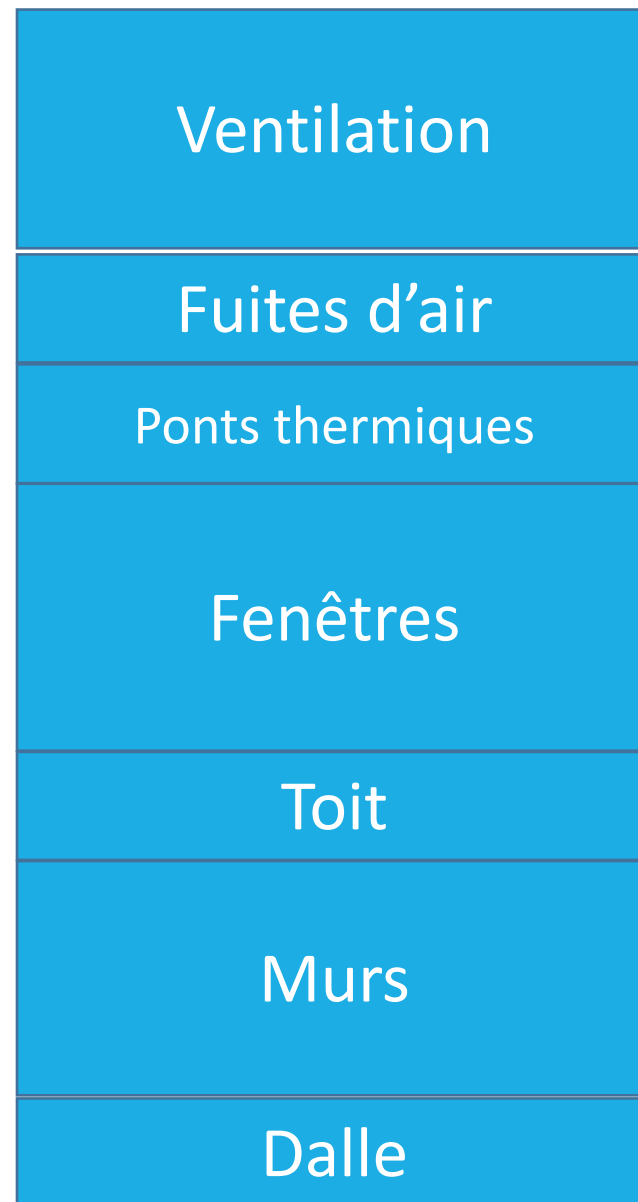


Gains

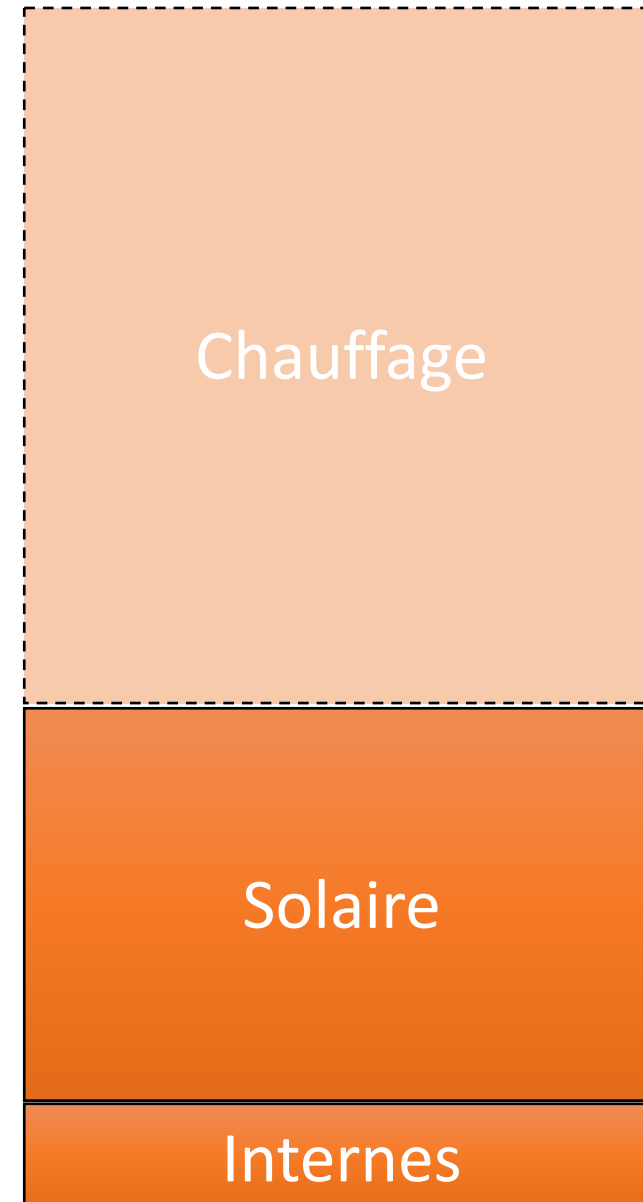


Pertes

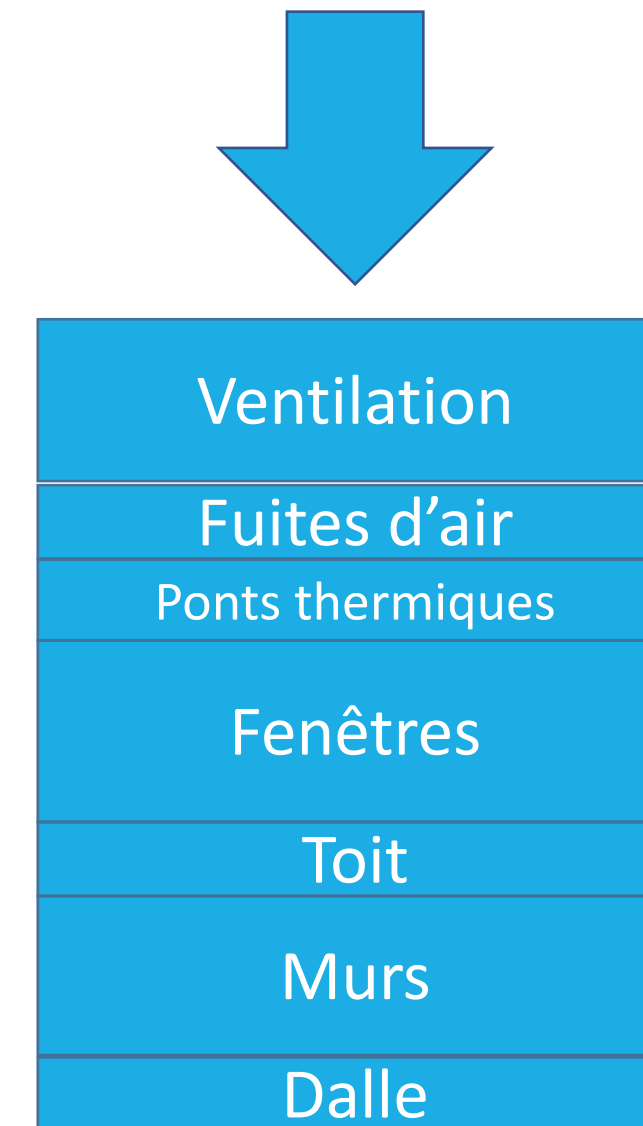
BILANS ÉNERGÉTIQUES



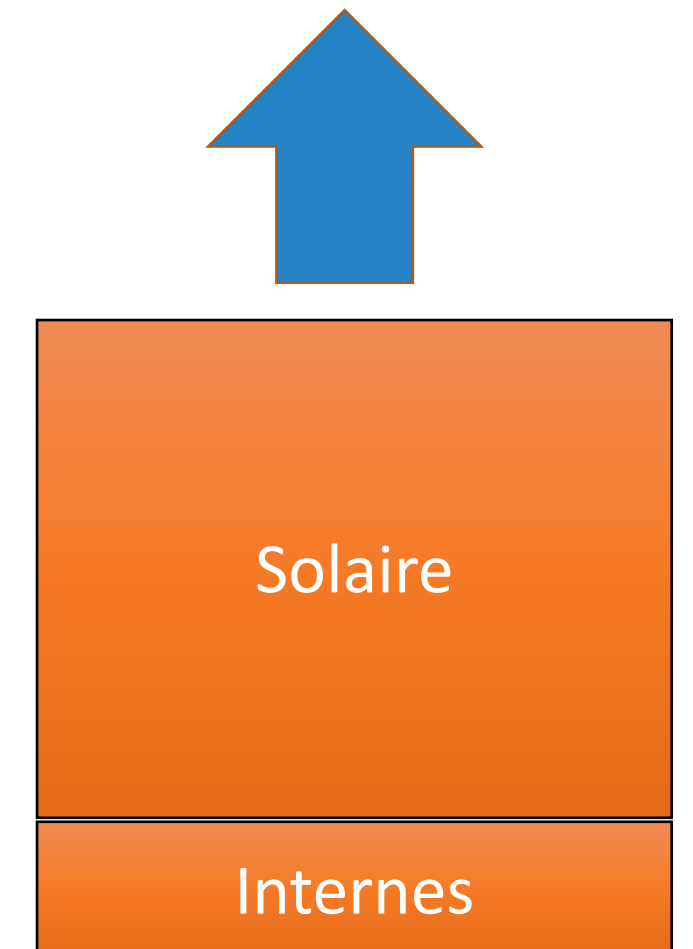
Pertes



Gains

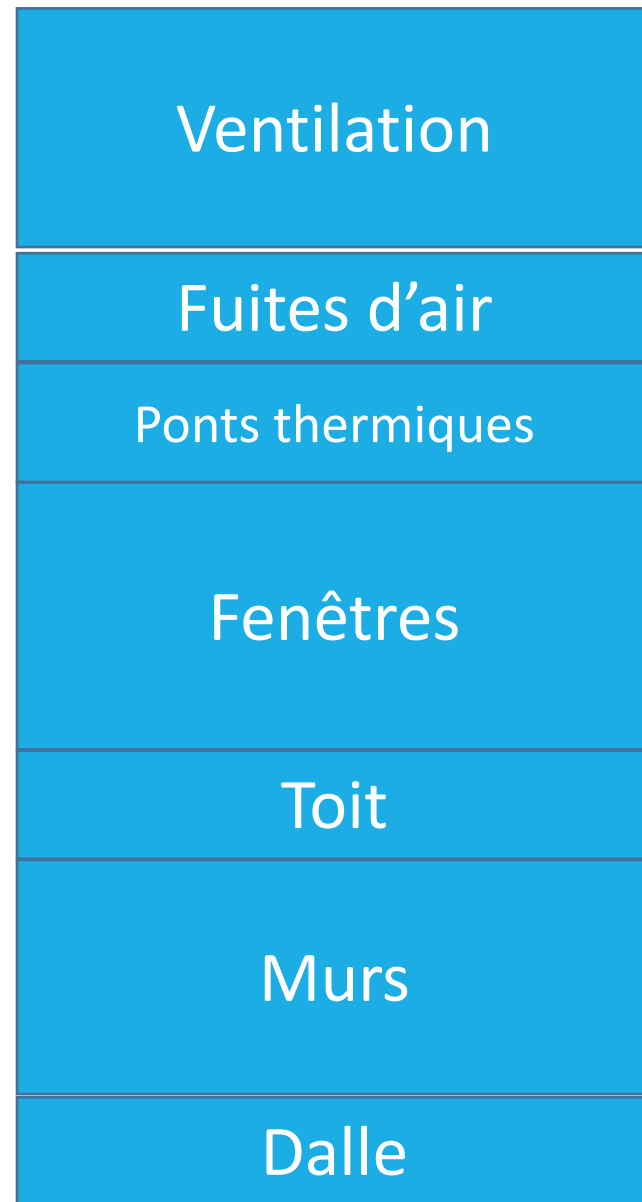


Pertes

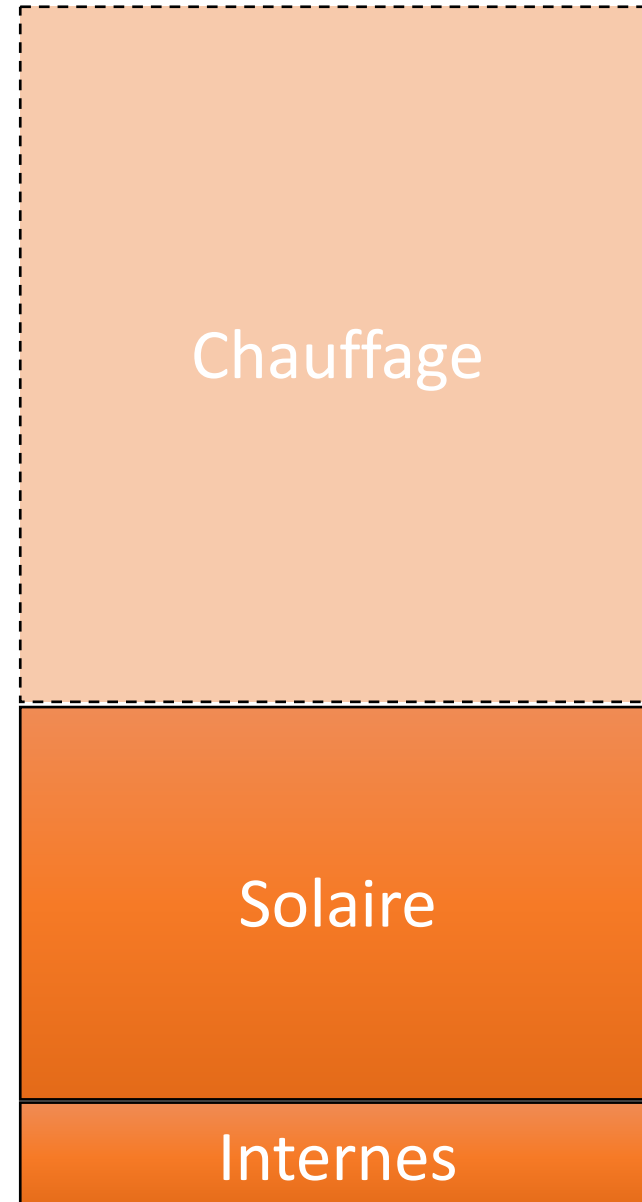


Gains

BILANS ÉNERGÉTIQUES



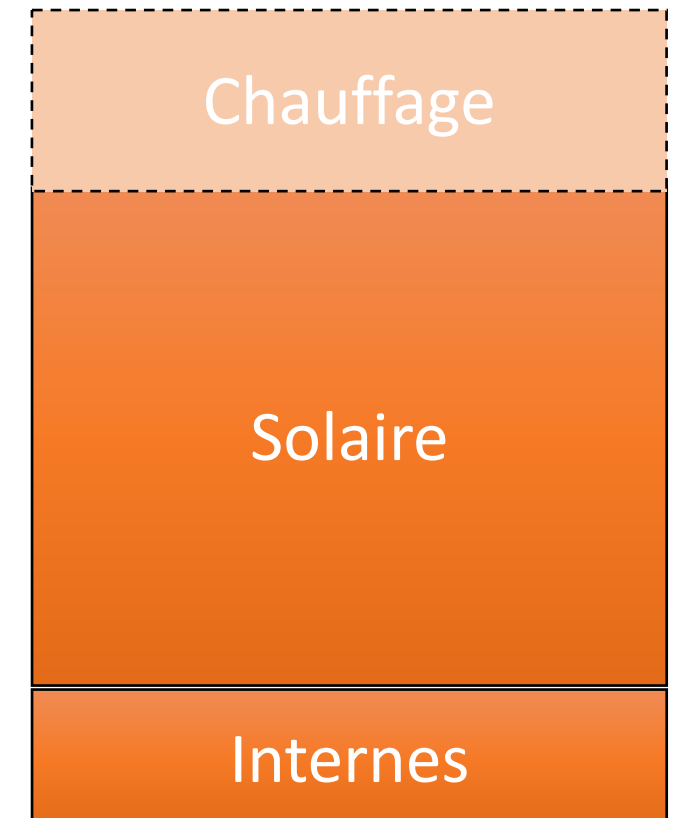
Pertes



Gains

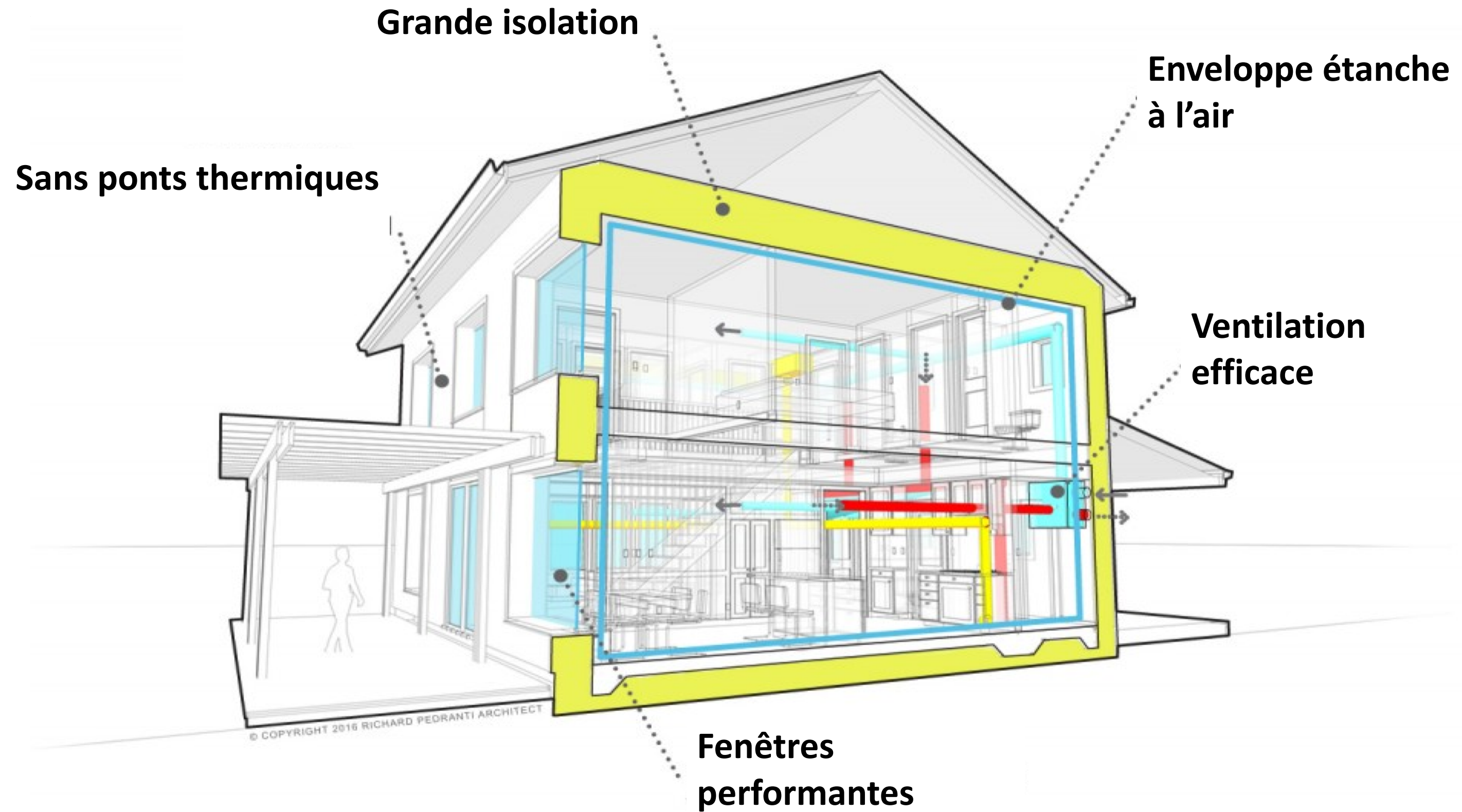


Pertes



Gains

LES CINQ PRINCIPES

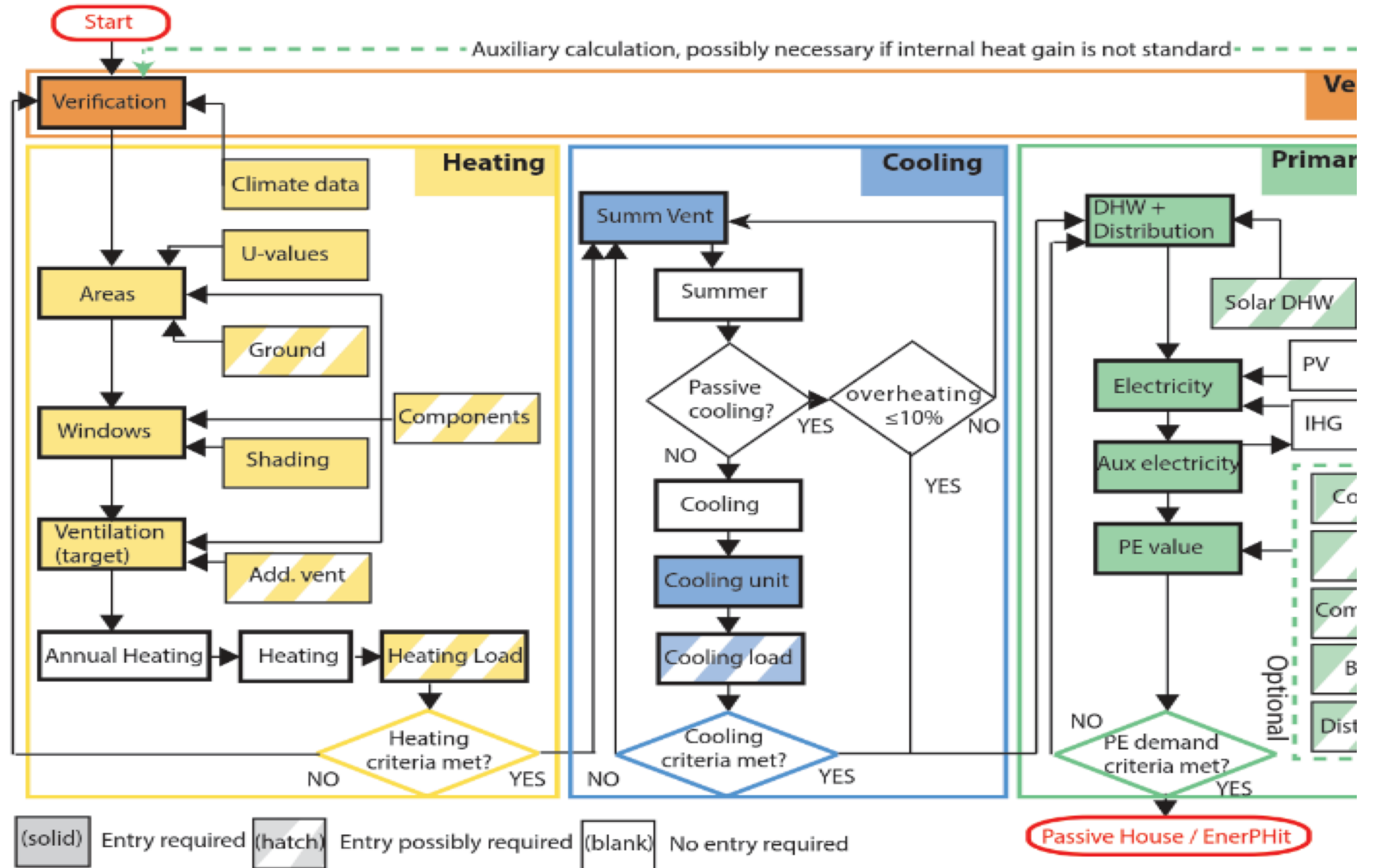


Specific building demands with reference to the treated floor area					
		Treated floor area	156,0 m ²	Requirements	Fulfilled?*
Space heating	Heating demand		14 kWh/(m ² a)	15 kWh/(m ² a)	yes
	Heating load		10 W/m ²	10 W/m ²	yes
Space cooling	Overall specif. space cooling demand		kWh/(m ² a)	-	-
	Cooling load		W/m ²	-	-
	Frequency of overheating (> 25 °C)		1,6 %	-	-
Primary energy	Heating, cooling, auxiliary electricity, dehumidification, DHW, lighting, electrical appliances		60 kWh/(m ² a)	120 kWh/(m ² a)	yes
	DHW, space heating and auxiliary electricity		33 kWh/(m ² a)	-	-
	Specific primary energy reduction through solar electricity		25 kWh/(m ² a)	-	-
Airtightness	Pressurization test result n ₅₀		0,2 1/h	0,6 1/h	yes

* empty field: data missing; '-': no requirement

PHPP - PASSIVE HOUSE PLANNING PACKAGE

PHPP - PASSIVE HOUSE PLANNING PACKAGE



Certification de bâtiments



Certification de composantes



Certification de personnes



**PLUSIEURS NIVEAUX
DE CERTIFICATION**