KlimaHaus - CasaClima

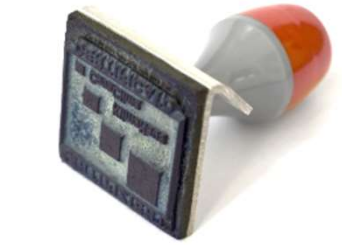
PUTTING ENERGY EFFICIENCY AND SUSTAINABILITY INTO PRACTICE

KlimaHaus - CasaClima
PUTTING SUSTAINABILITY INTO PRACTICE

SÜDTIROL KlimaLand

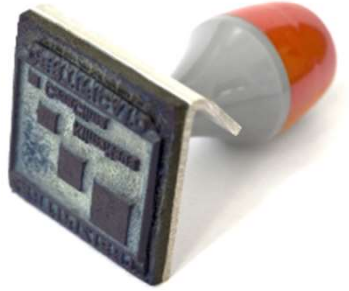
- CERTIFICATION
- EDUCATION
- CONSULTANCY
- RESEARCH &DEVELOPMENT
- COMMUNICATION

KlimaHaus®
CasaClima

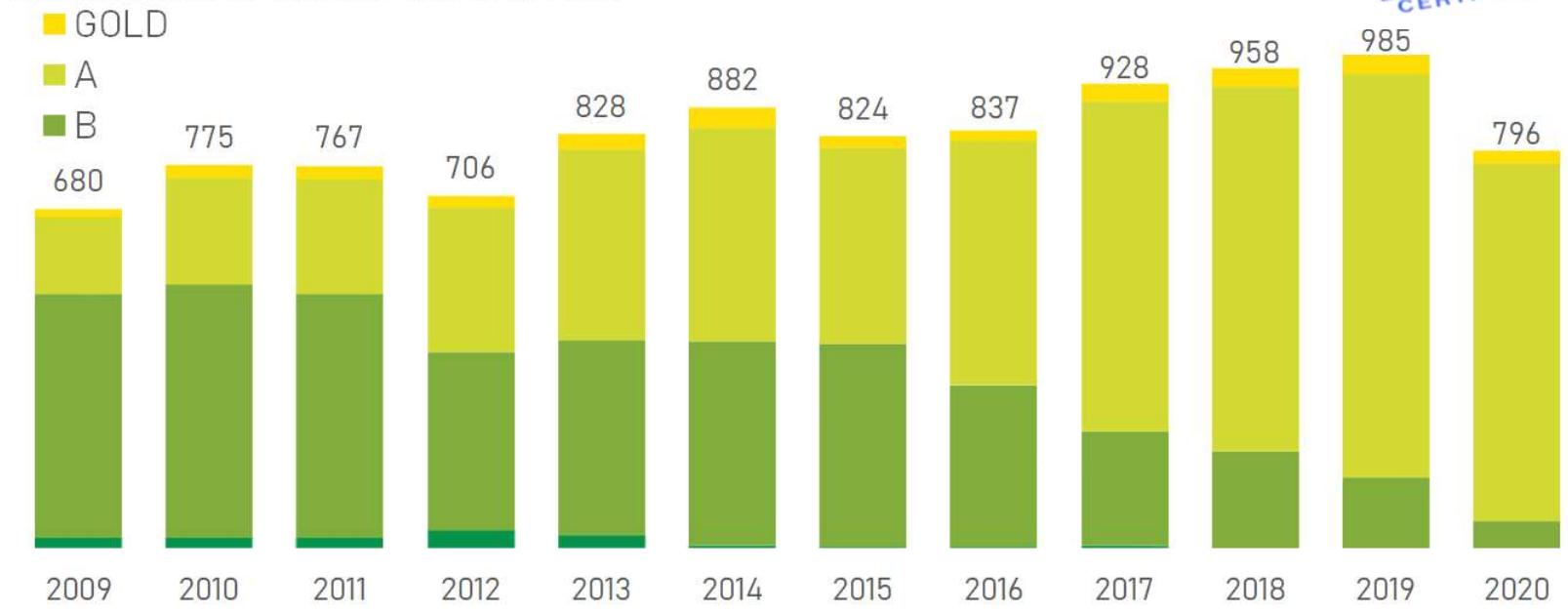


CERTIFICATION

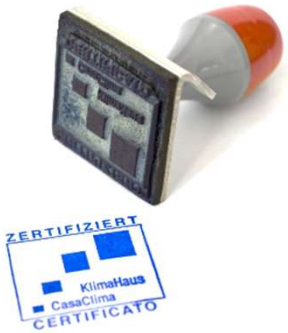
KlimaHaus
CasaClima®

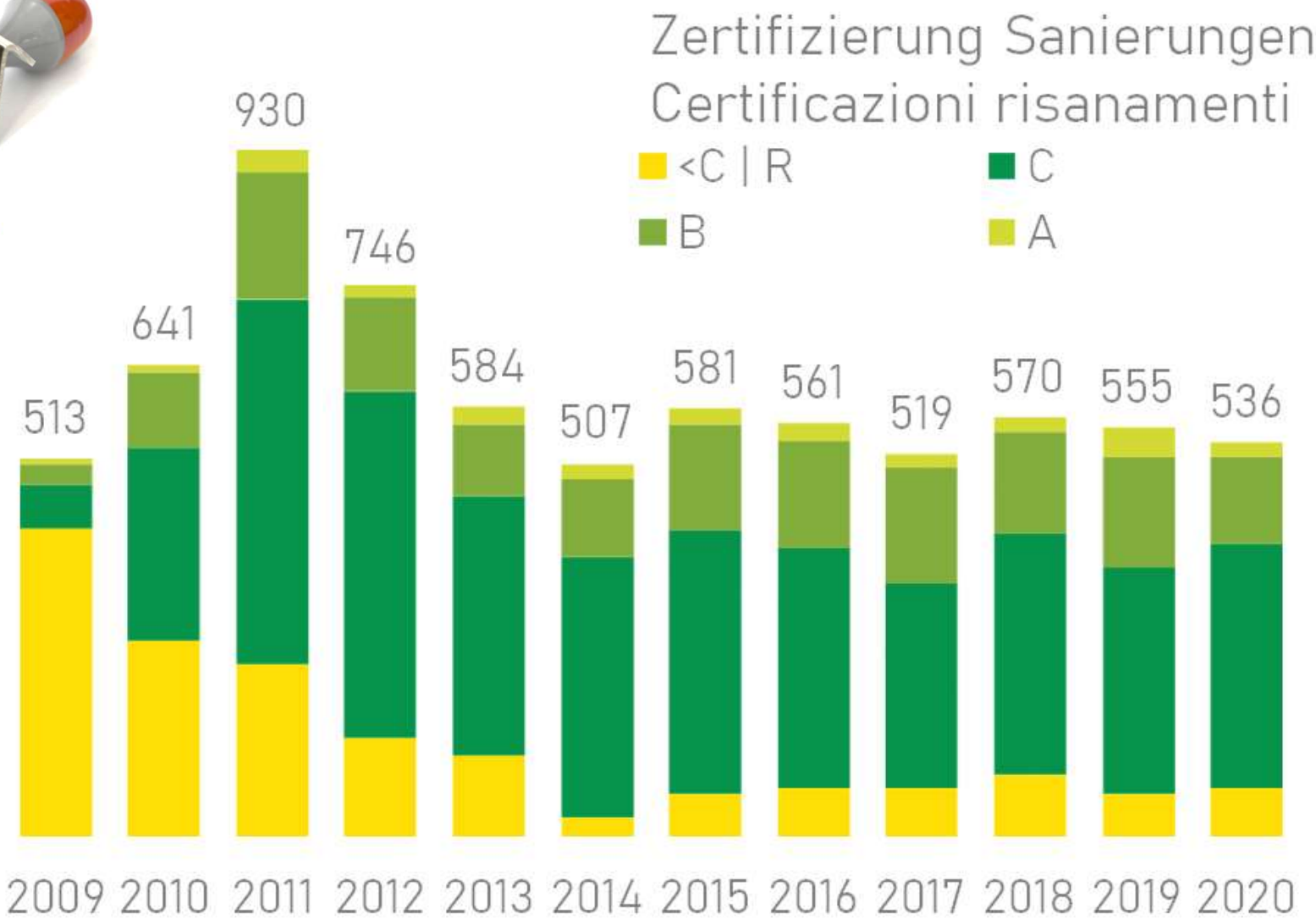


Zertifizierung Neubauten
Certificazioni nuove costruzioni



CERTIFICATION





KlimaHaus - CasaClima
PUTTING SUSTAINABILITY INTO PRACTICE

CERTIFICATION

EDUCATION

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RESEARCH &DEVELOPMENT

COMMUNICATION

30.03.2021 - 02.04.2021

WEBINAR - BASE PER PROGETTISTI CASACLIMA

Il "Corso Base CasaClima per progettisti" presenta il progetto CasaClima e i principi di una costruzione a basso consumo energetico. Vengono illustrati i principali fondamenti di fisica tecnica appl...

24.03.2021 - 31.03.2021

WEBINAR - Corso Installatore/Posatore caposquadra livello EQF4 conforme ai requisiti UNI 11673-3

Il corso specialistico di Installatore/Posatore Caposquadra EQF4 organizzato dall'Agenzia CasaClima risponde ai contenuti della norma UNI 11673-3 nel livello di qualifica più alto e corrisponde alle li...

More than
50 course types
(also english)

Consulenza CasaClima 2020

CERTIFICATION

EDUCATION

CONSULTANCY

RESEARCH &DEVELOPMENT

COMMUNICATION

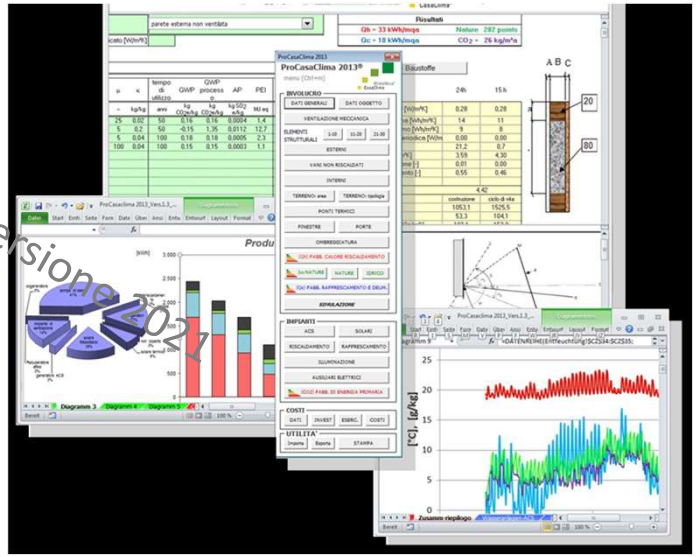
ENERGY CHECK

https://energycheck.klimahaus.it/de/willkommen-1.html

EU-PROJECTS

KlimaHaus CasaClima®

- CERTIFICATION
- EDUCATION
- CONSULTANCY
- **RESEARCH &DEVELOPMENT**
- COMMUNICATION



EUSALP
EU STRATEGY FOR THE ALPINE REGION

GPP4build
Green Public Procurement for Buildings

CoME EASY

Interreg
Fondo Europeo di Sviluppo Regionale
UNIONE EUROPEA
ITALIA SVIZZERA - ITALIE SUISSE - ITALIEN SCHWEIZ
QAES

E2I@NOI
SRI

efre·fesr
Südtirol · Alto Adige
Europäischer Fonds für regionale Entwicklung
Fondo europeo di sviluppo regionale
EUROPEAN UNION

AUTONOME PROVINZ BOZEN SÜDTIROL
PROVINCIA AUTONOMA DI BOLZANO ALTO ADIGE

COMMUNICATION

CERTIFICATION

EDUCATION

CONSULTANCY

RESEARCH &DEVELOPMENT

COMMUNICATION

COMMUNICATION

CERTIFICATION

EDUCATION

CONSULTANCY

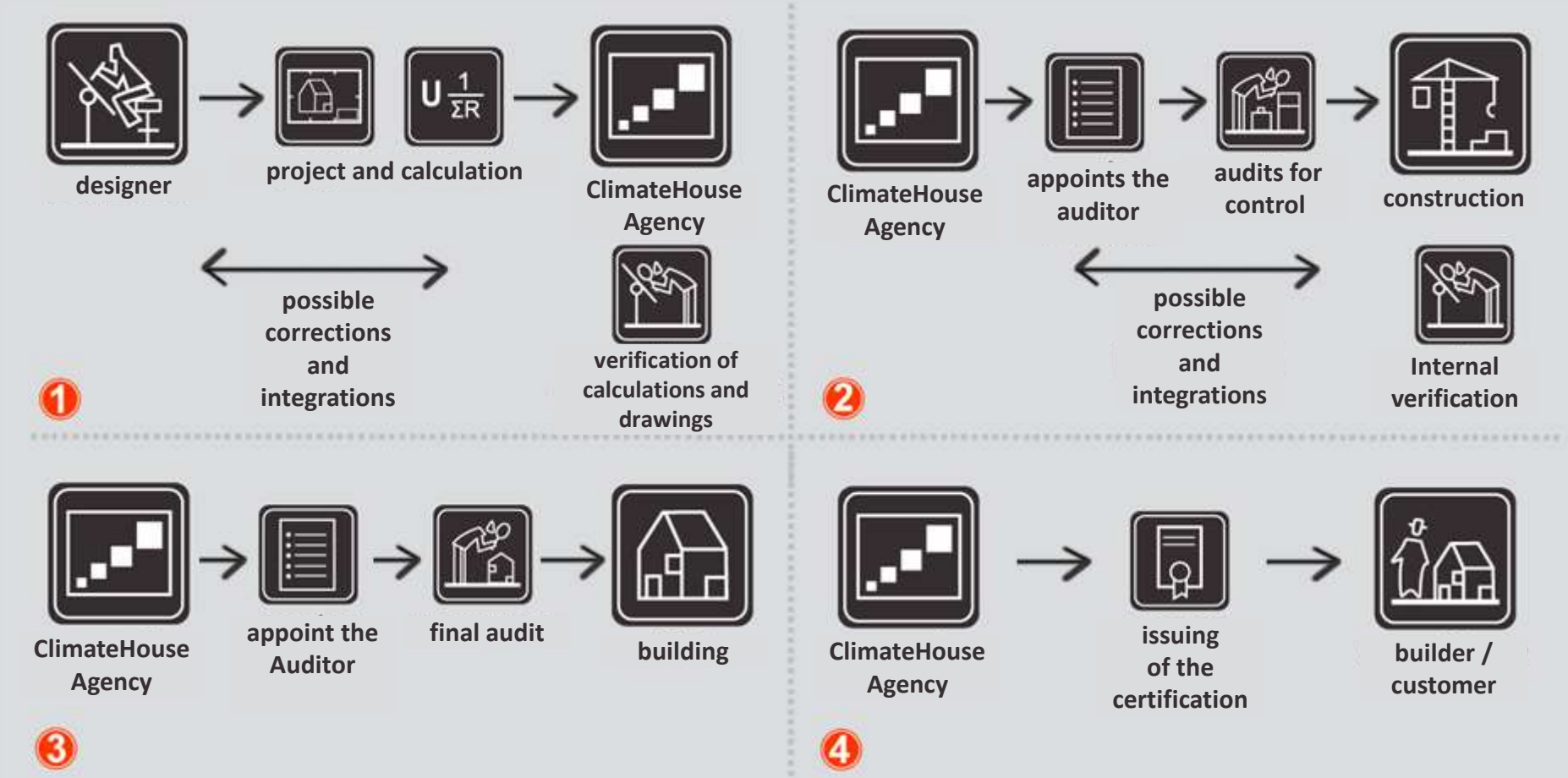
RESEARCH &DEVELOPMENT

COMMUNICATION

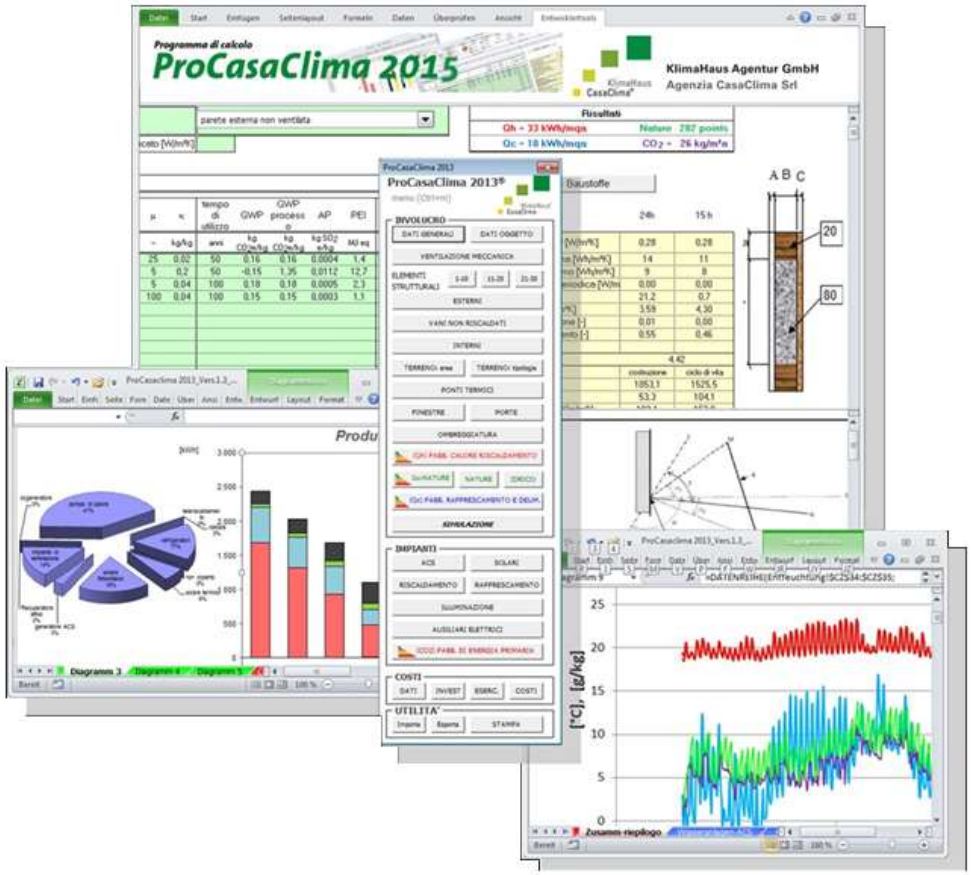
EVENTS:

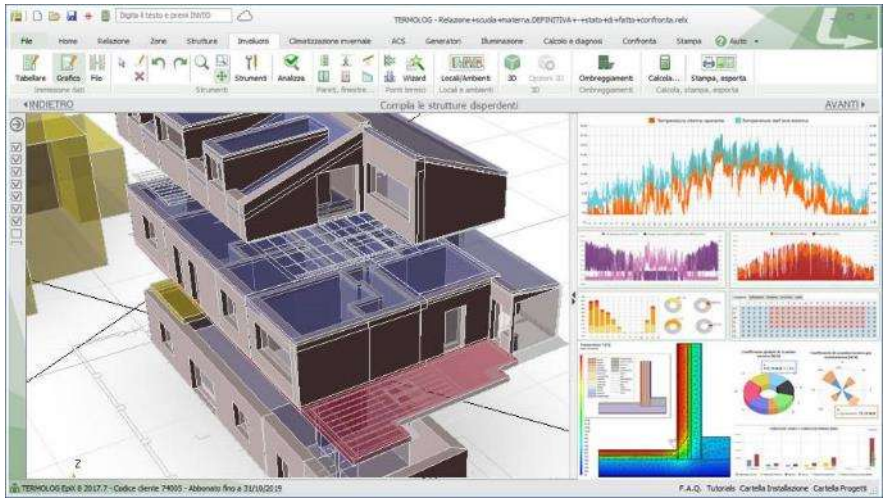
- CO2-CUBUS
- CASACLIMA FAIR
- Other side –events with producers/costumers/institutions

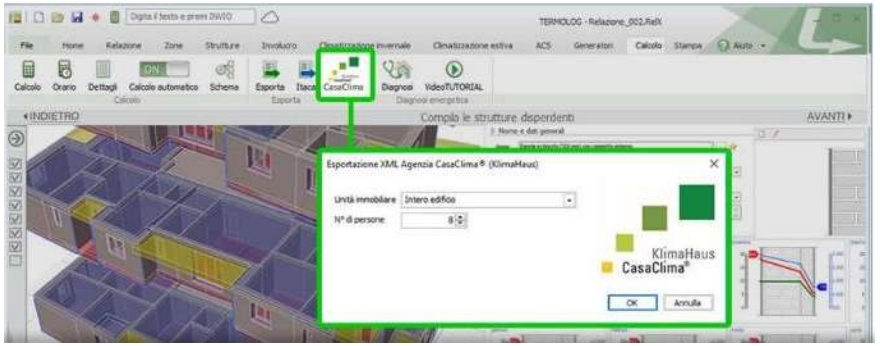
KlimaHaus – CasaClima
Quality Assurance Process



KlimaHaus – CasaClima
Guidelines, Instruments and Tools







soon also an English version (for free)

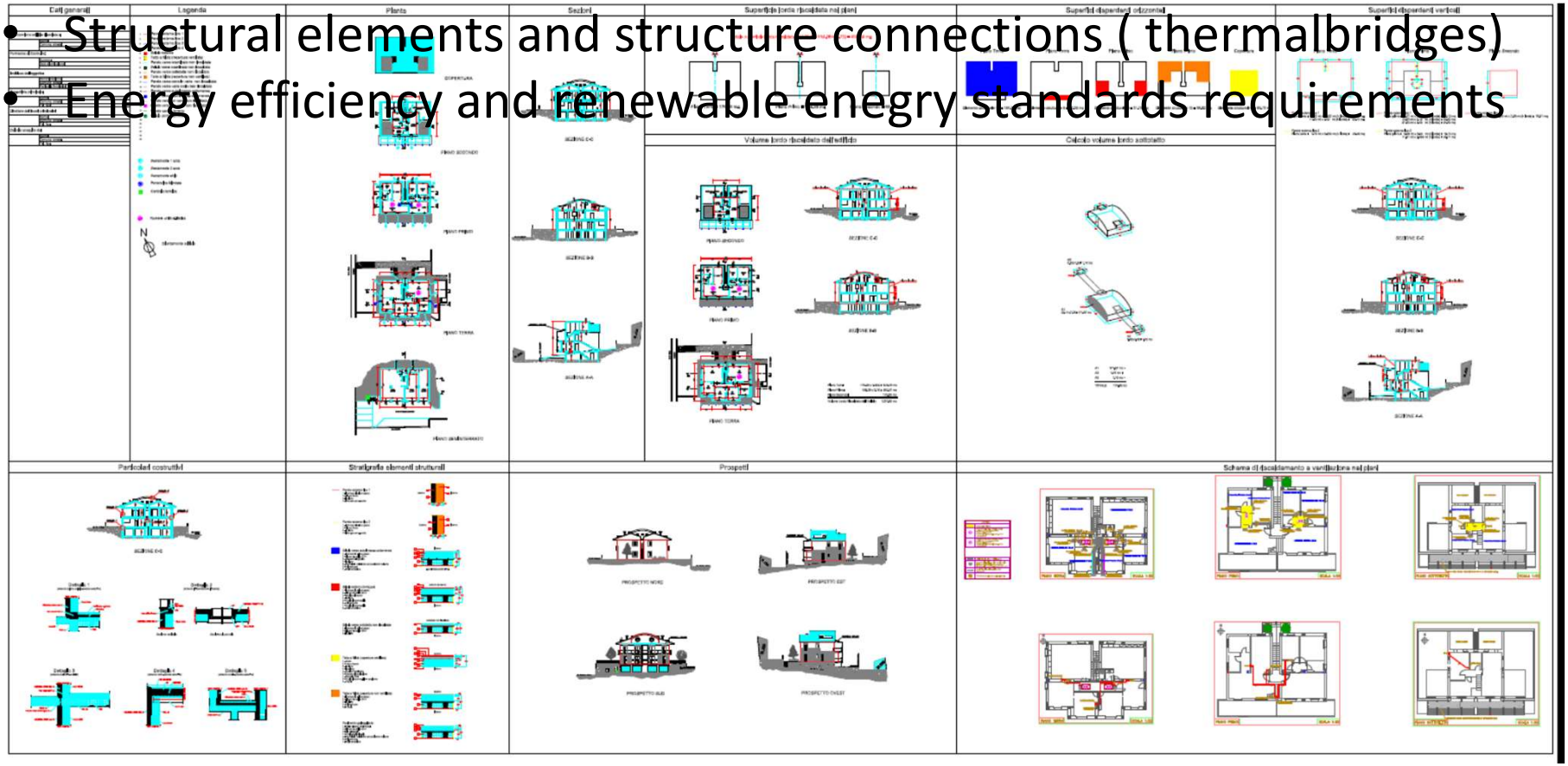
KlimaHaus - CasaClima
QUALITY ASURANCE GUIDE LINES

soon also an international guideline….

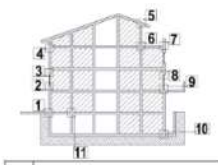
KlimaHaus - CasaClima
QUALITY ASURANCE GUIDE LINES

1. Project control

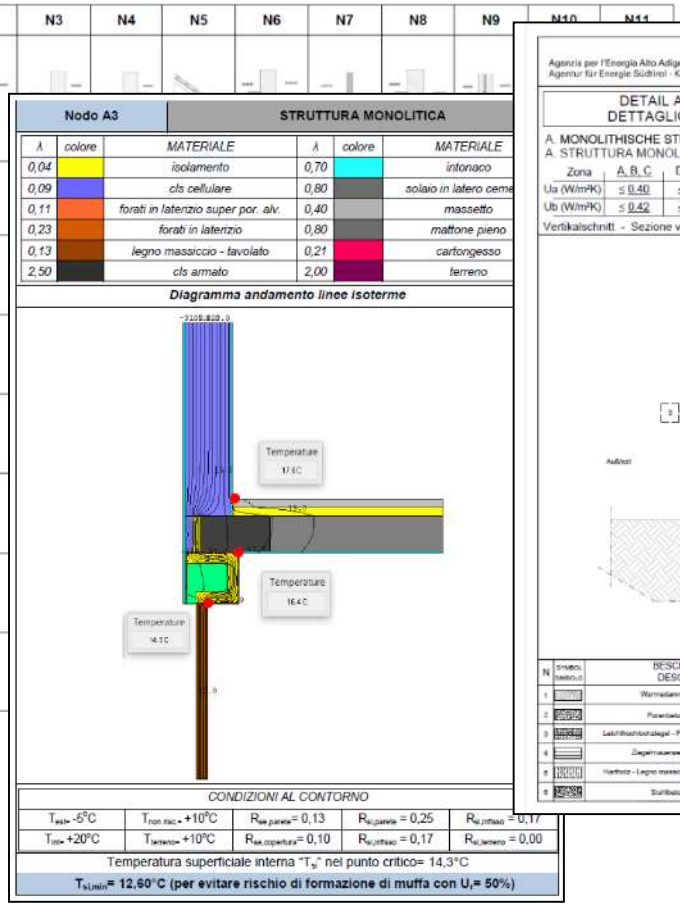
- **Geometry**
- Data input Enegry balance Software (ProCasaClima)
- Structural elements and structure connections (thermalbridges)
- Energy efficiency and renewable enegry standards requirements



KlimaHaus – CasaClima
Guidelines, Instruments and Tools



			N1	N2
A.	STRUTTURA MONOLITICA		A.N1a A.N1b A.N1c A.N1d	A.N2
B.	STRUTTURA MASSICCIA IN LEGNO		B.N1a B.N1b B.N1c B.N1d	B.N2
C.	ISOLAMENTO INTERSTIZIALE		C.N1a C.N1b C.N1c C.N1d	C.N2
D.	PARETE VENTILATA		D.N1a D.N1b D.N1c D.N1d	D.N2
E.	COSTRUZIONE A TELAIO IN LEGNO		E.N1a E.N1b E.N1c E.N1d	E.N2
F.	MURO IN LATERIZIO CON ISOLAMENTO ESTERNO		F.N1a F.N1b F.N1c F.N1d	F.N2
G.	MURO IN C.A. CON ISOLAMENTO ESTERNO O PILASTRO		G.N1a G.N1b G.N1c G.N1d	G.N2



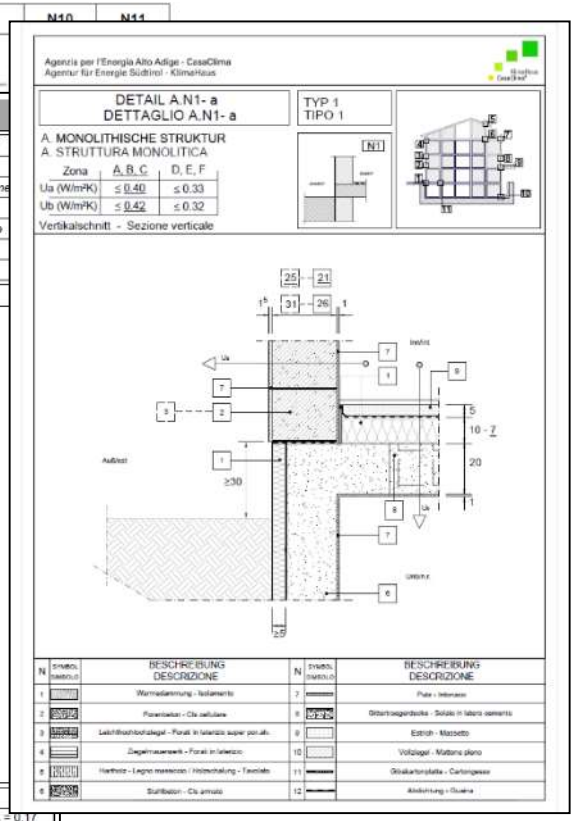
Nodo A3		STRUTTURA MONOLITICA			
λ	colore	MATERIALE	λ	colore	MATERIALE
0,04		isolamento	0,70		intonaco
0,09		cls cellulare	0,80		solaio in latero ceme
0,11		forati in laterizio super por. alv.	0,40		massetto
0,23		forati in laterizio	0,80		mattone pieno
0,13		legno massiccio - tavolato	0,21		cartongesso
2,50		cls armato	2,00		terreno

Diagramma andamento linee isoterme

CONDIZIONI AL CONTORNO				
T_{est} -5°C	$T_{non\ risc.}$ +10°C	$R_{se,parete}$ = 0,13	$R_{si,parete}$ = 0,25	$R_{si,infisso}$ = 0,17
T_{risc} +20°C	$T_{terreno}$ +10°C	$R_{se,copertura}$ = 0,10	$R_{si,infisso}$ = 0,17	$R_{si,terreno}$ = 0,00

Temperatura superficiale interna "T_{si}" nel punto critico= 14,3°C

$T_{si,Limite}$= 12,60°C (per evitare rischio di formazione di muffa con U_i= 50%)



Agenzia per l'Energia Alto Adige - CasaClima
Agentur für Energie Südtirol - KlimaHaus

DETAIL A.N1- a
DETTAGLIO A.N1- a

TYP 1
TIPO 1

A. MONOLITHISCHE STRUKTUR
A. STRUTTURA MONOLITICA

Zona	A, B, C	D, E, F
Ua (W/m²K)	≤ 0,40	≤ 0,33
Ub (W/m²K)	≤ 0,42	≤ 0,32

Vertikalschnitt - Sezione verticale

N1

N	SYMBOL SIMBOLO	BESCHREIBUNG DESCRIZIONE	N	SYMBOL SIMBOLO	BESCHREIBUNG DESCRIZIONE
1		Wärmedämmung - Isolamento	7		Putz - Intonaco
2		Porenbeton - Cls cellulare	8		Gitterträgerdecke - Solaio in latero cemento
3		Leichthochlochziegel - Forati in laterizio super.por.alv.	9		Estrich - Massetto
4		Ziegelmauerwerk - Forati in laterizio	10		Vollziegel - Mattone pieno
5		Hartholz - Legno massiccio / Holzschalung - Tavolato	11		Gipskartonplatte - Cartongesso
6		Stahlbeton - Cls armato	12		Abdichtung - Guaina

https://www.klimahaus.it/smartedit/documents/_mediacenter/catalogo_casaclima_2021.pdf

KlimaHaus - CasaClima
QUALITY AUDITS ON SITE

KlimaHaus - CasaClima
QUALITY ASURANCE GUIDE LINES

2. Control construction

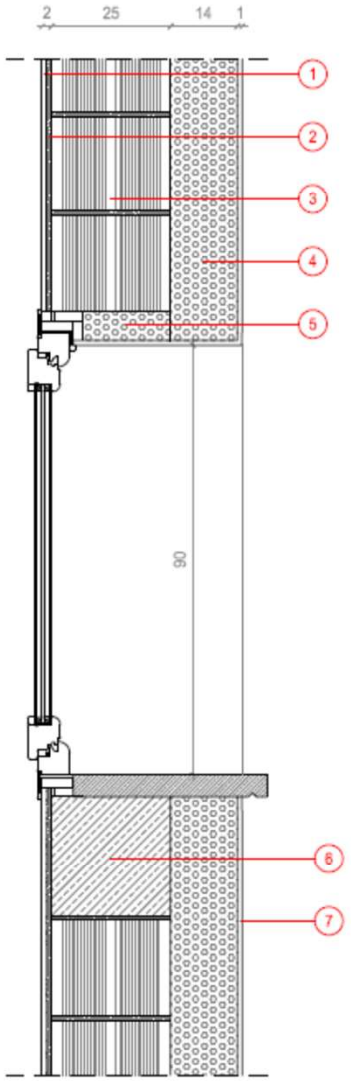
- Audits on the construction side
- Comparison of data for energy calculation
- Identification of products, connection details
- Conformity with the minimum energy requirements of the project

EXAMPLE

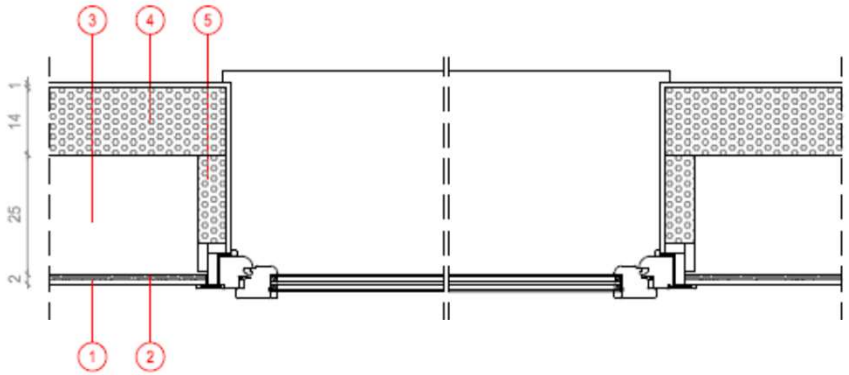
ABITAZIONE 9

PARTICOLARE COSTRUTTIVO FINESTRA (piano primo)

06



Sezione verticale / scala 1:10

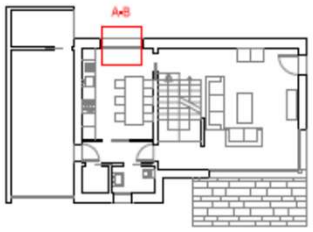


Sezione orizzontale / scala 1:10

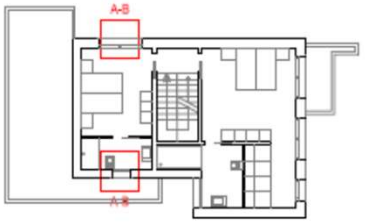
Spessore del calcestruzzo aerato (Ytong-Climaplus) sotto davanzale della parete in muratura

Spessore del calcestruzzo aerato (Ytong-Climaplus) sotto davanzale della parete in muratura

1. Lastra in cartongesso / 1,2 cm
2. Colla traspirante per cartongesso / 1 cm
3. Mattone forato
4. Cappotto in polistirene espanso in lastre Greypor G KN8 400 / 14 cm
5. Polistirene espanso preformato Greypor mod. GK 800 / 8 cm
6. Blocco prefabbricato da aerato YTONG Climaplus 325
7. Rasante per cappotto / 1 cm



Riferimento planta piano terra



Riferimento planta piano primo

EXAMPLE

ABITAZIONE 9	DOCUMENTAZIONE FOTOGRAFICA	02/A

Isolamento dei faretti ad incasso sotto lo sbalzo del primo piano

Spessore del calcestruzzo allegerito (Isocal) del solaio al piano primo

Rasatura armata del cappotto in EPS con graffite

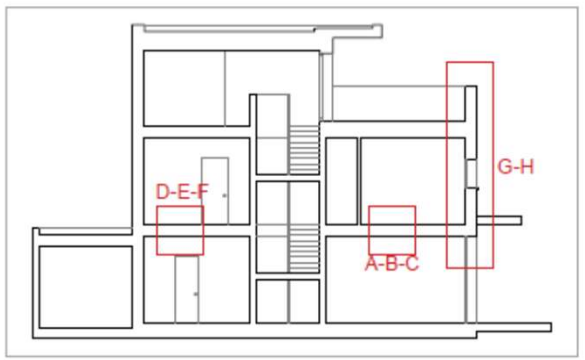
Isolamento dei faretti ad incasso sotto lo sbalzo del primo piano

Spessore del calcestruzzo allegerito (Isocal) del solaio al piano primo

Cappotto in EPS con graffite della parete in c.a.

Isolamento dei faretti ad incasso sotto lo sbalzo del primo piano

Spessore del calcestruzzo allegerito (Isocal) del solaio al piano primo



Sezione di riferimento

3. Final inspection

- Check of the entire documentation (including BDT)
- Final check of energy calculation data
- Possible technical non-conformities (technical commission)
- Compliance with the minimum energy requirements (assessment protocol)
- Issue of the KlimaHaus certificate and the KlimaHaus plaque

CLOSING THE GAP

Certified quality vs. toothless paper tiger

KlimaHaus CasaClima®

KlimaHaus - CasaClima

PUTTING ENERGY EFFICIENCY AND SUSTAINABILITY INTO PRACTICE – CASACLIMA/KLIMAHAUS NATURE

KlimaHaus CasaClima®

Energy Efficiency

LCA Materials

Indoor Quality

Water cycle

Acoustic comfort

Natural daylight

CasaClima-KlimaHaus Nature

1. Energy efficiency	Energy efficiency of the building envelope	≤ 50 kWh/m²a
	Global energy efficiency of the building	≤ 20 kg CO2/m²a
2. Environmental sustainability of the materials used	Primary non-renewable energy content (PEI) Acidification potential (AP) Global warmin potential (GWP100) Durability of construction materials (tu)	Maximum score < 300 Points
3. Water management	Efficiency of the sanitary facilities of the building Unsealing of surfaces. Eventually existing structures for the utilisation and/or channeling of rain water	Degree of improvement compared to a standard type housing ≥ 35%
4. Interior air quality	Integrated ventialtion system and/or employment of products and materials that respect the emissions ceiling (VOC and Formaldehyde).	Emissions ceiling for - Formaldehyde : 0,05 ppm - VOC lt. policy
5. Natural lighting	Daylight factor FLDm	≥ 2% ≥ 3% for classrooms
6. Measures to protect from Radon exposure	Maximum level of Radon concentration Rn-222 in interior spaces	< 200 Bq/m³ New building < 400 Bq/m³ Refurbishment
7. Sound insulation	Airborne sound and footfall insulation	Set value in lt. guidelines

CasaClima-KlimaHaus
SUSTAINABILITY LABELS

Sustainability certification **KlimaHaus Nature**

KlimaHaus – Energy certification

KlimaHaus
CasaClima®

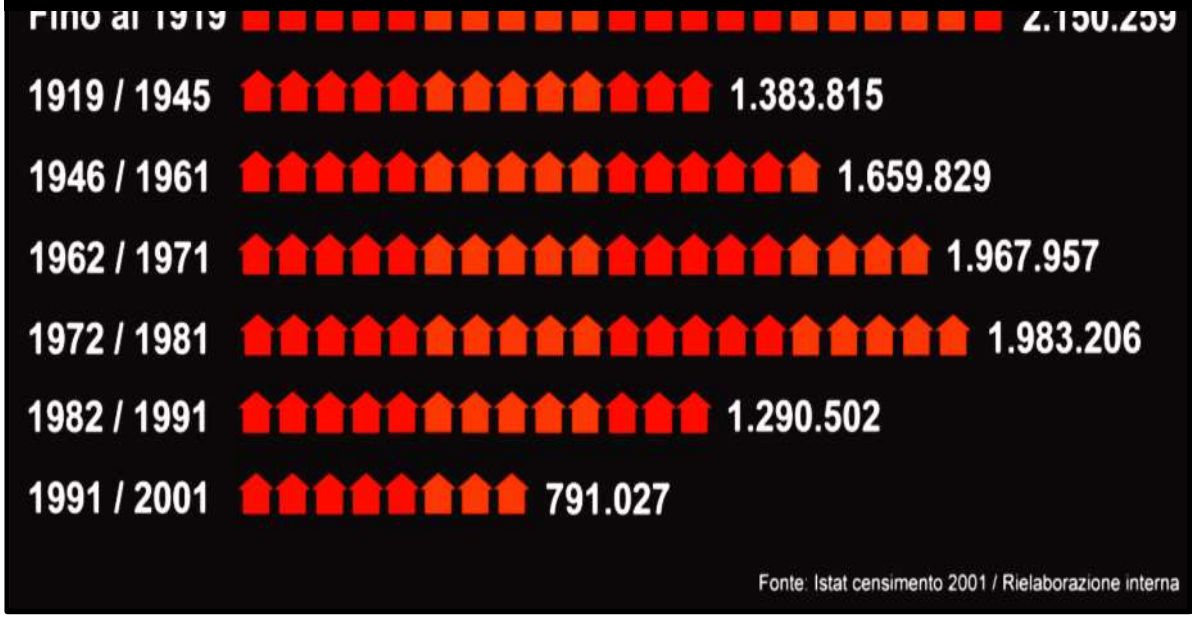
KlimaHaus
CasaClima®

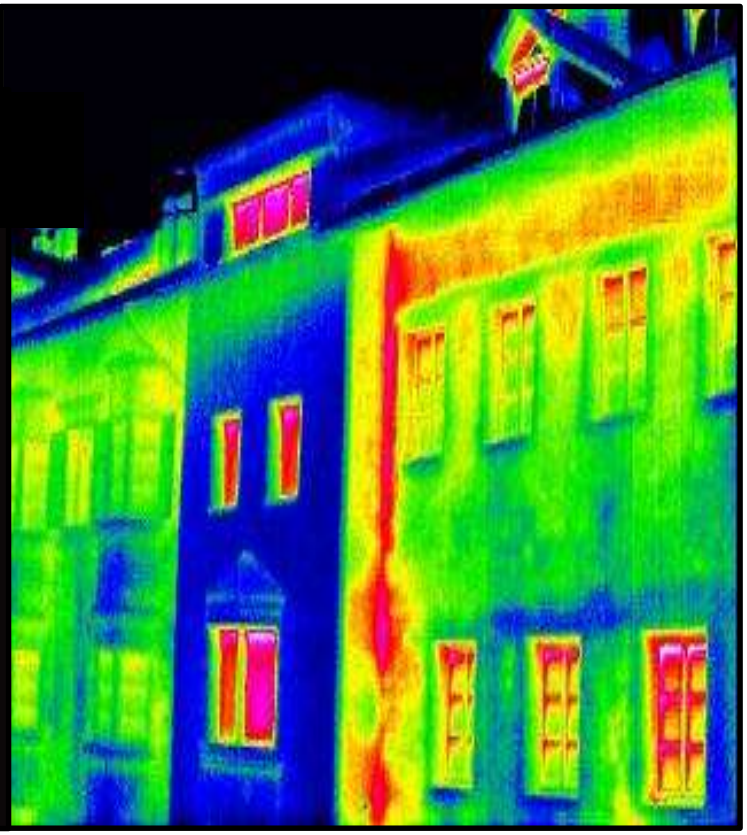
KlimaHaus
CasaClima®

Energy refurbishment of buildings with Klimahaus / CasaClima R

KlimaHaus
CasaClima®
R

Italian building stock distribution by year of construction



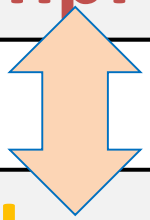


KlimaHaus - CasaClima
QUALITY ASURANCE GUIDE LINES

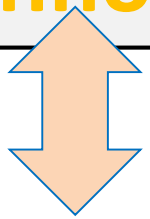
Building (single family, multi-family building)

Real estate unit

Potential for improvement



Urban and technological limits



Technical solutions - design - execution

Examples

Historic building

Multi fam. house

Real estate unit

External insulation

Historic building

Multi fam. house

Real estate unit

Roof insulation

Historic building

Multi fam. house

Real estate unit

External insulation

KlimaHaus R

IMPROVING EFFICIENCY OF EXSTIG BUILDINGS

Historic building

Multi fam. house

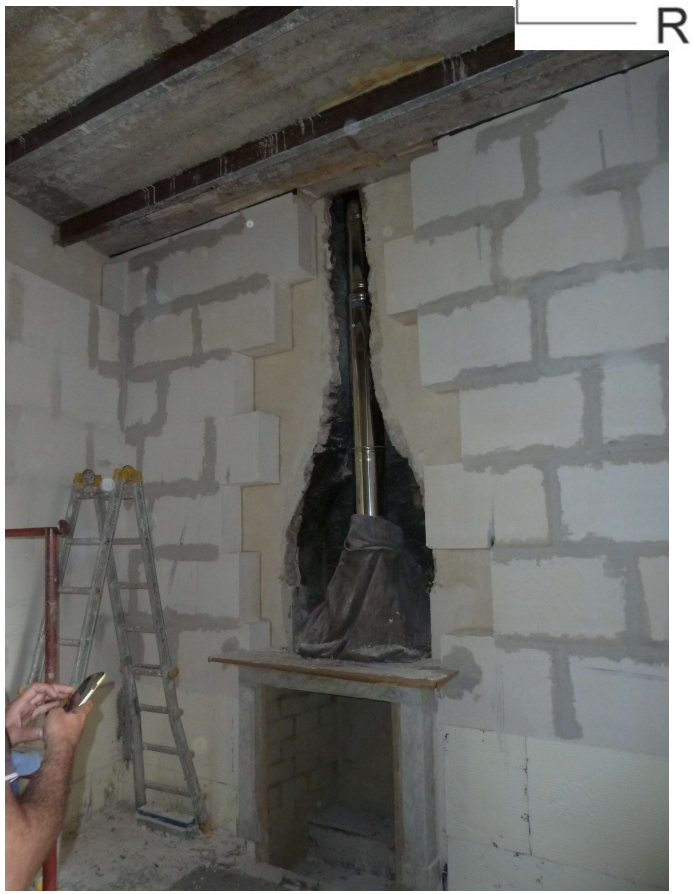
Real estate unit

Refurbishment of historic buildings - interior insulation

Historic building

Multi fam. house

Real estate unit



Refurbishment of historic buildings - interior insulation

KlimaHaus R

IMPROVING EFFICIENCY OF EXSTIG BUILDINGS

More than 11.000 certified new and over 7.000 retrofitted buildings

KlimaHaus CasaClima®

Vision without execution is just hallucination

Thomas Alva Edison

KlimaHaus CasaClima®

Schwarzensteinhütte - Rifiugio Sasso Nero, KlimaHaus A, 3.026 m