



Summary

1. EuroPHit and the step-by-step approach to retrofit
2. EcoHotel Bonapace – Nago Torbole: the first Passivhaus Hotel in Italy
3. Hotel-Restaurant Valcanover: the first Hotel retrofitted to the Passivhaus standard using a step-by-step approach
4. Further projects...

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Step-by-step approach to refurbishment

1. Existing Building
Poor efficiency building stock

2. Insulation

3. Windows, Airtightness

4. Heating System

retrofit





step by step overall refurbishment plans

EnerPHit + RES

NZEB

- ✓ - Easier to finance (smaller initial investment)
- ✓ - Components used until the end of lifecycle
- ✗ - Design becomes more complex
- ✗ - Building sites set up many times

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Overall Refurbishment Plan

1. Optimization connection details implemented in different steps

2. Avoids Building Physics Issues

3. Economical optimization of the refurbishment process



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The first Passivhaus Hotel in Italy: EcoHotel Bonapace


EcoHotel Bonapace, Nago Torbole (TN) Altitude: 68 m




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EuroPHit




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EcoHotel Bonapace

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Heating demand
Overall space cooling demand
Heating, cooling, ventilation, DHW, auxiliary electricity, lighting, electrical appliances
Pressurization test result n₅₀

15 kWh/(m2a)
4 kWh/(m2a)
118 kWh/(m2a)
0.5 1/h




Photo: © ZEPHIR

Main Challenges

1. **1st Passivhaus Hotel in Italy**
2. **2nd Passivhaus Hotel Worldwide**
3. **High satisfaction of the users**
4. **Extremely low running costs**
5. **SEPC number, RES implementation**
6. **Visitors from all over the world come to see the neZEH concept implemented / Good feedbacks by guests**

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Hotel-Restaurant-Pizzeria Valcanover

GPS coordinates: 46° 1' 37.74"N, 11°13' 45.46"E Altitude: 477 m
Hotel Restaurant Valcanover, Via di Mezzolago 1, 38057 Pergine Valsugana (TN)




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Main Challenges

1. Limitation of Internal Heat Gains
2. Three different building types in one project
3. Step by step implementation according to the building owner needs (economical, practical...)

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Existing Building **Refurbishment Project**

East View

South-East View

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The project (last step)

Ground Level **First Level**

Second Level **Basement**

- Restaurant
- Hotel
- Residential

Existing Building and Target Values

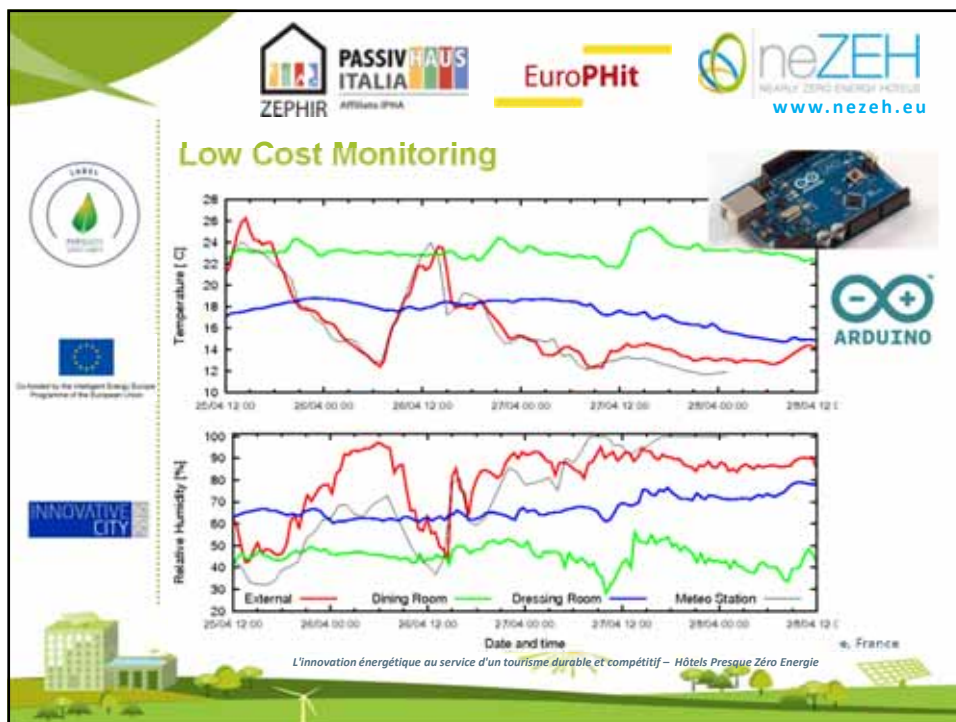
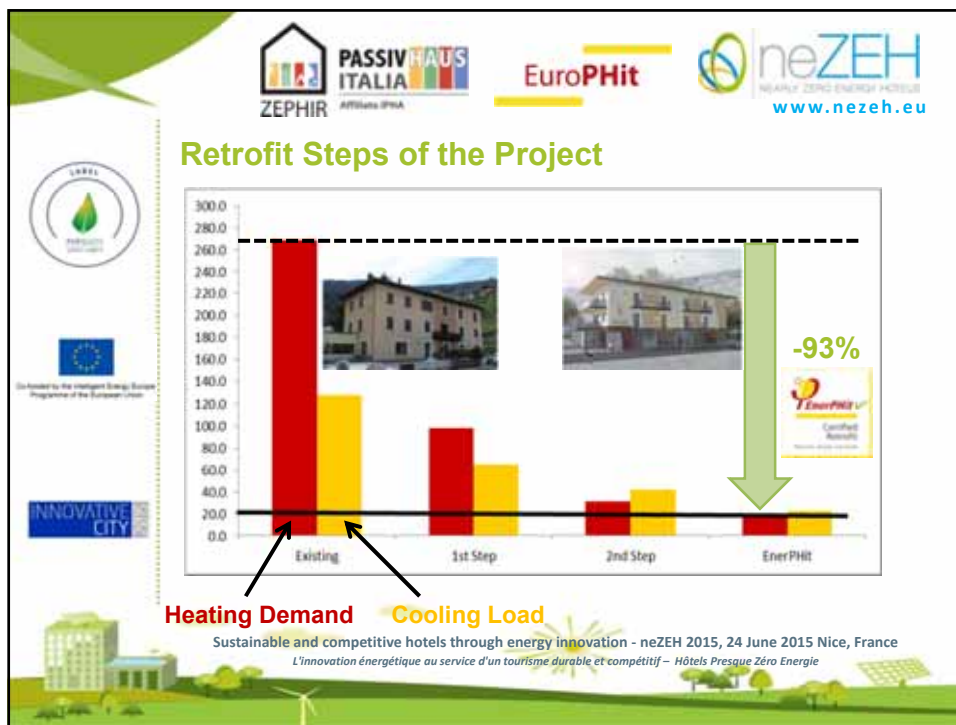
	Existing Building	Refurbishment Project (EnerPHit Target Values)	
Heating Demand	268.8 kWh/(m ² a)	20.0 kWh/(m ² a)	
Heating Load	128.0 W/m ²		
Cooling Demand	3.5 kWh/(m ² a)	15.0 kWh/(m ² a)	
Cooling Load	12.7 W/m ²	10.0 W/m ²	
Airtightness	10.0 1/h	0.6 1/h	1.0 1/h
Primary Energy	867.9 kWh/(m ² a)	120.0 kWh/(m ² a)	???

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Retrofit Steps of the Project

End Date	Description of the retrofit step	Costs
31.07.2015	Design Stage	50500 €
31.03.2016	Renovation of the ground floor	796700 €
31.03.2017	Demolition and erection of the 1 st and 2 nd floor	715200 €
31.03.2018	Building services and finishing of the 1 st and 2 nd floor	364000 €
		1,926,400 €

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Further upcoming projects...

"LEAF" Low Energy Action For Hotel/B&B

1. Energy audits for 6/7 sample hotels or B&B in Apulia
2. Refurbishment plan for 1/2 selected hotels
3. Implementation of step-by-step energy efficient measures
4. Monitoring of the overall results
5. Long term: development of a scalable approach for hotels/B&B/trullis etc.

LEAF **CityZEN**

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Thank you for your attention

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L'INNOVATION ÉNERGÉTIQUE AU SERVICE D'UN TOURISME DURABLE ET COMPÉTITIF
HÔTELS PRESQUE ZÉRO ENERGIE – ÉDITION 2015
 24 Juin 2015 – Nice ACROPOLIS

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The poster features the neZEH logo and the European Union flag at the top. The text 'Co-funded by the Intelligent Energy Europe Programme of the European Union' is present. The website 'www.nezeh.eu' is listed. The main title is 'Sustainable and competitive hotels for energy innovation' in large blue font, followed by 'NEZEH 2015' in a smaller font. The location and date are 'Acropolis Nice – June 24th 2015'. At the bottom, there is an illustration of a modern building, trees, a sun, and solar panels on a green field.