

# Smart, cost effective, next generation buildings

Kurt Emil Eriksen  
Head of Active House and Strategic Projects  
VKR Holding A/S

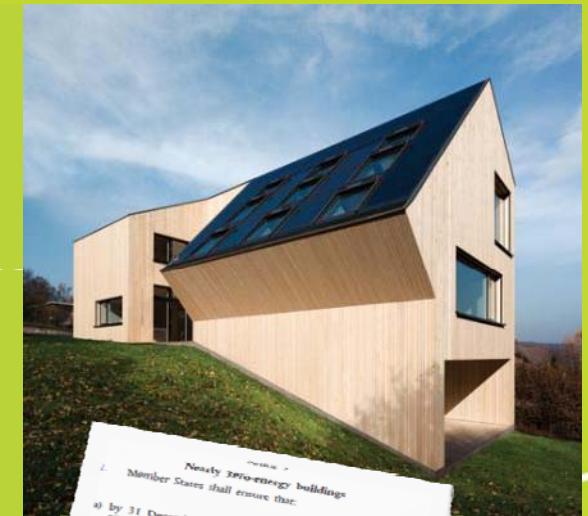
email: [kee@vkr-holding.com](mailto:kee@vkr-holding.com)



**European Commission** has high ambitions on security of supply, climate changes and creation of local job, therefore they have ambitious targets for 2020

- 20% reduction of CO<sub>2</sub>
- 20% of the energy used, shall be renewable energy
- 20% energy efficiency

The member states are also required to implement legislation that require **nearly zero-energy buildings by end of 2020 – (2018 for public buildings)**



40% of the energy used is used for heating and cooling of buildings

People spend 90% of our time in buildings, however up to 30 % of the building mass does not contribute to nor provide a healthy indoor climate



Think of a vision – where buildings create healthier and more comfortable lives for their occupants without having a negative impact on the climate and environment – moving us towards a cleaner, healthier and safer world – this is the vision of Active House



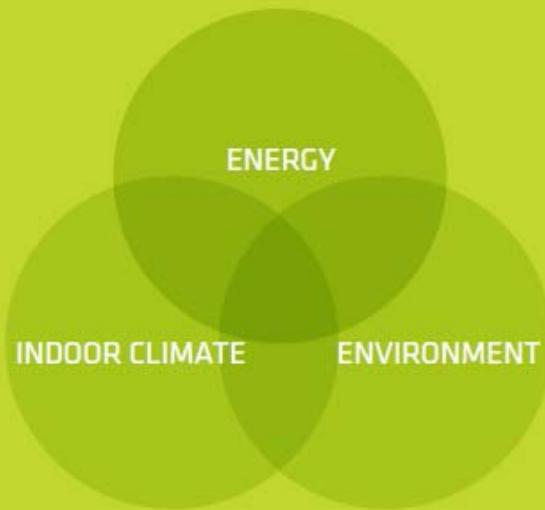
Active House  
Buildings that give more than they take



The long-term target is to develop Active House to become the future principle for new buildings and renovation.



## THE 3 PRINCIPLES



Technical specification for  
Active House is developed

### ENERGY

- A building which is energy efficient and easy to operate
- A building which substantially exceeds the statutory minimum in terms of energy efficiency
- A building which exploits a variety of energy sources integrated in the overall design

### INDOOR CLIMATE

- An indoor climate that promotes health, comfort and the sense of well-being
- A building which ensures good indoor air quality, an adequate thermal climate and appropriate visual and acoustic comfort
- An indoor climate which is easy for occupants to control and at the same time encourages responsible environmental behavior

### ENVIRONMENT

- A building which exerts the minimum impact on environmental and cultural resources
- A building which avoids ecological damage and seeks to add to local biodiversity
- A building which is constructed of materials having a high recycled content and providing the ability of its own recycling or re-use



## STAKEHOLDERS

### Partners in the Alliance

Building industry  
E.g. architects, engineers, building manufacturers, construction companies and house manufacturers

Universities and knowledge centres  
E.g. researchers within the construction sector and renewable energy

International organizations and networks  
E.g. within the construction sector, health, environment and renewable energy

### Partners in society

Local communities  
By highlighting and showcasing important knowledge in new buildings, renovation and demonstration projects

Politicians on national, regional and international level  
By enhancing their knowledge and common understanding of possible solutions in buildings

End users  
By exchanging learnings of good and bad experiences and communicating newly developed solutions for buildings.



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## PARTNERS IN THE ALLIANCE



CENERGIA



**GREAT GULF HOMES**  
WE BUILD NEIGHBORHOODS  
greatgulfhomes.com

**SENSIEL**  
Energy Efficient Solutions

**somfy.**



**RENSON**  
Creating healthy spaces

**Danfoss**

**GRUNDFOS**

**RUBOW**  
arkitekter

**SPU INSULATION**

**BROCKPORT**  
HOME SYSTEMS LTD.

**BlueLime**

**DICKSON**  
Innovative textiles for your world

**HunterDouglas**

**MTHøjgaard**

**T A**  
Danish Association of  
Wood and Furniture Industries  
part of CII

**PROVIDENCE  
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**DTU**

**DUKO**  
Ventilation & Sun Control

**JELD-WEN**  
WINDOWS & DOORS

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Creating healthy spaces

**Thermo Logix**

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RÅDSTUFEN ARKITEKTER A/S

**ula**

**ROCKWOOL**  
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**VFF**  
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**LIVINGLab**  
by DOVISTA

**W**

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**SBR**

**SAPE**

**SB**  
Danish Building Research Institute  
AALBORG UNIVERSITY

**LAAEC**  
Asociația Auditorilor Energetici pentru Clădiri

**Wienerberger**



	Objectives	Activities and Deliverables
<b>Knowledge sharing</b>	Leverage existing knowledge through a strong alliance and facilitate cross-sector working groups.	<ul style="list-style-type: none"> <li>• Annual general assembly</li> <li>• Topic based workshops for members</li> <li>• Training and webinars</li> </ul>
<b>Specification and demonstration</b>	Create new knowledge, describe, illustrate and demonstrate the opportunities and attractiveness of Active Houses.	<ul style="list-style-type: none"> <li>• Active House specifications for residential and non-residential buildings</li> <li>• Simple evaluation scheme of buildings</li> <li>• Demonstration buildings</li> <li>• Catalogue of design patterns and cases</li> <li>• Design and Assessment Tools</li> </ul>
<b>Communication</b>	Influence positively on the full supply chain in the construction sector, politicians and legislators.	<ul style="list-style-type: none"> <li>• Communicate with building users and specifiers</li> <li>• External conferences and symposiums</li> <li>• Training and webinars for specifiers</li> <li>• Influence positively on codes and legislation</li> </ul>



## EXAMPLES OF CASES



### ACTIVE HOUSE - RUSSIA

The First Active House in Russia is designed to set a new standard for residential house construction in Russia. The house design is based on the Active House principles.



### SOLHUSET

Children in Hørsholm are playing in the most climate-friendly nursery in Denmark.



### JADARHUS

One of the purposes of these ISOBO Aktiv houses is to test different technical solutions in one single building.

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Follow the development , contribute  
and join the alliance at  
[www.activehouse.info](http://www.activehouse.info)

Contact:

[kurt.emil.eriksen@activehouse.info](mailto:kurt.emil.eriksen@activehouse.info)  
[mikkel.skott.olsen@activehouse.info](mailto:mikkel.skott.olsen@activehouse.info)

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PERFORMANCE AND DOCUMENTATION

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