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# NEARLY ZERO ENERGY BUILDINGS AND ITS IMPLEMENTATION IN THE CZECH REPUBLIC

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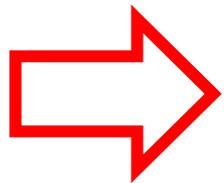
# TRENDS IN CONSTRUCTION INDUSTRY

- ➔ Construction industry 4.0,
- ➔ BIM development
- ➔ Unified solutions for buildings
- ➔ 3D printing

(Source: <https://www.isa.org/intech/20160601/>, <https://3c1703fe8d.site.internapcdn.net/newman/gfx/news/hires/2018/suikersequat.jpg>)

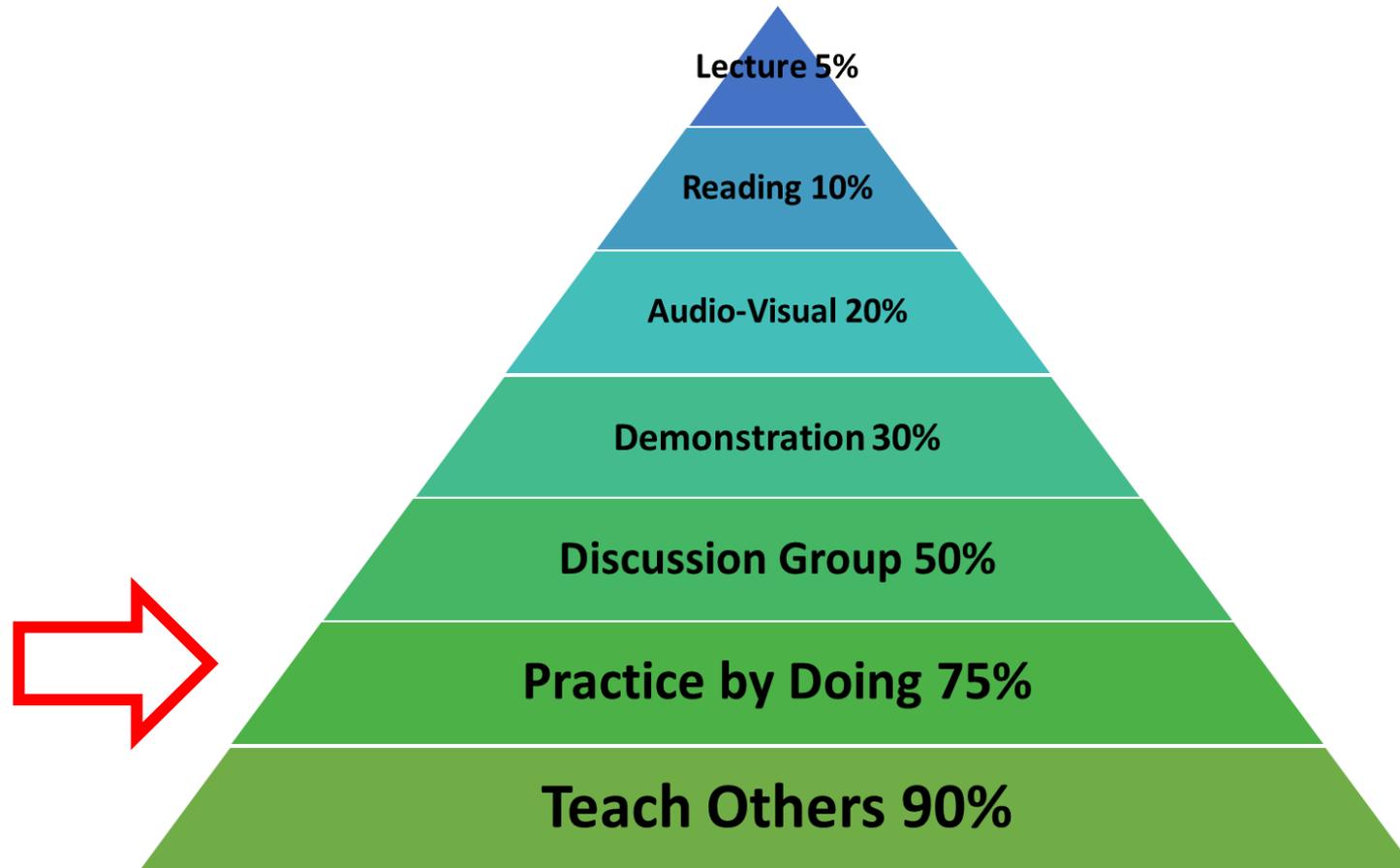
# TRENDS IN CONSTRUCTION INDUSTRY

- ➔ Increasing complexity of buildings
- ➔ More professions involved
- ➔ More demanding coordination and cross-craft
- ➔ nZEB requirements



**Need for life-long learning, new skills, knowledge and competences**

# LEVELS OF KNOWLEDGE RETENTION



# TRAININGS IN THE CZECH REPUBLIC



# TRAININGS IN THE CZECH REPUBLIC



## ➔ Blower Door test equipment



## ➔ Measurer of CO<sub>2</sub> concentration

### MANUÁL

#### „Měřič CO<sub>2</sub>“ - CDL 210



# TRAININGS IN THE CZECH REPUBLIC

## → Thermo-imagers



- ➔ Establishing ABF training center
- ➔ 4 types of structures
  - 2 wooden structures and
  - 2 brickwork structures
- ➔ Equipment for Blower Door test, CO<sub>2</sub> concentration measurement, thermo-imaging, ventilation units
- ➔ More than **30 trainings** on nZEB, more than **700 trainees** passing the courses



# TRAIN-TO-NZEB RESULTS IN EUROPE

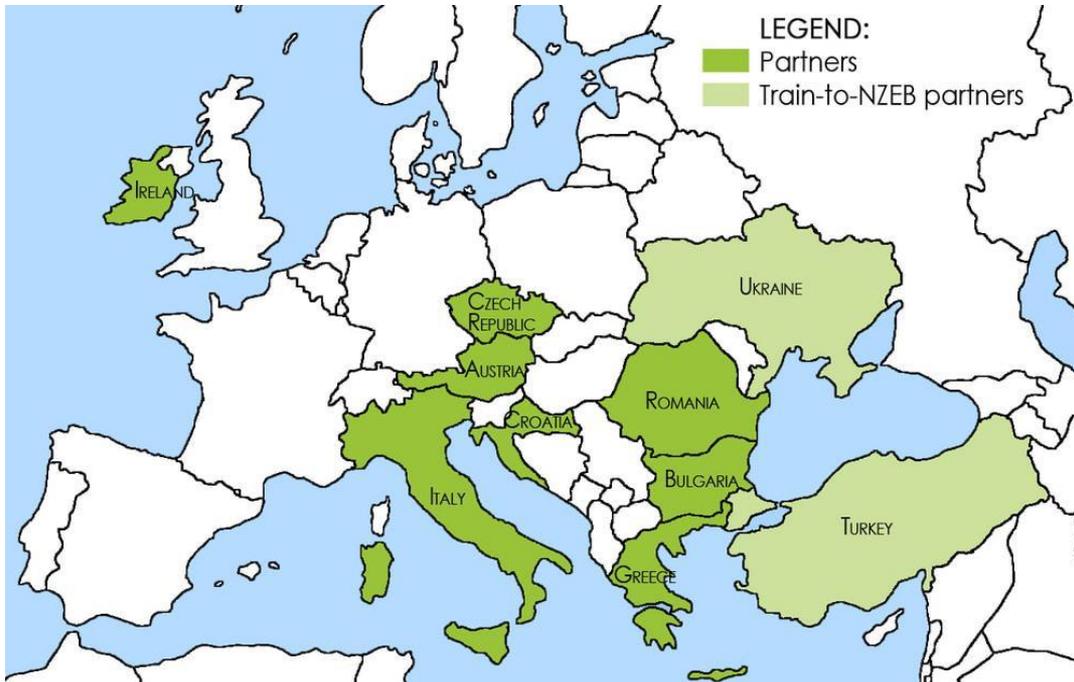
## ➔ Training centers around Europe



КАМАРА НА СТРОИТЕЛИТЕ В БЪЛГАРИЯ  
BULGARIAN CONSTRUCTION CHAMBER



LEGEND:  
■ Partners  
■ Train-to-NZEB partners

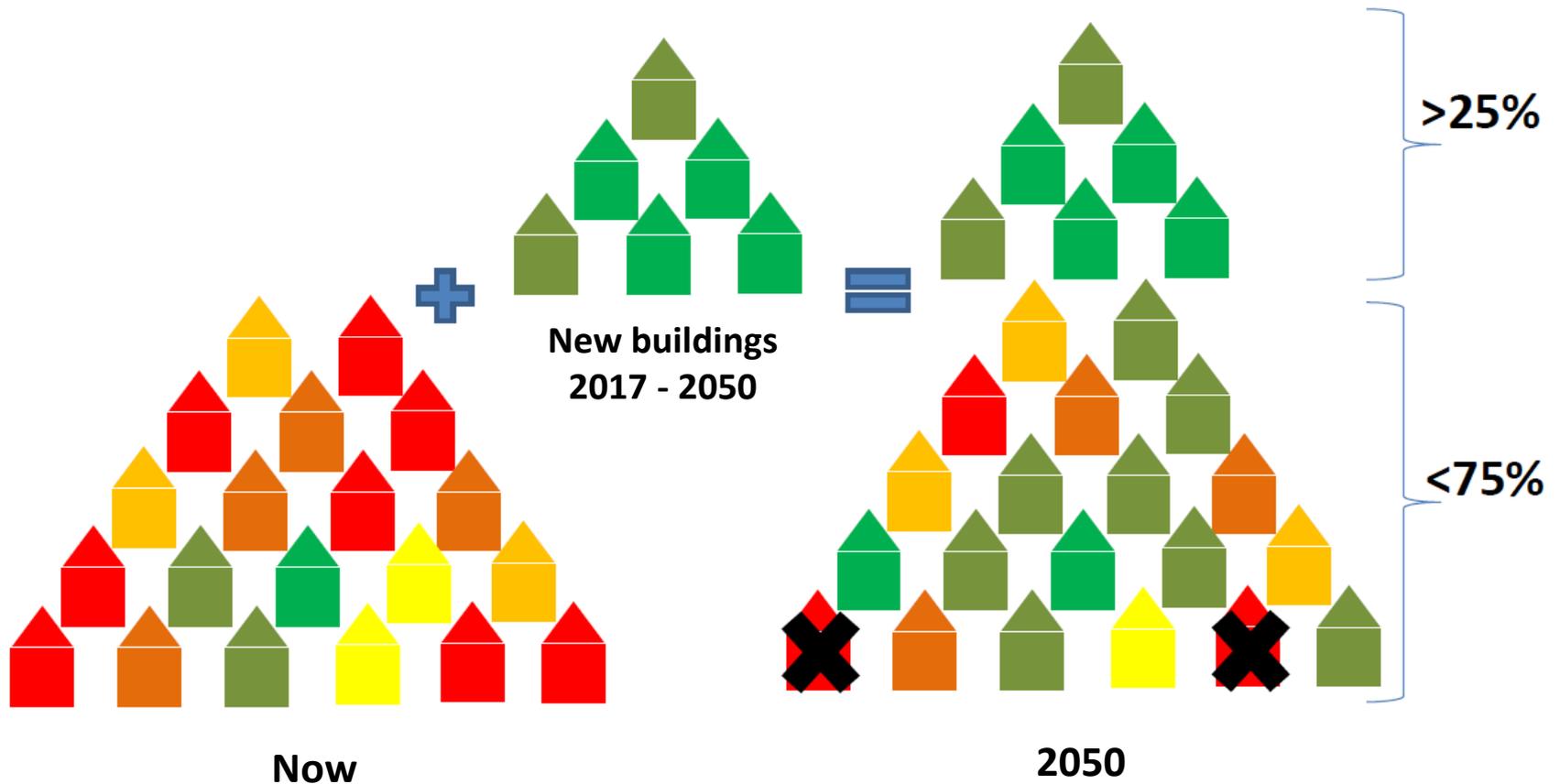


Training and certification for more than:

- ➔ 90 trainers
- ➔ 2,400 construction workers
- ➔ 480 designers
- ➔ 720 non-specialists



# NZEB IMPLEMENTATION TILL 2050?



(Source: Bogdan Atanasiu, *Challenges and Principles for nearly Zero-Energy Buildings*, presentation of BPIE for ENTRANZE project, 2012)

# SUMMARY

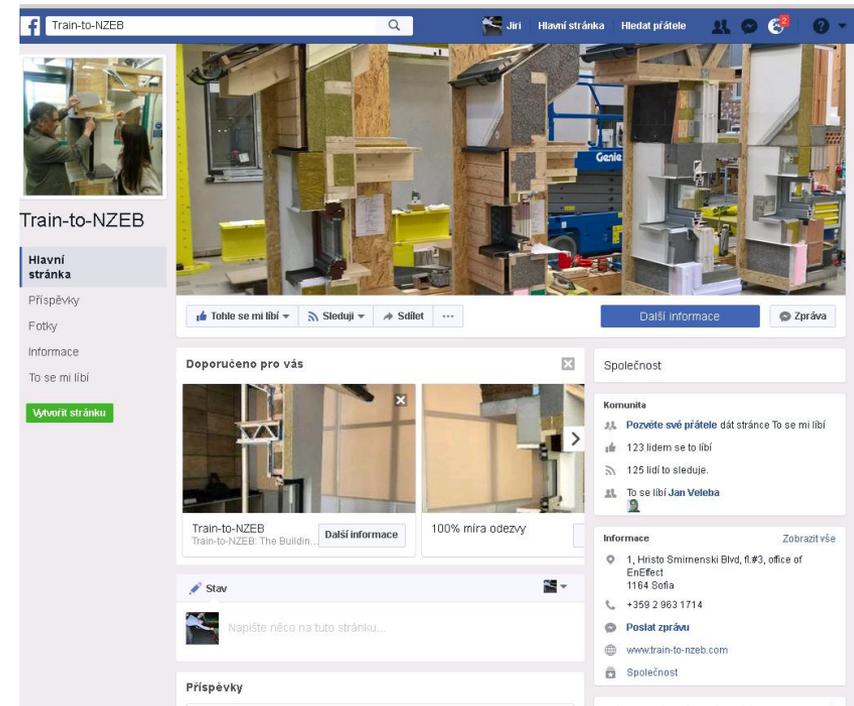
- ➔ Dramatic **changes** in construction industry
- ➔ Critical need for **Vocational training** and newcomers



- ➔ Attractive **practical trainings** as solution increasing quality
- ➔ Future focusing on **Deep Energy Retrofits**

# INFORMATION ABOUT TRAININGS

- Project web [www.train-to-nzeb.com](http://www.train-to-nzeb.com)
- Web of SEVEn [www.svn.cz](http://www.svn.cz)
- [www.stavebniakademie.cz](http://www.stavebniakademie.cz)
- Facebook SEVEn
- Twitter





# Thank you for your attention!

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