



Politechnika  
Śląska



UCZELNIA  
BADAWCZA  
INICJATYWA DOSKONAŁOŚCI

# SUSTAINABLE PRODUCTION AND CONSUMPTION INDOOR ENVIRONMENT AND SUSTAINABLE BUILDINGS

---

Joanna Ferdyn-Grygierek

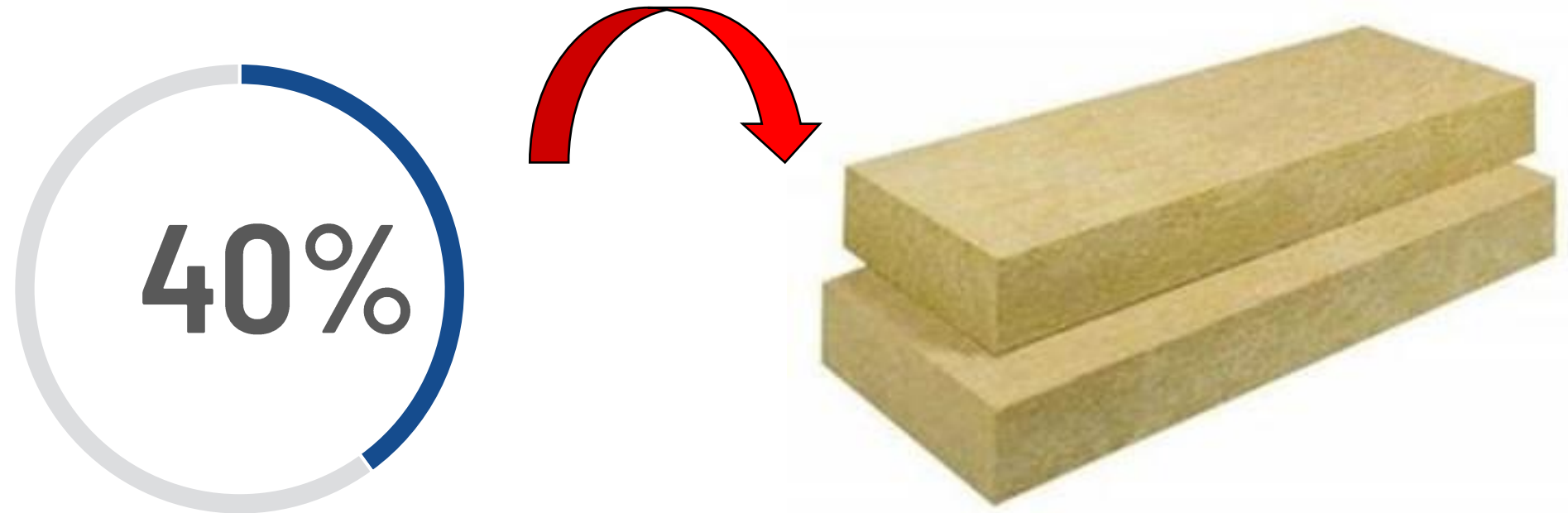
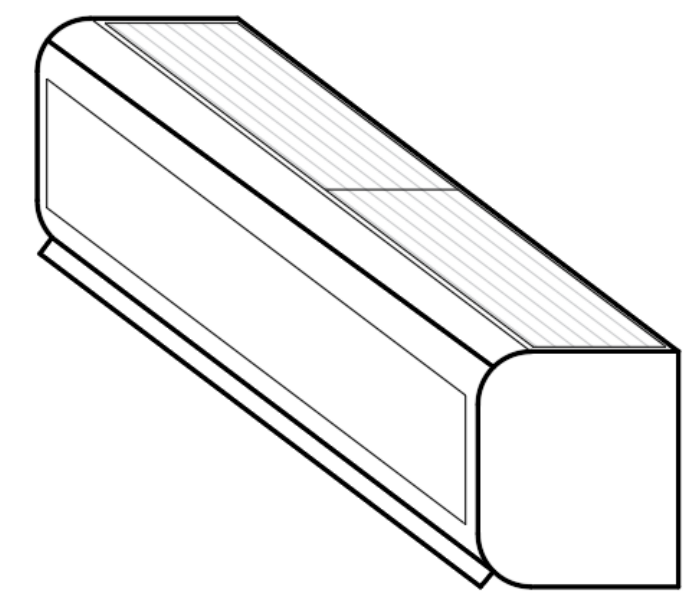


EURECA-PRO



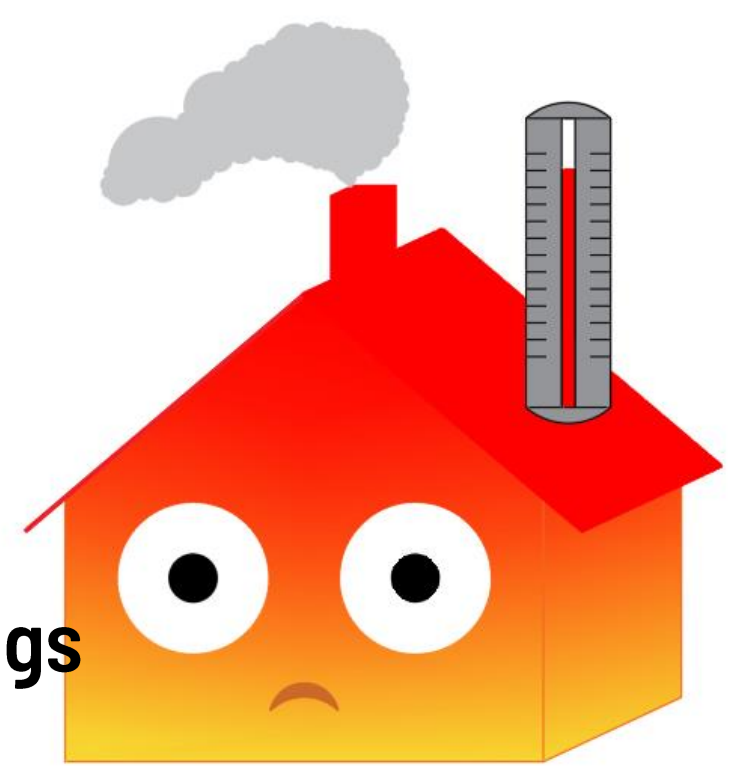
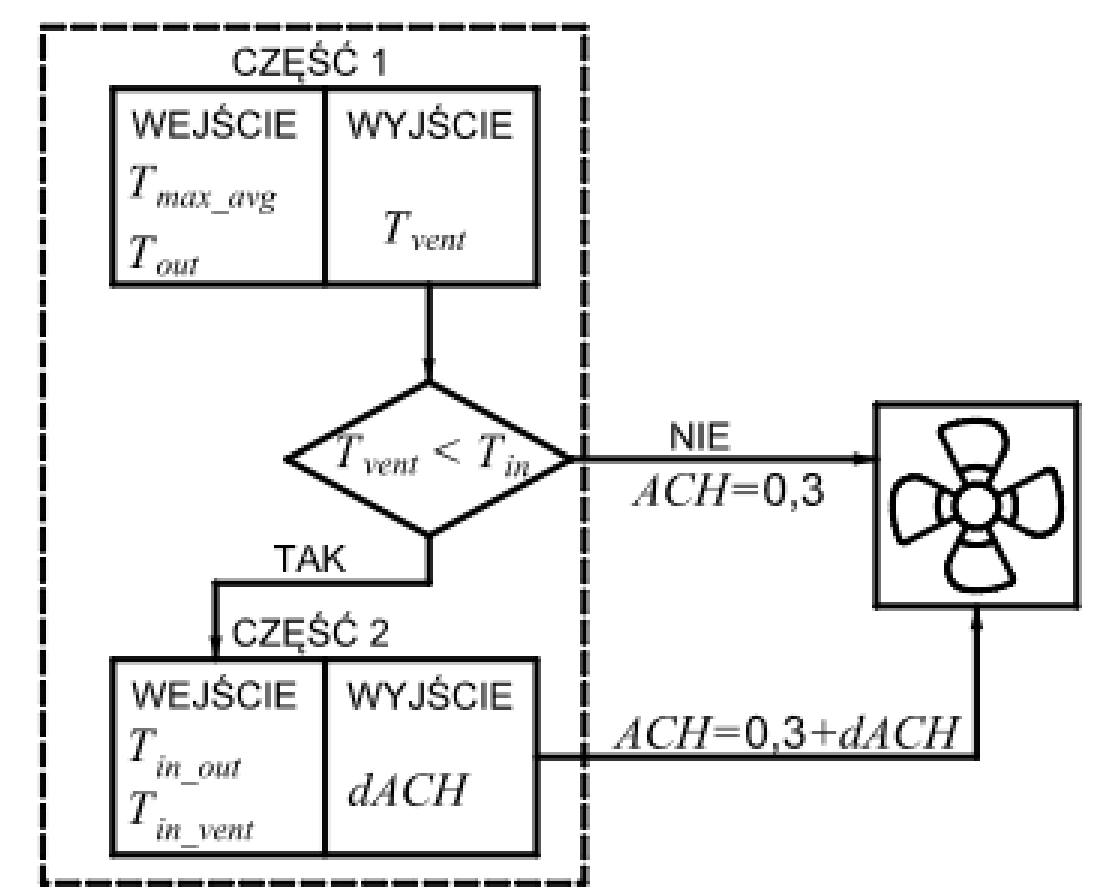
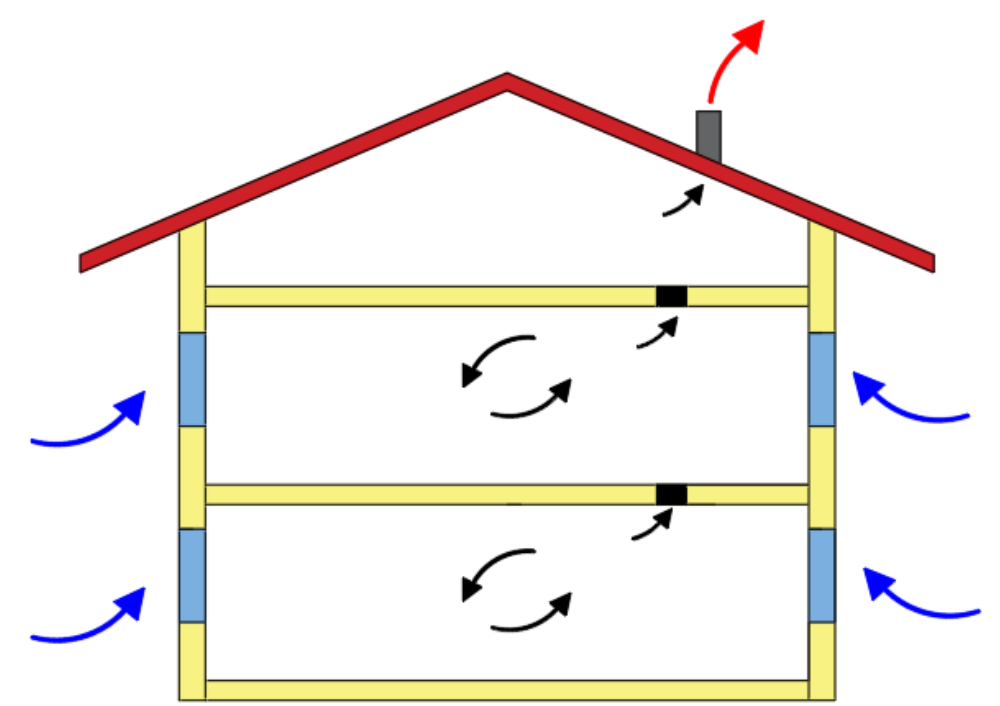
# Main problem

- Mechanical cooling eg. splits
- Passive cooling

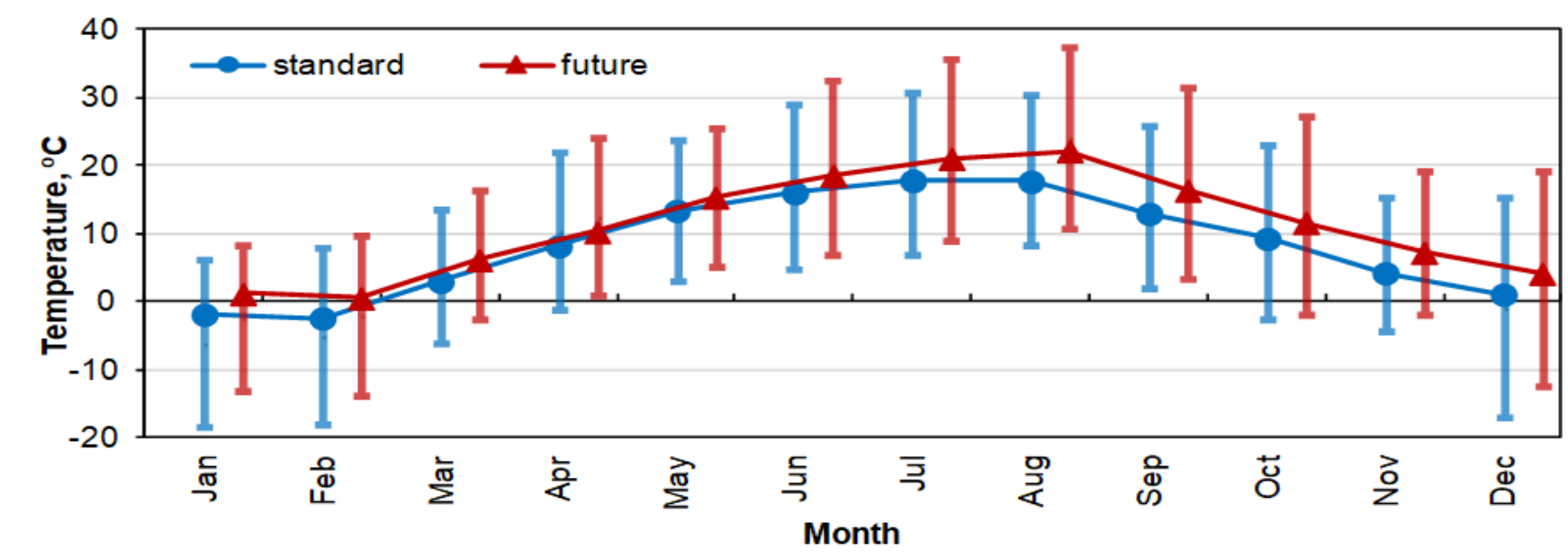


Reduction of heating consumption

of the total energy consumption is used in the building sector



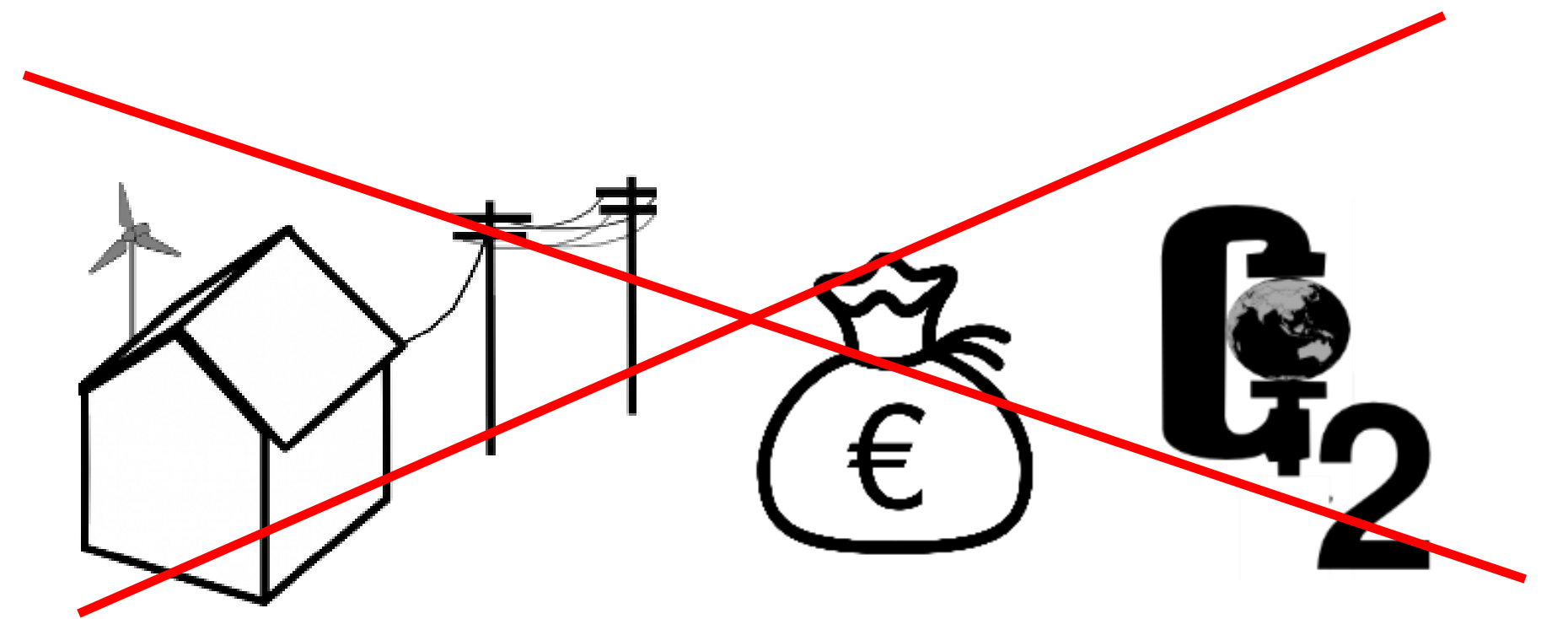
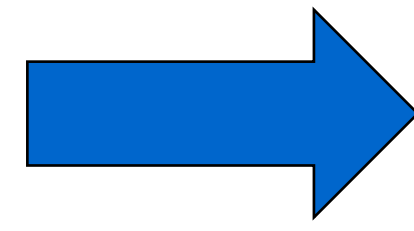
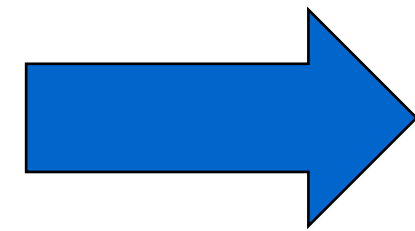
Overheating buildings



CCWorldWeatherGen:  
HadCM3: A2

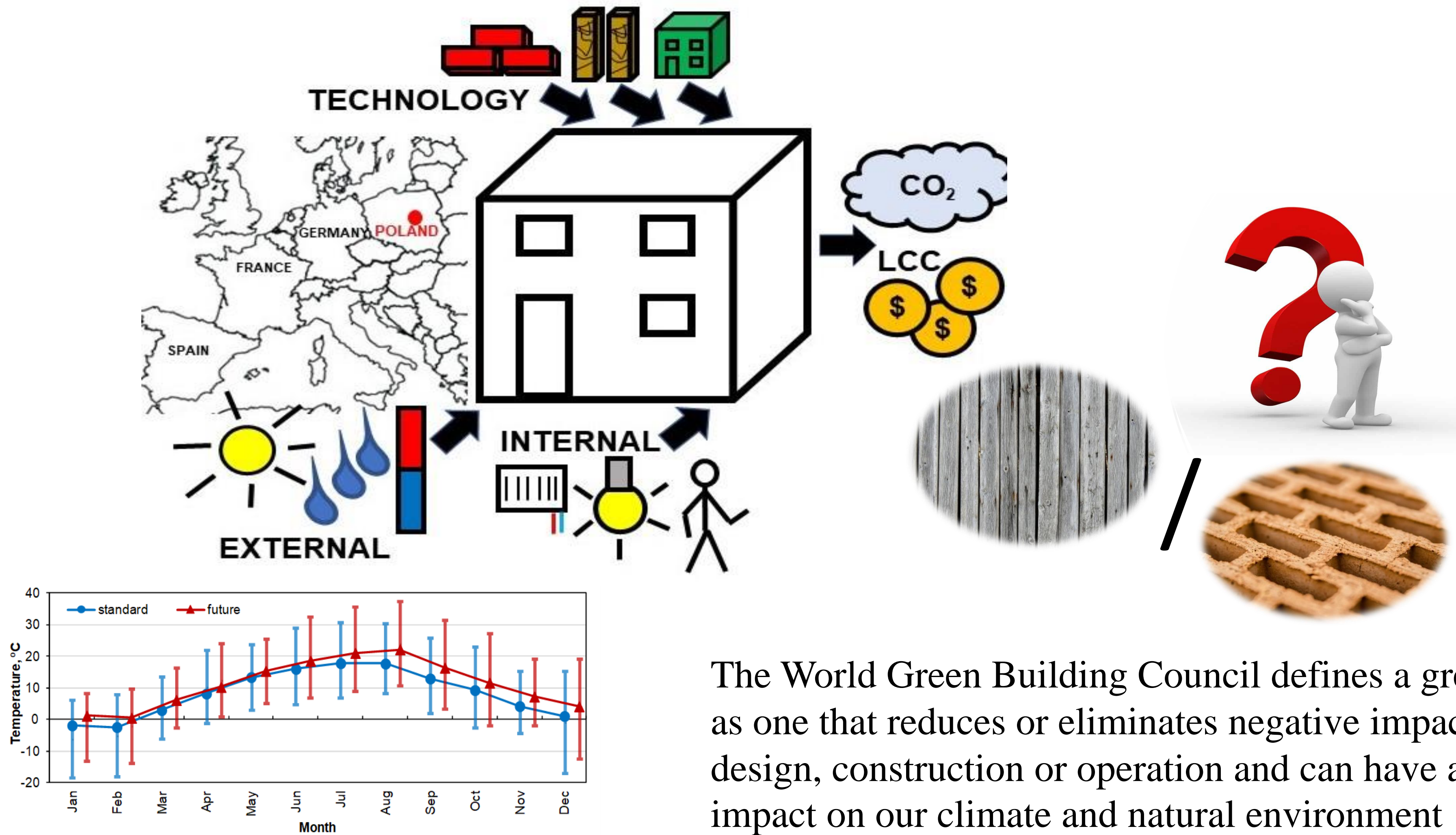




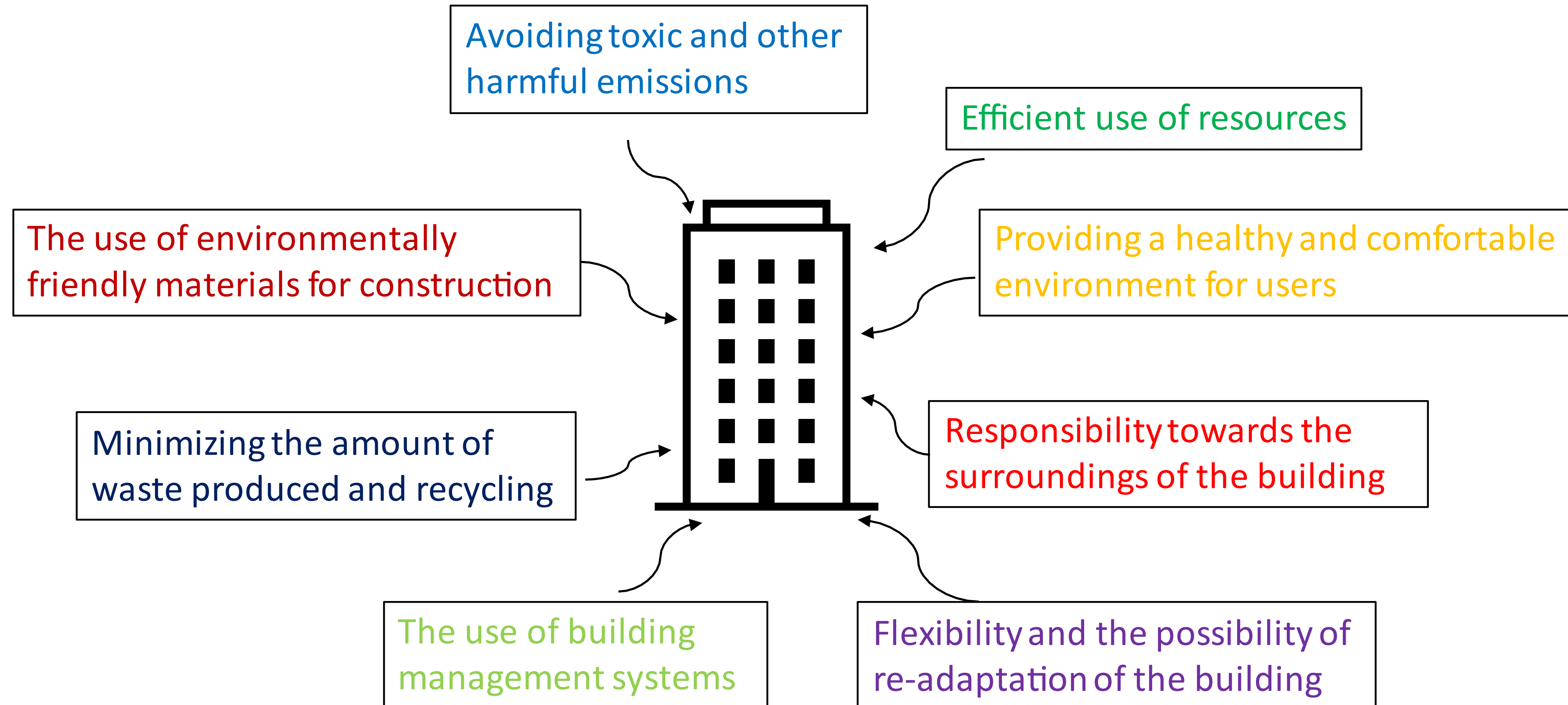




# Sustainable buildings



# Features of sustainable buildings



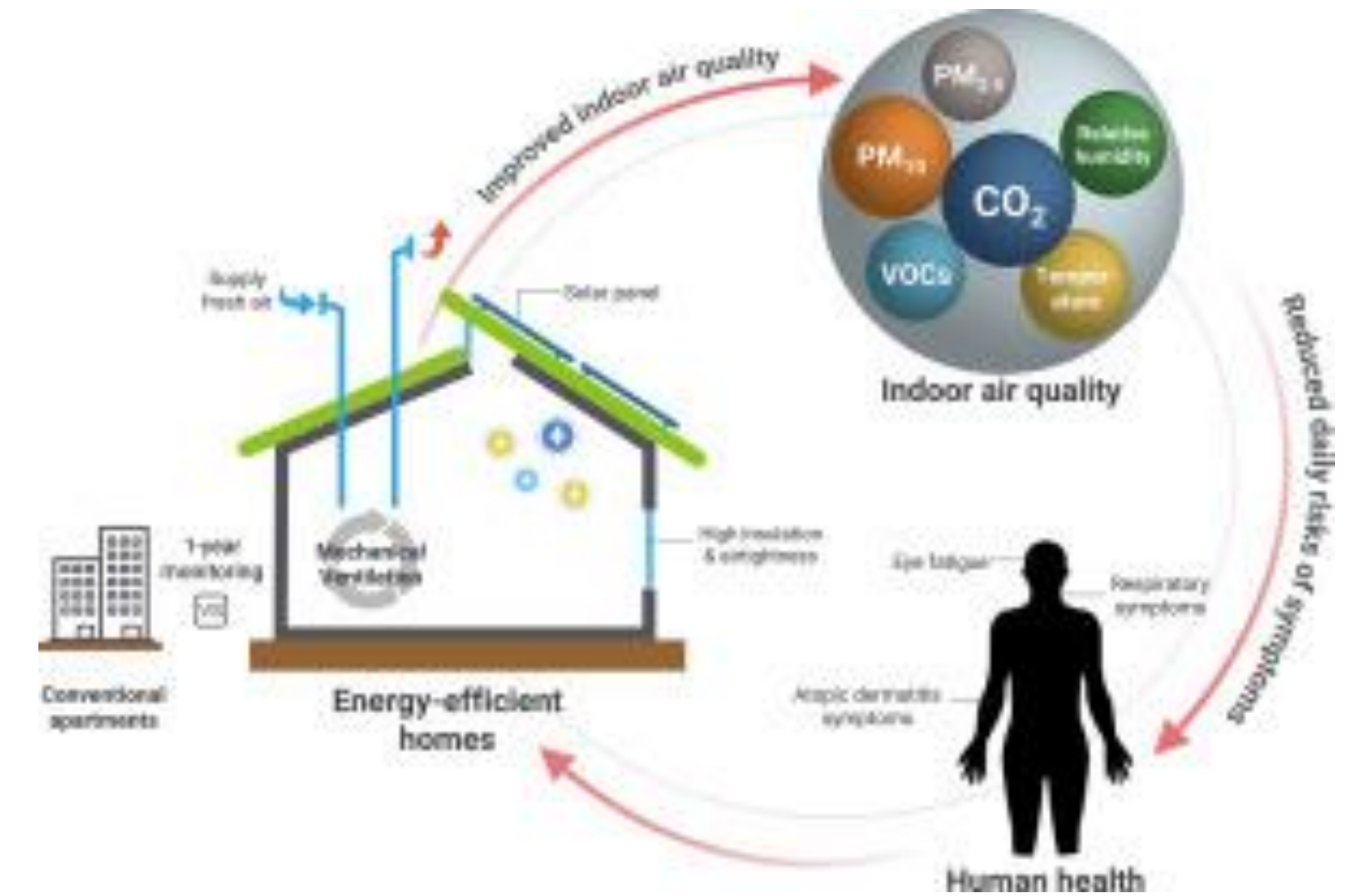


# IEQ factors

## Thermal comfort



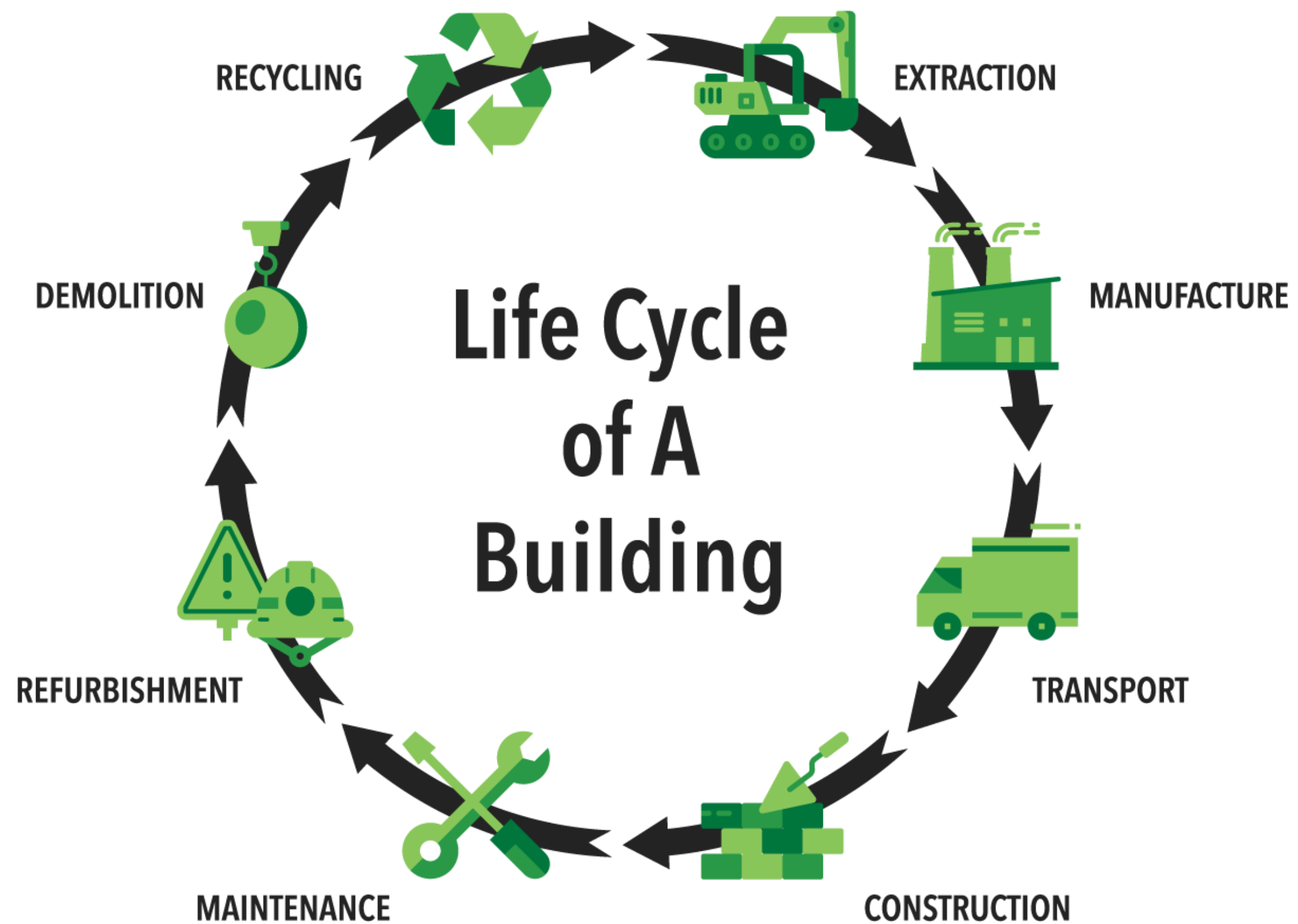
## Indoor air quality



[www.sciencedirect.com](http://www.sciencedirect.com)



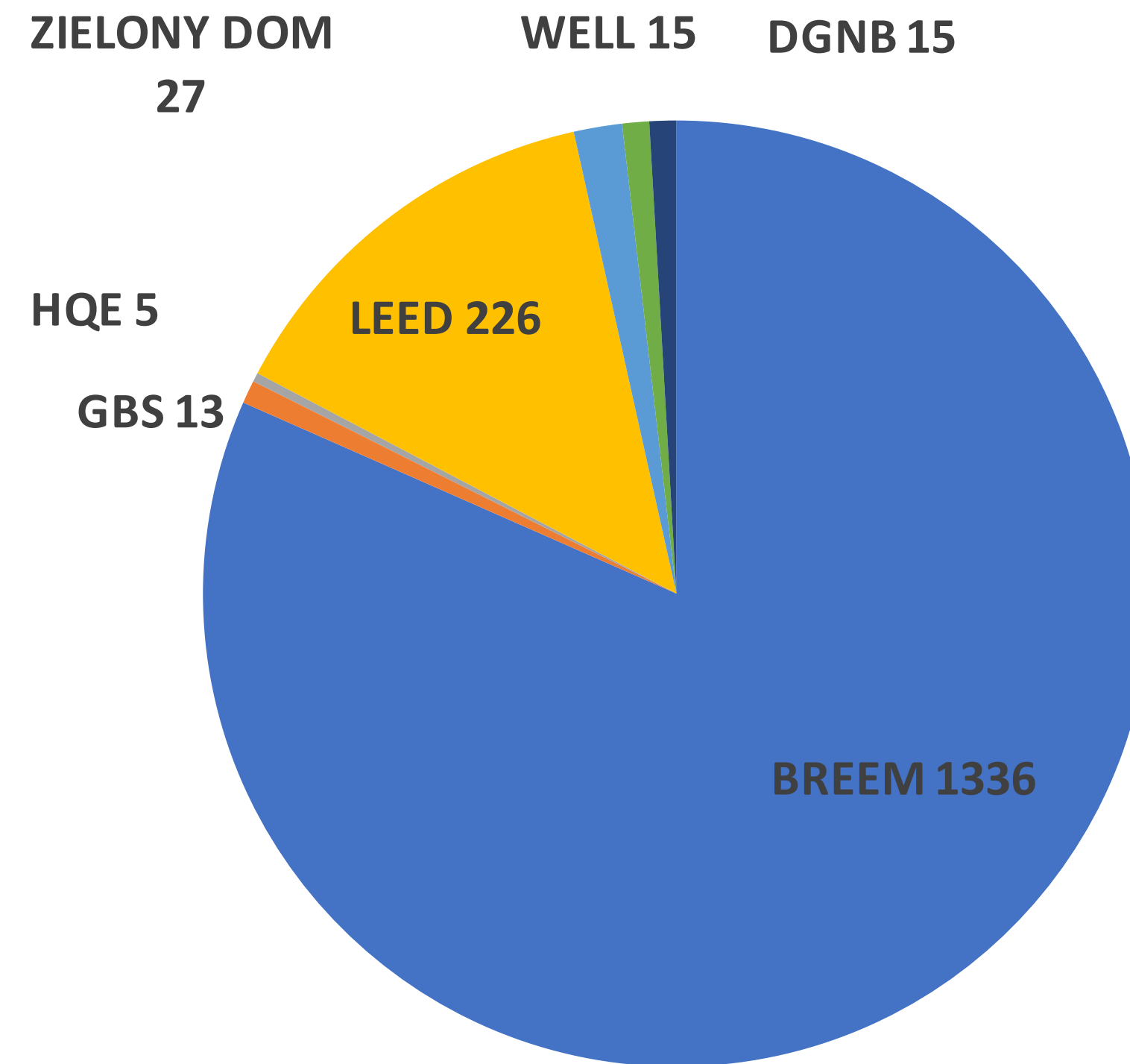
# Life cycle assesment



[www.igbc.ie](http://www.igbc.ie)



# Number of certified buildings in Poland





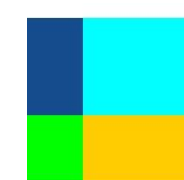
# THANK YOU FOR YOUR ATTENTION



*The European University on Responsible Consumption and Production is supported by the European Union via different project funding. EURECA-PRO phase I 2020-2023 is co-funded by the Erasmus+ Programme of the European Union. The Research and Innovation dimension of EURECA-PRO has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 101035798.*

*EURECA-PRO is also supported at a national level by: the Federal Ministry of Education, Science and Research and the Austrian Academic Exchange Service OeAD (Austria); the Federal Ministry of Education and Research and the German Academic Exchange Service DAAD (Germany); the Ministry of Education (Greece); the Ministry of Education and Science (Poland), the Ministry of Education (Romania), the Ministry of the Presidency Relations with the Courts and Democratic Memory and the Strategic Subsidy Plan 2021-2023 of the Ministry of Universities (Spain).*

*"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."*



**CENTRE OF CLIMATE AND ENVIRONMENT PROTECTION**