

abt / adviseurs in  
bouwtechniek



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The value of design: reducing CO<sub>2</sub> and materials



Focus shifts from energy to material



our mission: towards building ZERO impact  
from energy neutral to environmental neutral



50% - 60% material use in building = structure

material use structure





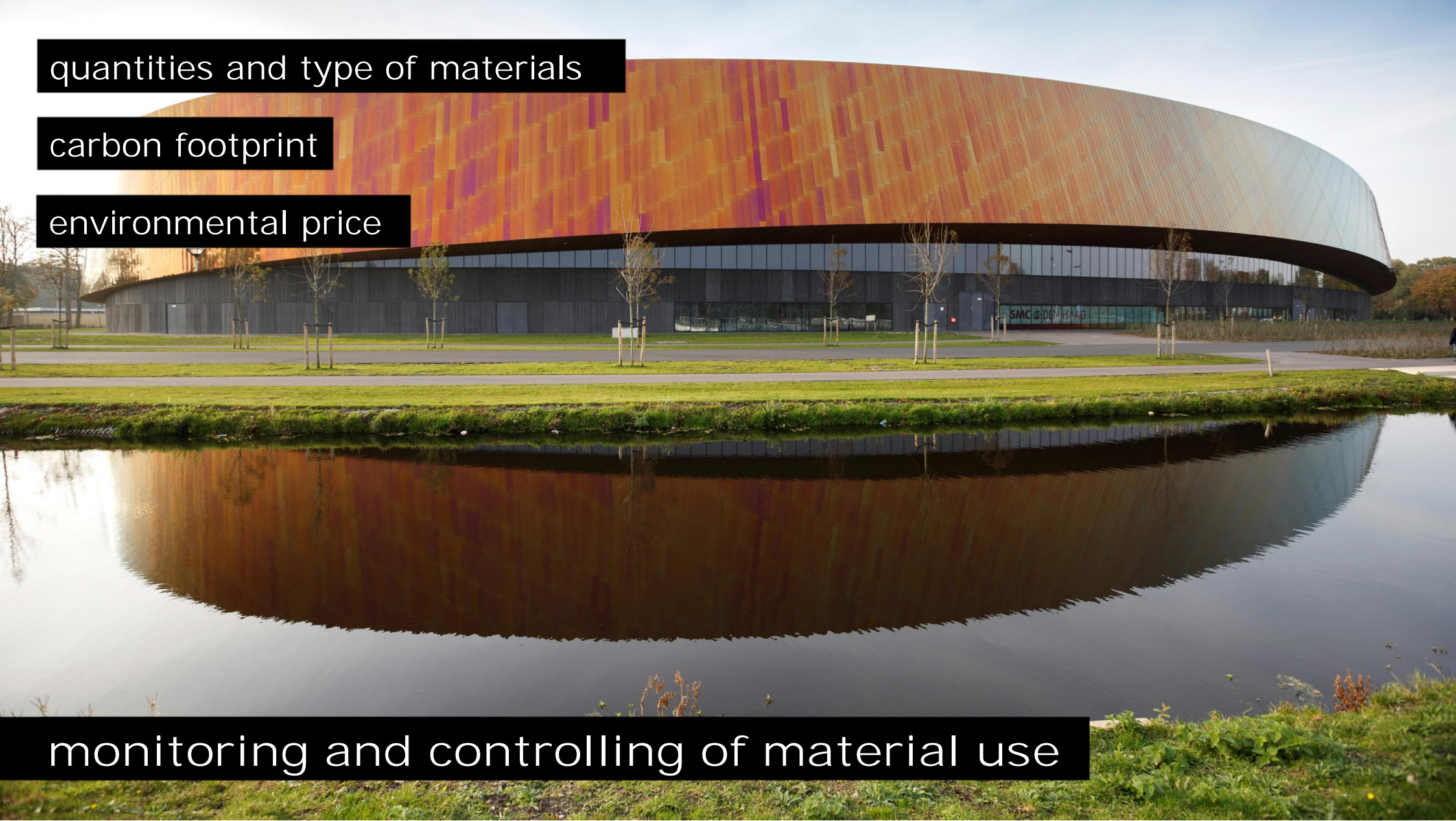
potential impact structural engineer

quantities and type of materials

carbon footprint

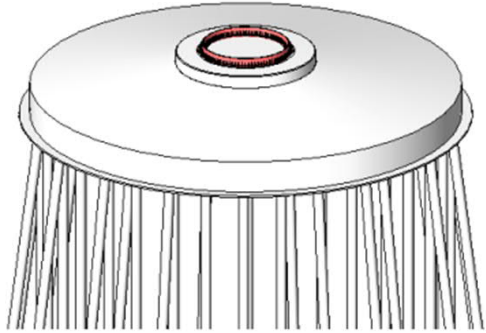
environmental price

monitoring and controlling of material use





# Windmill foundation



benchmark fundatie  
gemiddeld NL betonmengsel



690



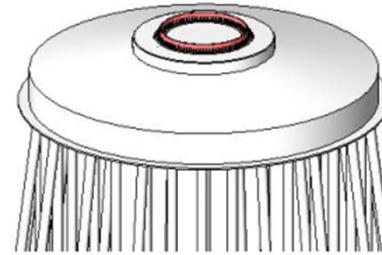
61.100



260.700 kg  
378 kg/m<sup>3</sup>



€ 25.000,-  
€ 36,-/m<sup>3</sup>



WINDBASE fundatie  
Hybride AAM betonmengsel



570



46.500



179.100 kg  
314 kg/m<sup>3</sup>



€ 17.425,-  
€ 31,-/m<sup>3</sup>

# Design optimisation

National Military Museum

40% optimisation steel structure

Design optimisation



3D virtual BIM model



ABT MIM



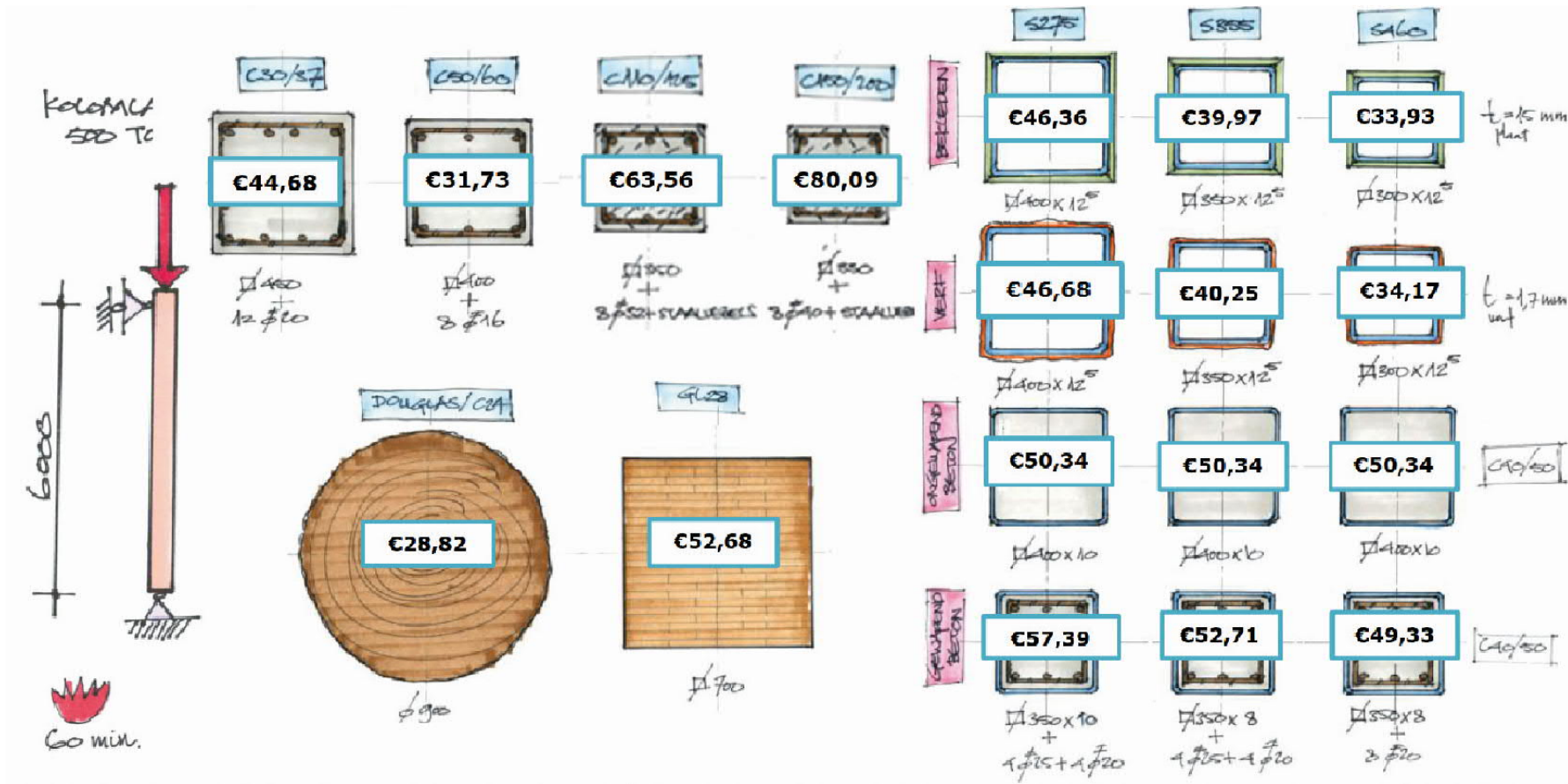
plugin

Environment-database



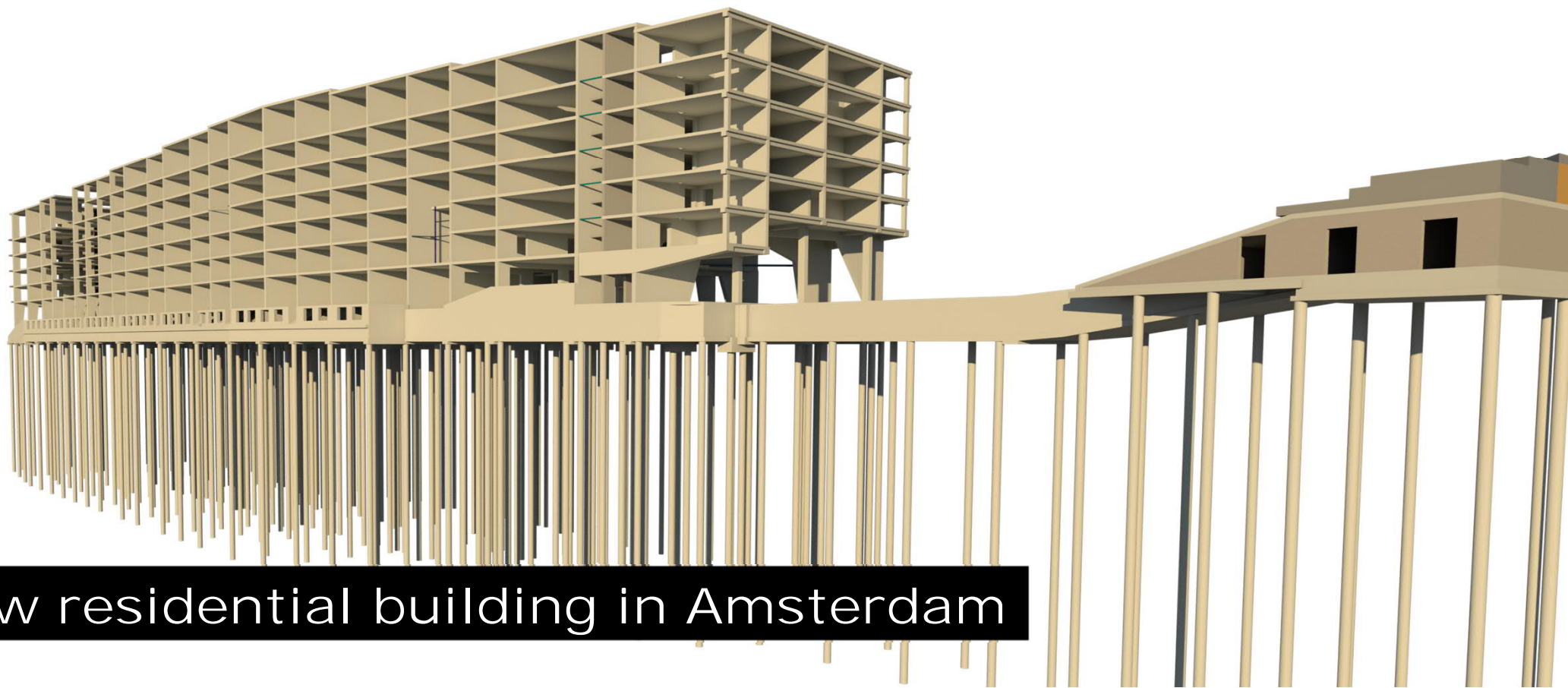
ABT Milieu-Impact Monitor





Study of environmental impact columns

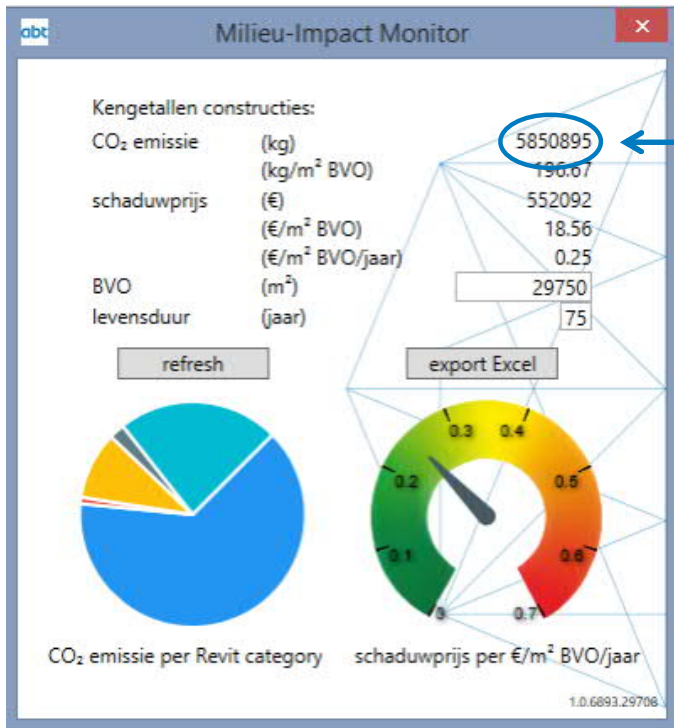
MIM best practice



New residential building in Amsterdam



# MIM best practice

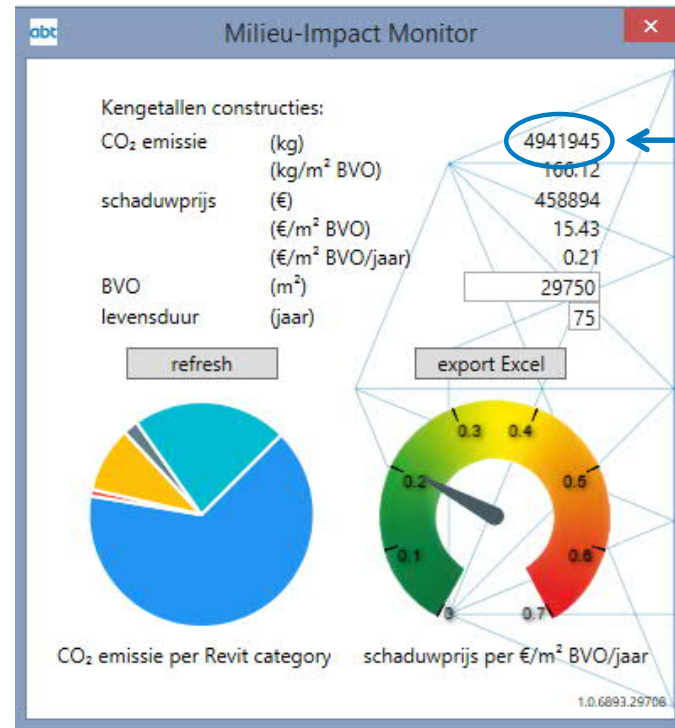


traditional concrete mixture

environmental benefit  
carbon footprint:  
908.950 kg CO<sub>2</sub>  
6.000.000 km travel by car



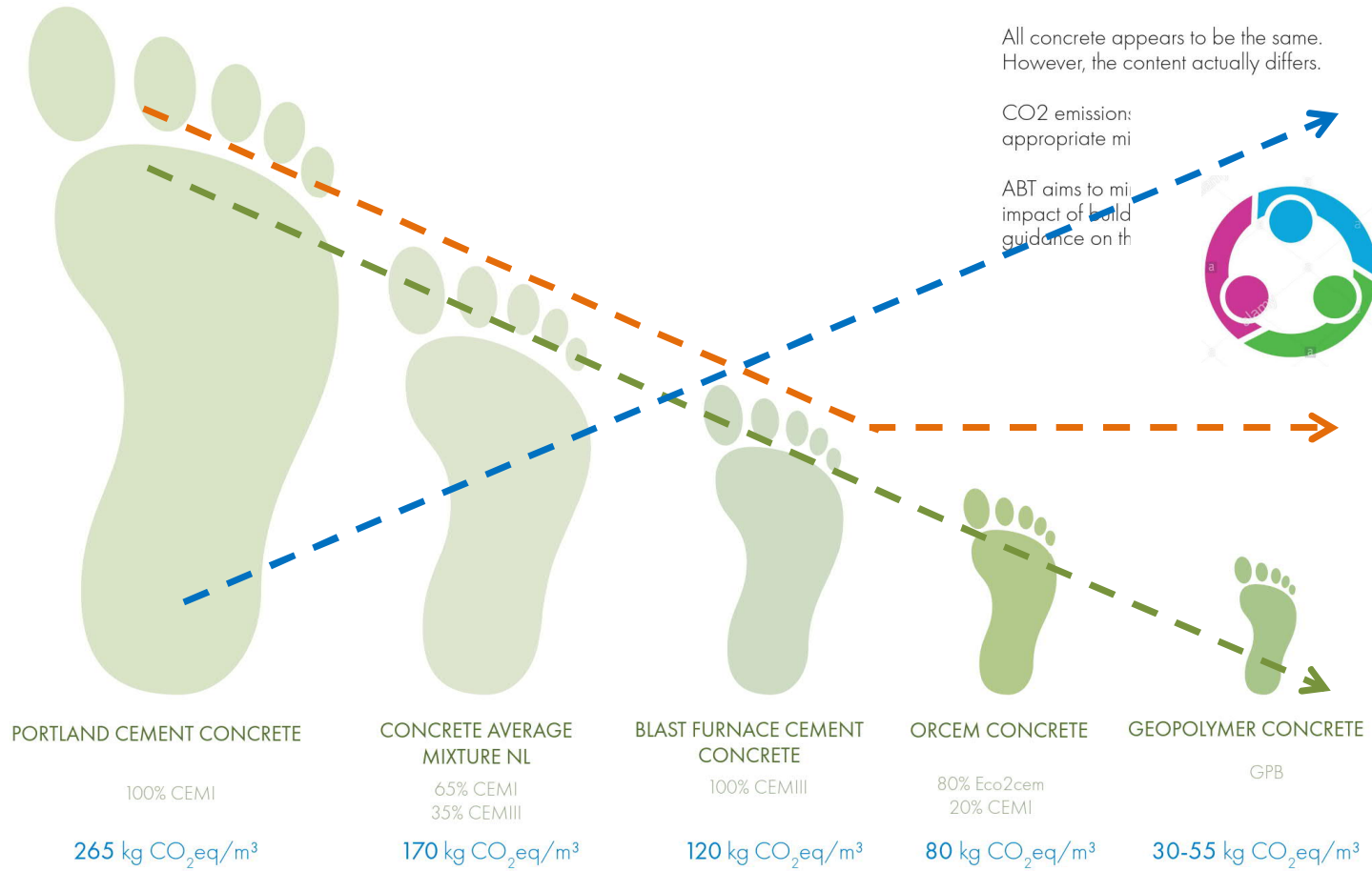
150x around the world



green concrete mixture

# New residential building in Amsterdam

# CARBON FOOTPRINT OF CONCRETE



collaboration

- Structural engineer
- Contractor
- Concrete technologist

And Client awareness

starting strength

carbon footprint

carbon footprint concrete mixture