

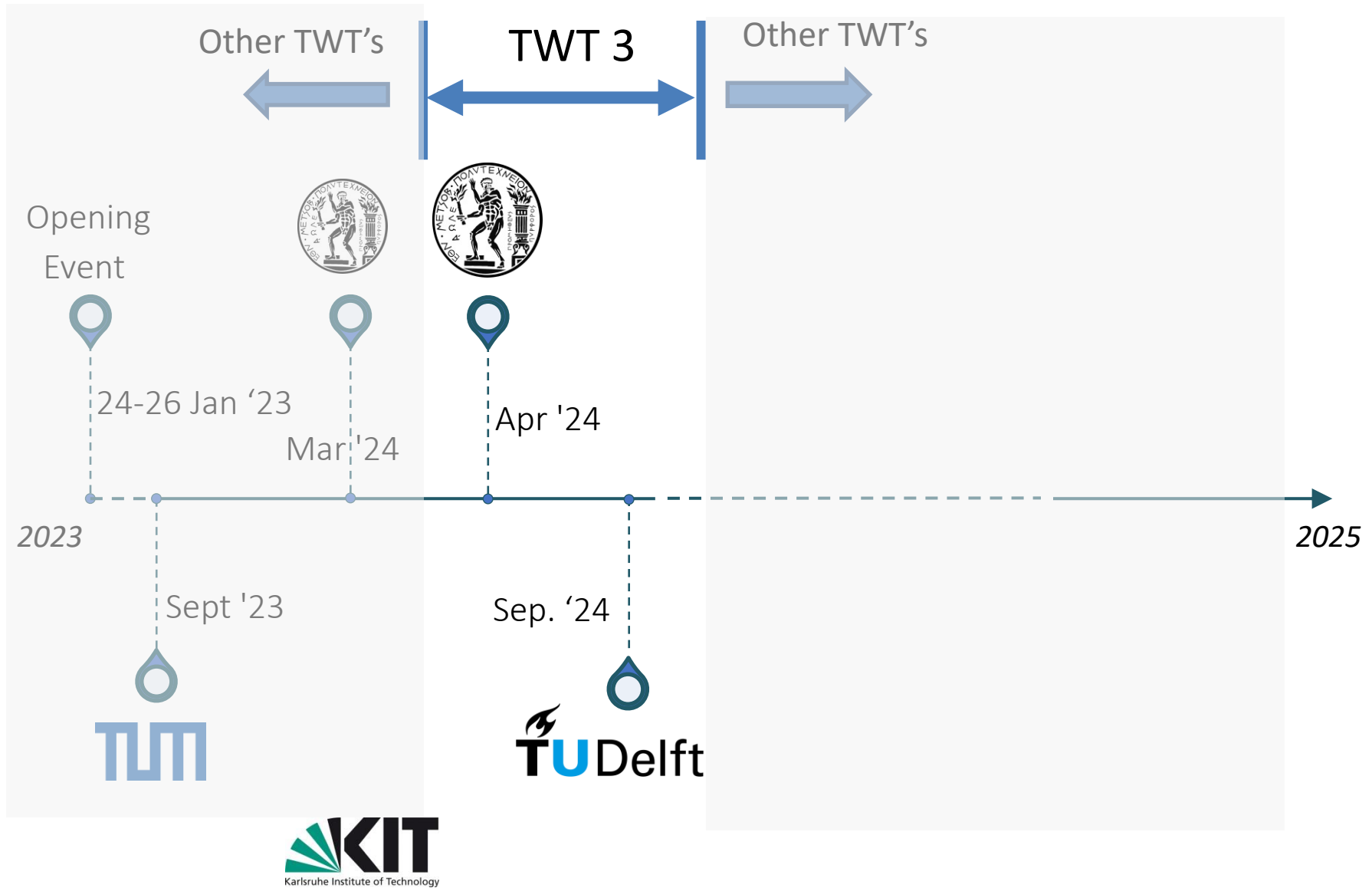
TWT 3 (4): Scale effects in urban flow wind tunnel studies

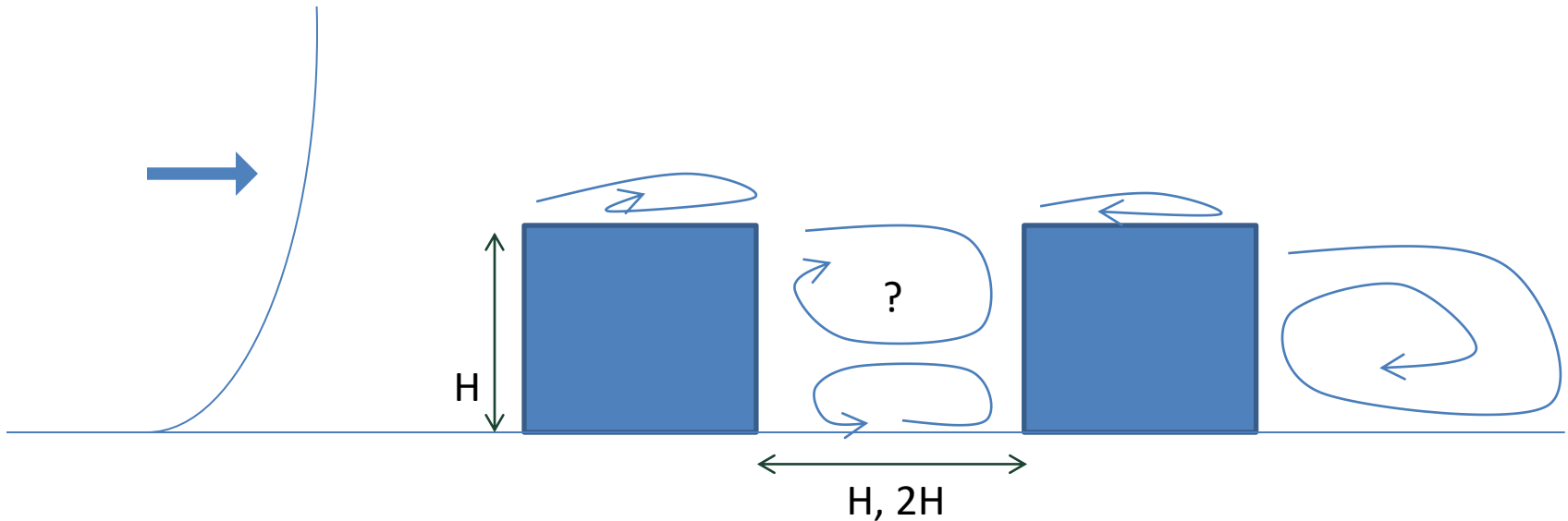
TU Delft - NTUA

TWEET-IE / Twin Wind tunnels for Energy and the Environment –
Innovations and Excellence

HORIZON-WIDERA-2021-ACCESS-03-01 / PR# 101079125

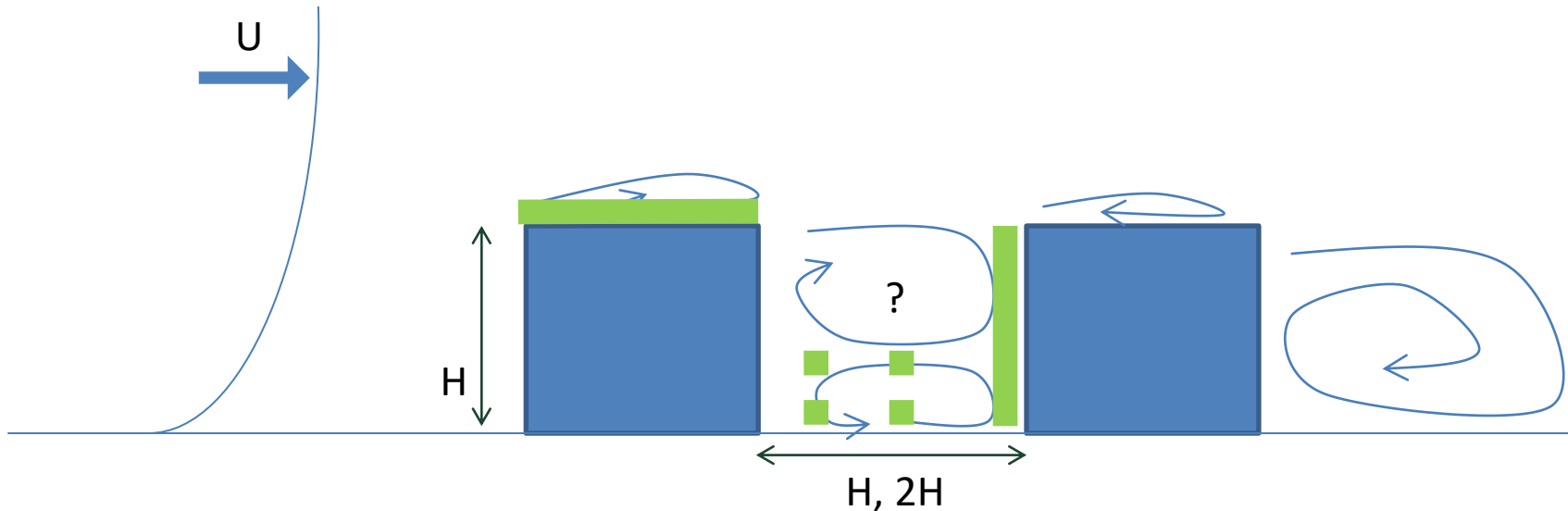






Flow features in street canyon may be unsteady and depend on:

- Canyon aspect ratio
- Upstream boundary layer profile
- Surface roughness (vegetation?)



Suggestions for configurations to be studied



Apr. '24

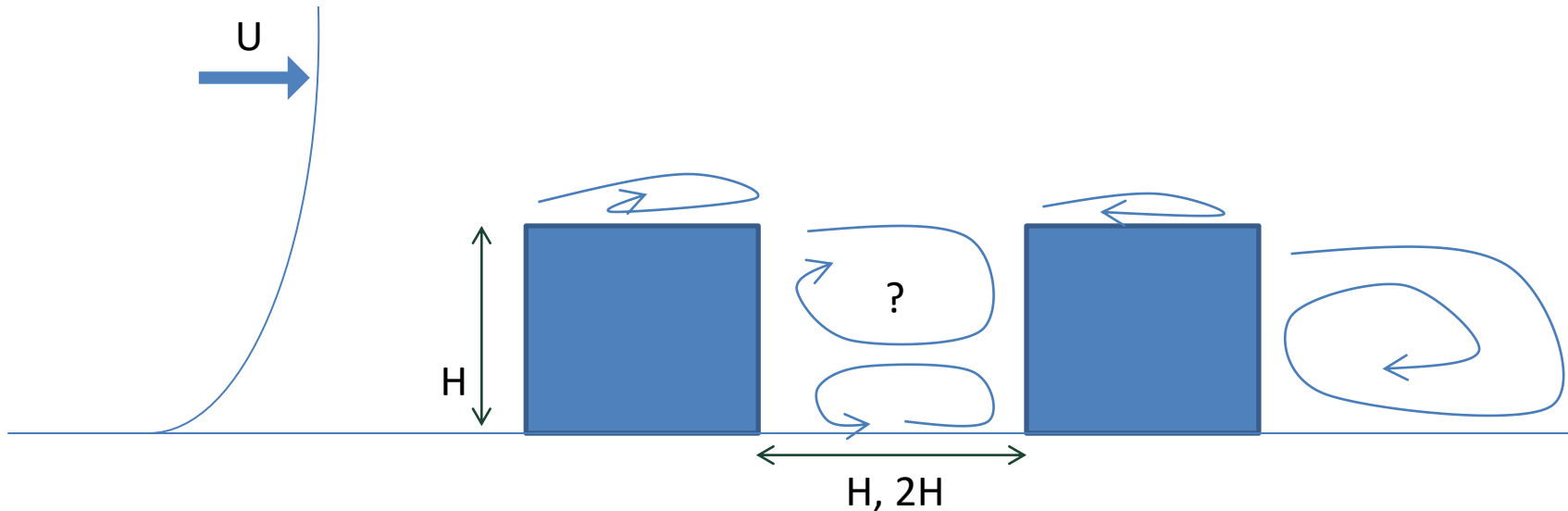
- $H=10\text{ cm}$
- $U=3\text{-}5\text{ m/s}$
- $Re=1,5\text{-}2,8 \cdot 10^4$



Sep. '24

- $H=10\text{ cm}$
- $H=50\text{ cm}$
- $U=3\text{-}5\text{ m/s}$
- $U=3\text{-}5\text{ m/s}$
- $Re=1,5\text{-}2,8 \cdot 10^4$
- $Re=0,7\text{-}1,4 \cdot 10^5$

Vegetation ?



Suggestions for methods



Apr. '24



Sep. '24

- PIV in canyon (Stereo ?, Tomo ?)
- Robotic arm (in Athens Spring '24 also for TWT2)
- Light source?
- Hi speed ?

Thank you !