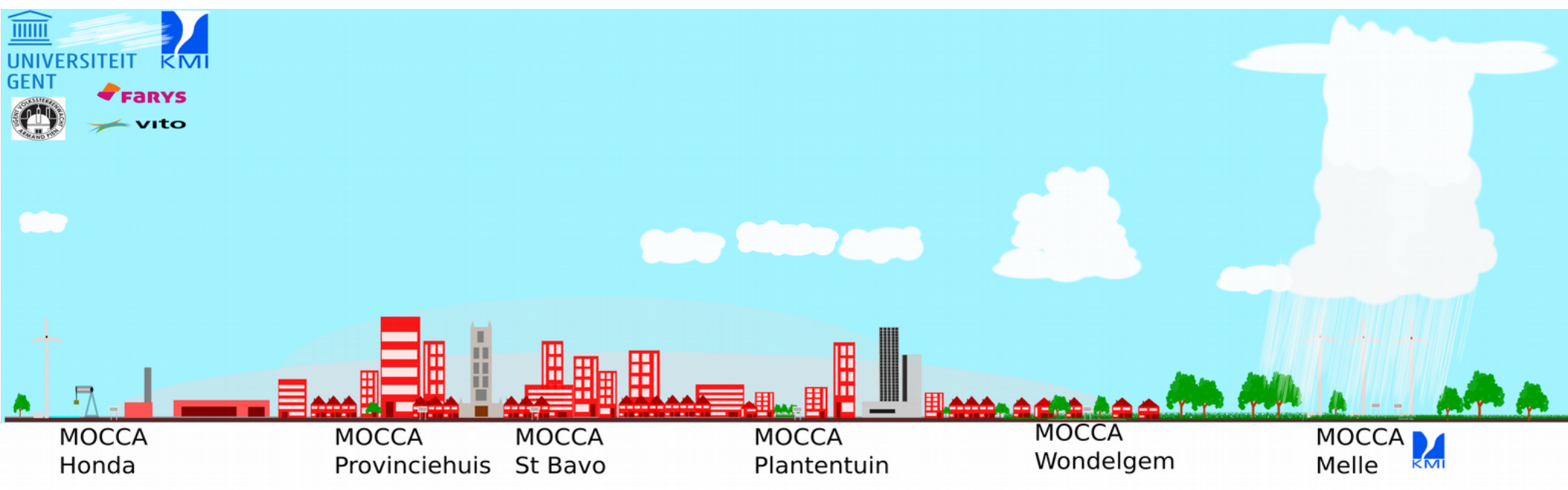


# MOCCA network

## monitoring the urban climate in Ghent

Steven Caluwaerts



# Building high-accuracy weather stations.



- 1. temperature (actively ventilated)
- 2. antenna
- 3. rain gauge
- 4. wind meter
- 5. temperature and relative humidity (passively ventilated)



Urban meteorological observations are difficult...

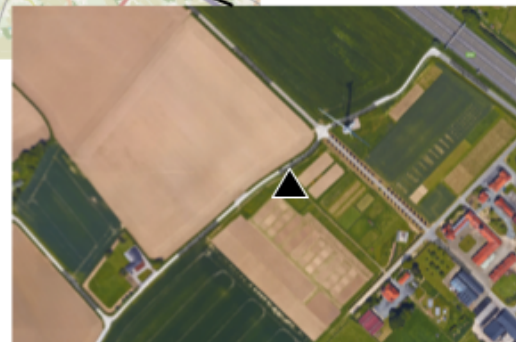
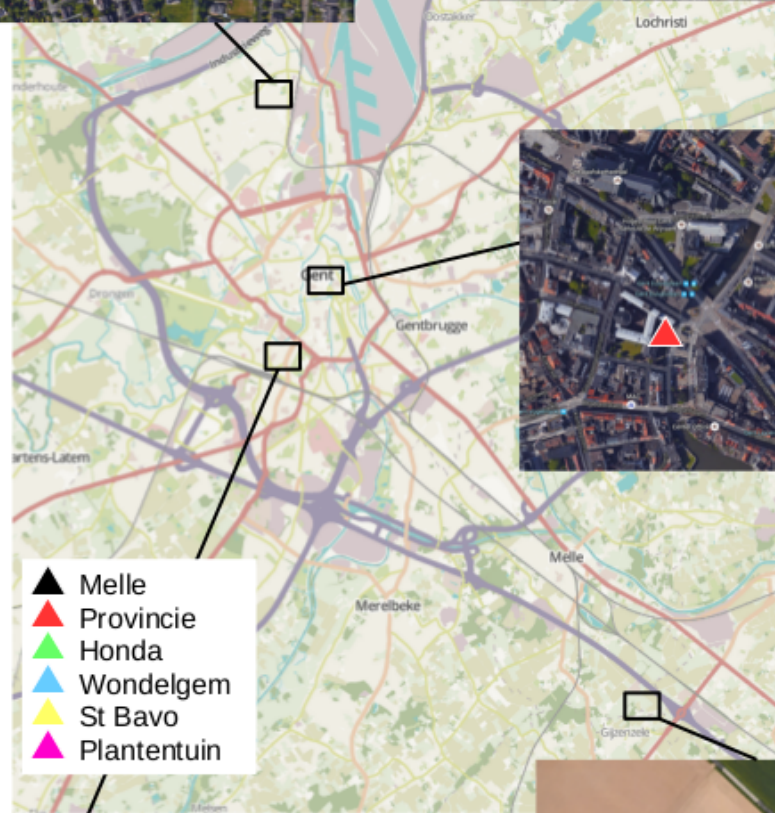


... but not impossible.

MOCCA Provinciehuis in city center Ghent (foto: Peter Camps)



Locations chosen to sample different urban landscapes.

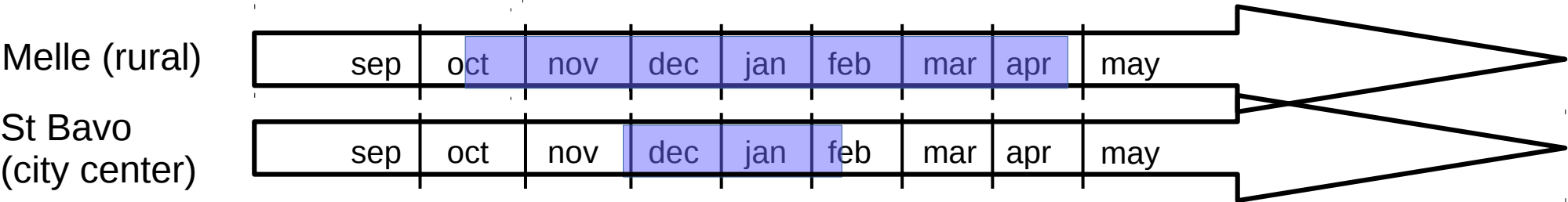




What is impact of green on urban climate?

Urban heat island during winter: reduction of 40% in freezing hours.

Winter 2016-2017 much shorter in city center!



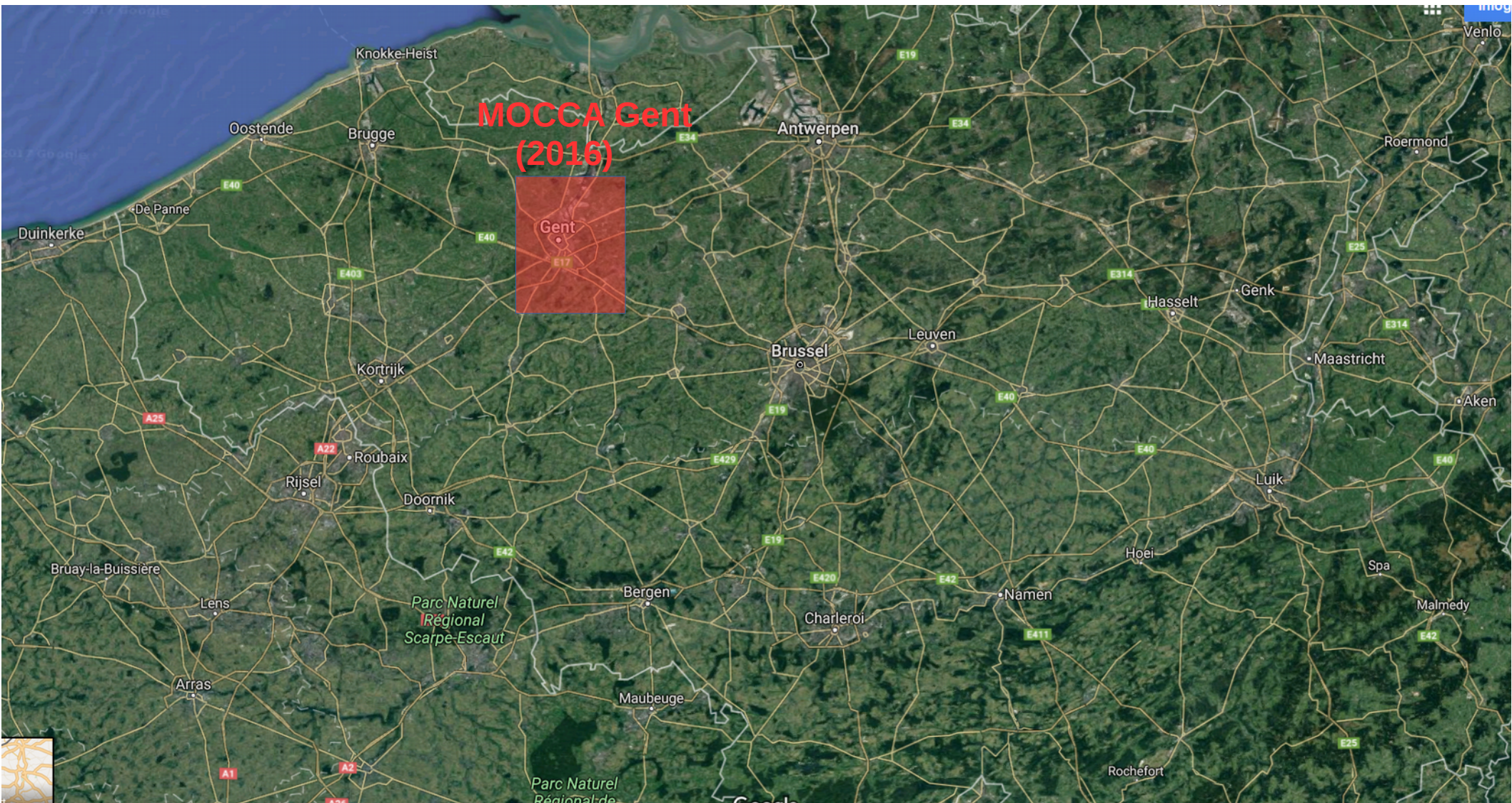
impact on plants and animals, energy consumption,...



MOCCA St Bavo in city center (foto: Peter Camps)

# Outlook

MOCCA Gent measurements will continue and analysis, model validations, more measurements, ... will follow.

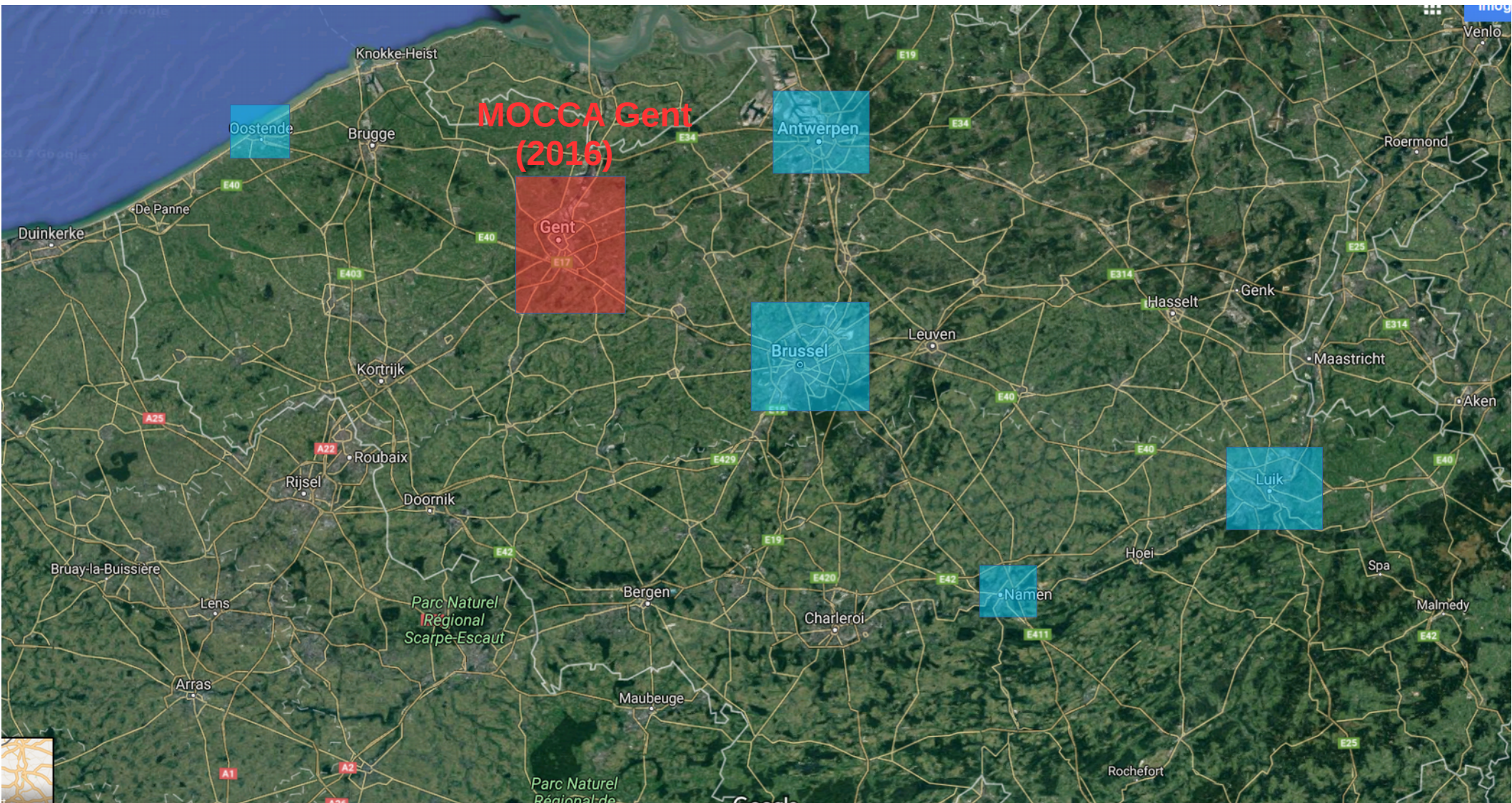


Interested? [steven.caluwaerts@ugent.be](mailto:steven.caluwaerts@ugent.be) or [www.mocca.ugent.be](http://www.mocca.ugent.be)

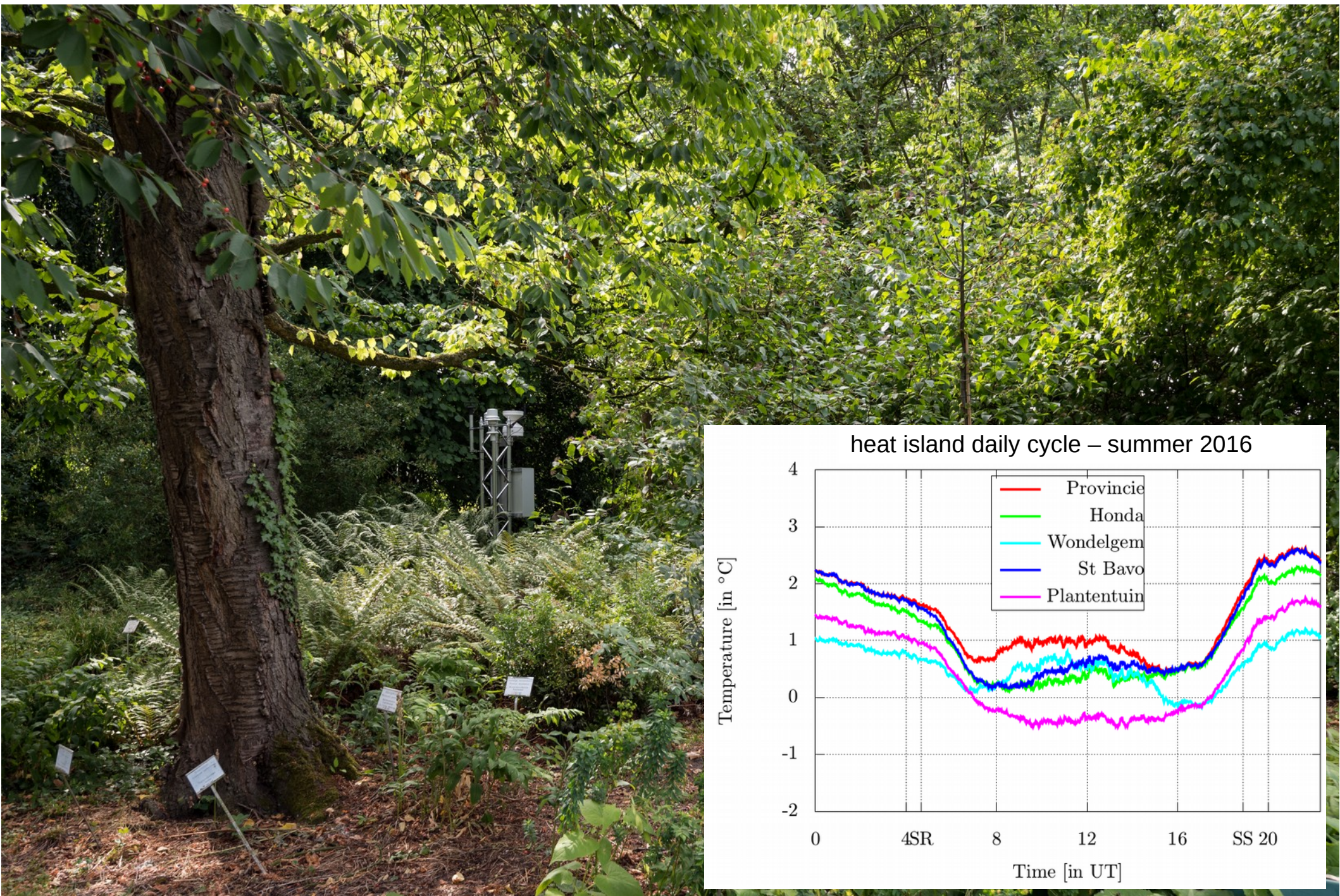
# Invitation

MOCCA might hopefully inspire others and serve as a first step towards more urban climate observations in Belgium!

More urban networks?



Interested? [steven.caluwaerts@ugent.be](mailto:steven.caluwaerts@ugent.be) or [www.mocca.ugent.be](http://www.mocca.ugent.be)



In summer: daytime urban cool island but still significant nighttime urban heat island.