UNIVERSITÄT SALZBURG

Z_GIS

11th LBS Symposium, Vienna

Urban Emotions

Fusing Data from Technical and Human Sensors to Support Spatial Planning with Crowdsourced Emotion Information

RUPRECHT-KARLS-
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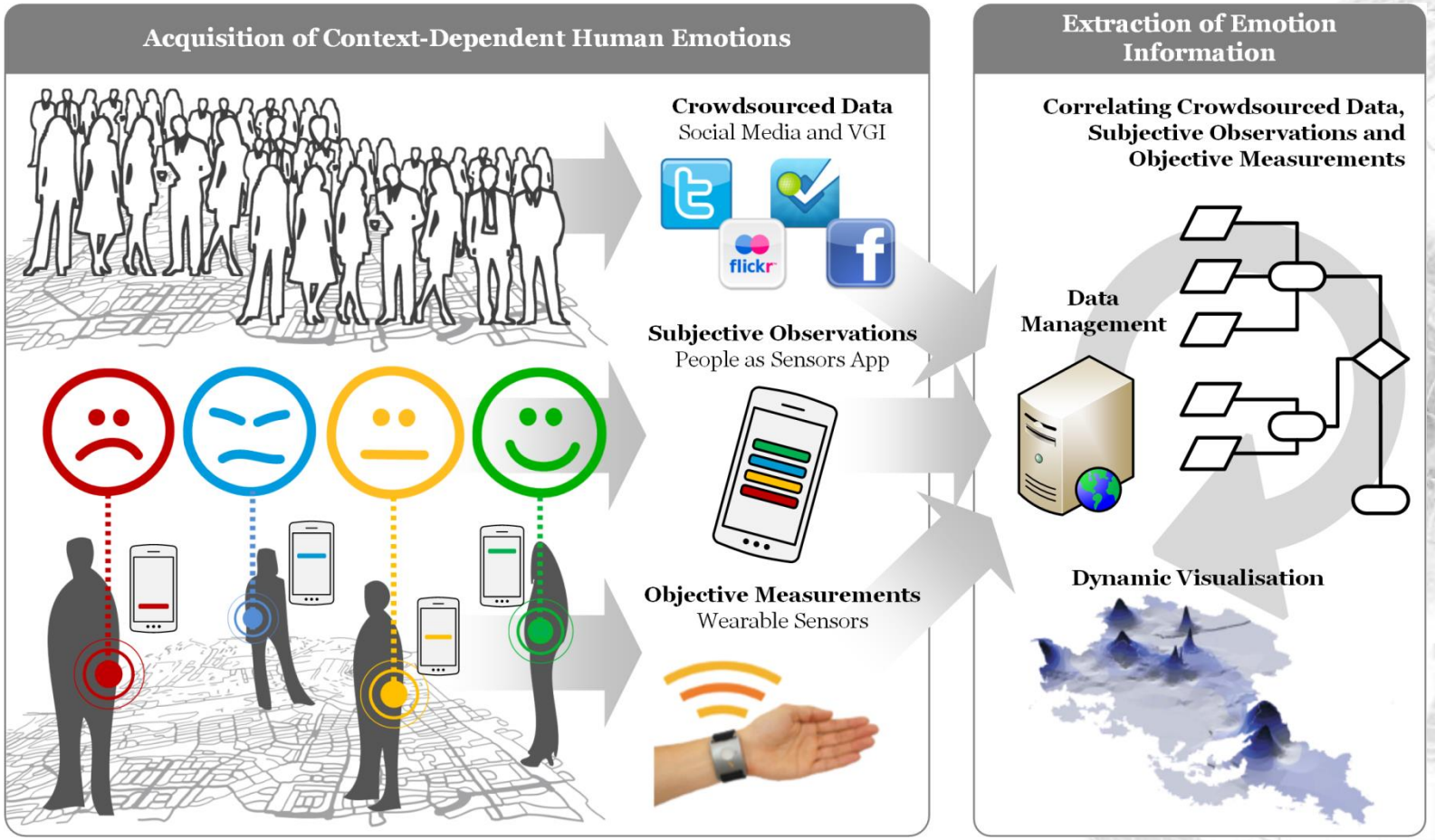
KAISERSLAUTERN

27 November 2014

Urban Emotions ::: Motivation

- Emotion information: better urban planning
- Innovative way to acquire and assess citizens‘ subjective sensations (traffic, safety, tourism, …)
- “Anthropocentric”

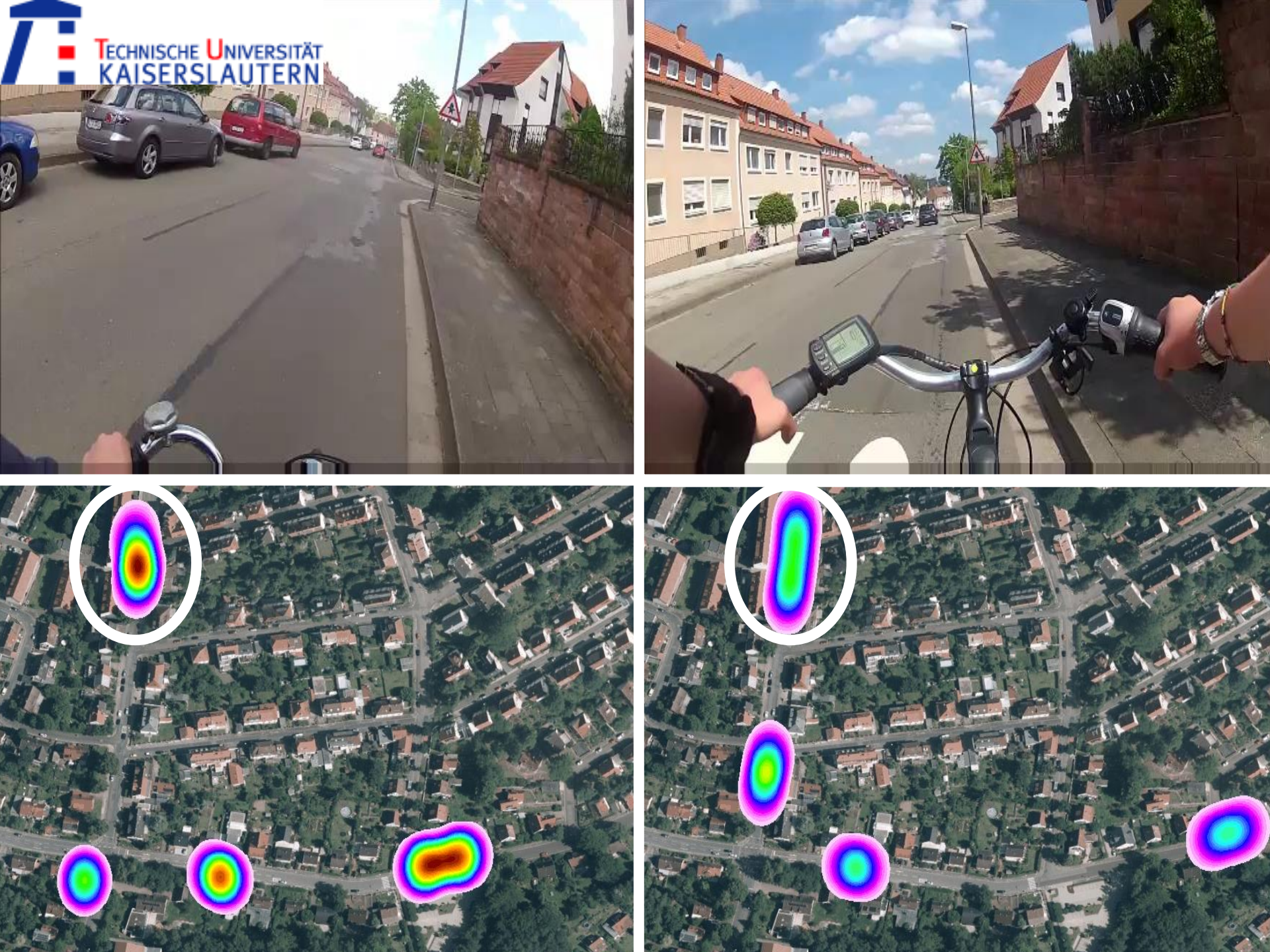
Urban Emotions ::: Idea



Urban Emotions ::: Emotion Sensors

- Wristband or chest belt
- Measurands: skin conductance, body temperature, additional heart rate, heart rate variability
- Detection of emotional spikes and stress levels → calibration!

→ Just benchmarking sensors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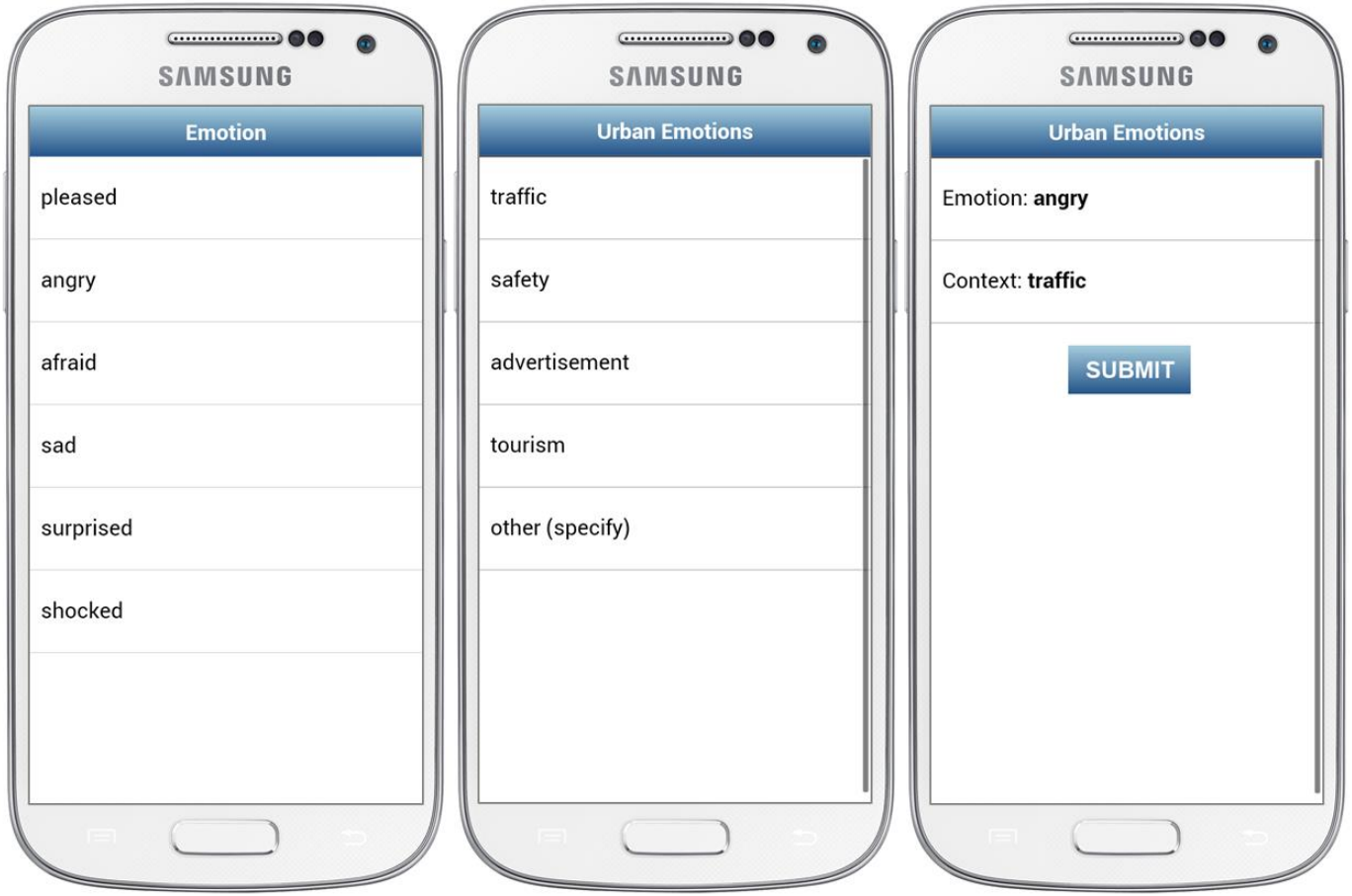
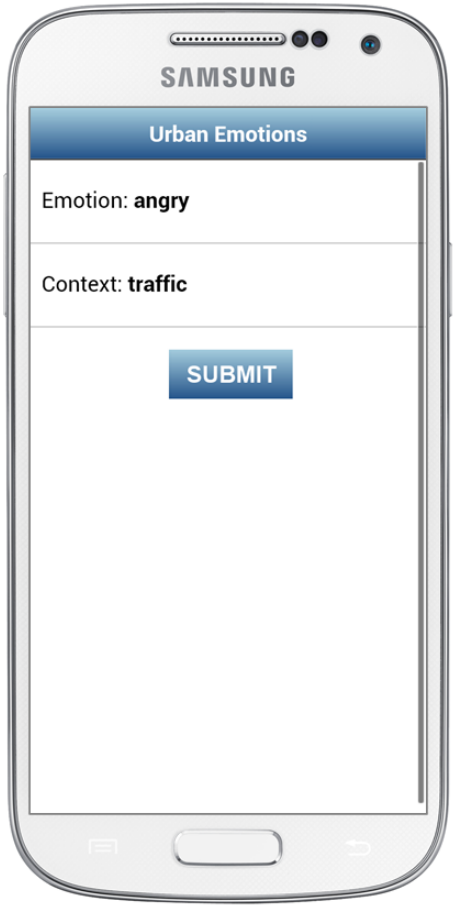
Wachtelgasse
Bozner Strasse
Zillerstrasse
Fasanenstrasse
Schießenweg
Zielenweg
Amsdorfgasse
Paumannstrasse
Franz-Martin-Strasse
Erlsachstrasse
Rosengasse
Hans-Sachs-Gasse
Adolf-Kolping-Strasse
Bleistrasse
Erzherzog-Eugen-Strasse
Bayrisch-Platz-Strasse
Julius-Raab-Strasse
Jahnstrasse
Staffenstrasse
Saint-Julien-Strasse
Wiener Bundesstrasse
Humboldtstrasse
Strübergasse
Wallnergasse
Rudolf-Biebl-Strasse
Roseggerstrasse
Lehener Strasse
Schumacherstrasse
Städtisches Gaswerk

Urban Emotions ::: People as Sensors



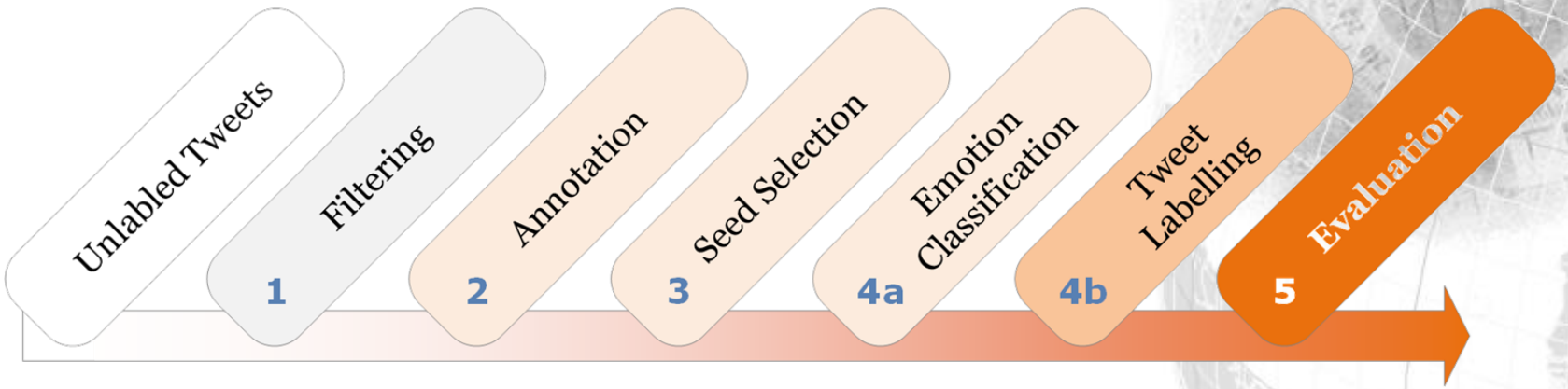
Urban Emotions ::: People as Sensors

- Trigger: emotion and location
- Calibration! → individual, learning effect, influential context factors
- Correlation with sensor measurements → "ground-truthing"
- Standardised data integration infrastructure (SOS-T)

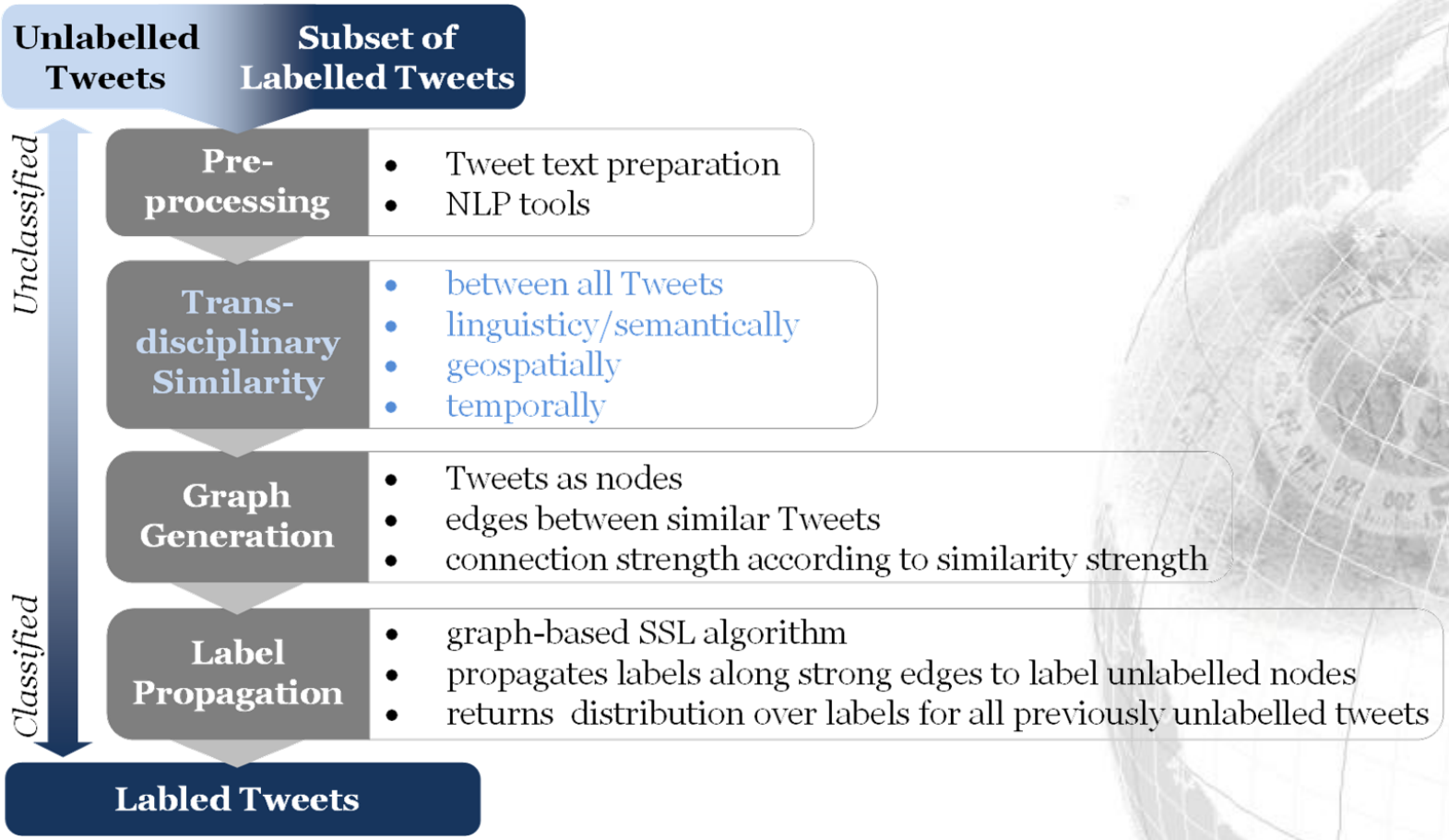


Urban Emotions ::: Emotions from VGI

- Goal: unlabelled Tweets → labelled Tweets
- Combination GI + CL + time



Urban Emotions ::: Emotions from VGI



Urban Emotions ::: Conclusions

- 3 data sources: biometric sensors, People as Sensors, social media data
- Define experiments (traffic, tourism,)
- Intensify collaboration with urban psychologists
- Feed back into urban planning

Acknowledgements

- Peter Zeile
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- …

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