Governance and Difference: lessons from northern Australia

Building a Heat Health Management Network - Institutional Capacity and Partnerships

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KGT
KGT Employment
Your Local Apprentice Employment Network Member

GTNT
Creating Territory Futures Through Apprenticeships

sra

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THERMAL HYPERFORMANCE
maximising performance in challenging environments

Heat Stress Research Partnership

menzies
school of health research

Skill360 Australia

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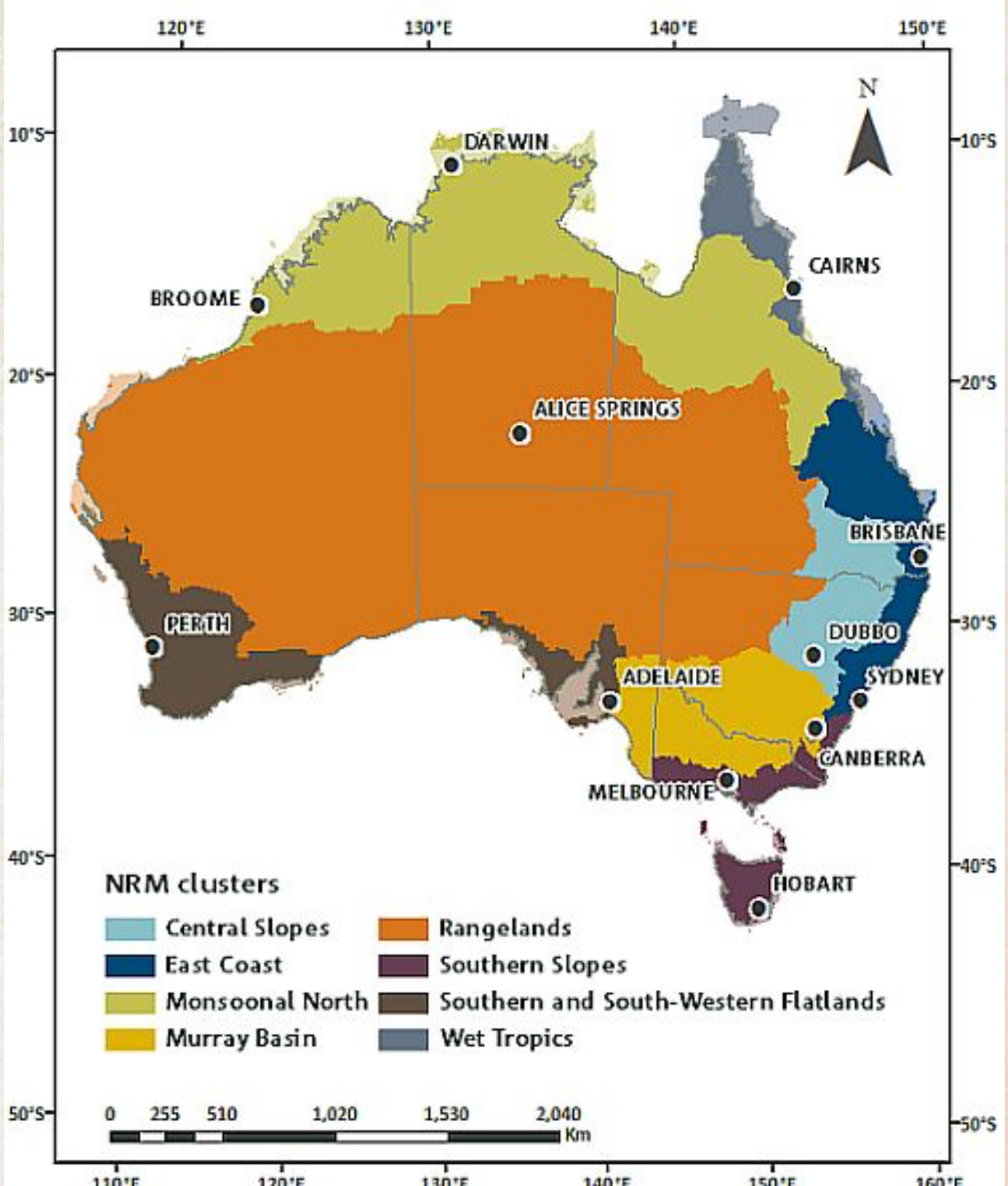

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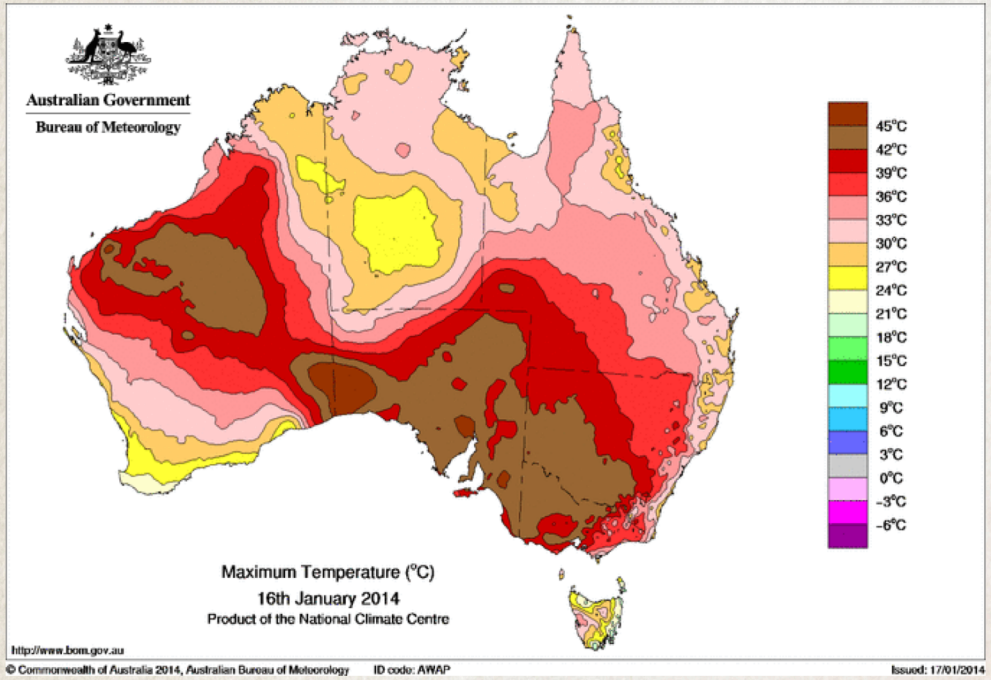
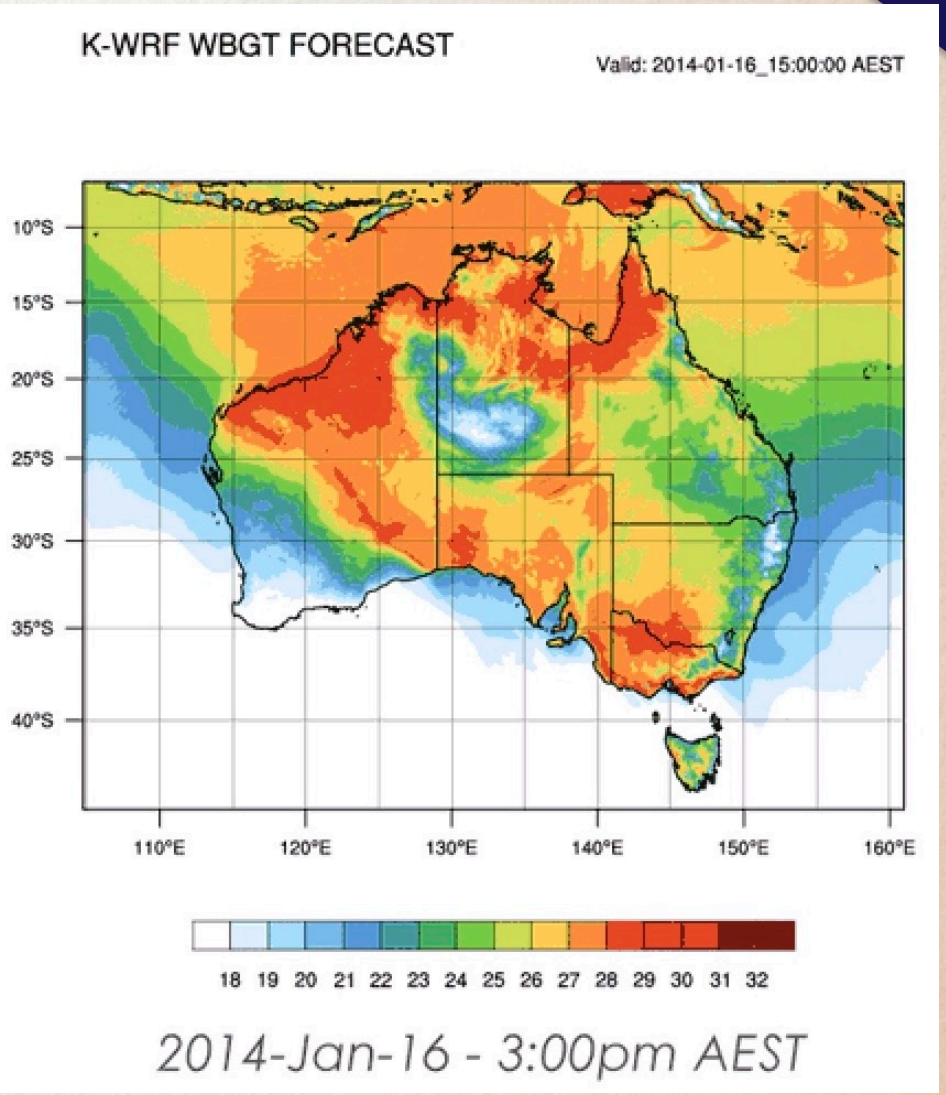
How heat ‘matters’ differently in northern Australia

***Materiality* of extreme heat:** more than just ‘T’emperature – considering humidity and other factors

***Temporality* of extreme heat:** occlusion of ‘chronic heat’ exposure





Differences in population: for whom is heat a problem?

- When, where and for whom is heat dangerous?
  - Morbidity and mortality discourse - focussed on the very young and elderly
  - Yet the ‘healthy’ population is also affected - major impacts on health and safety, wellbeing and productivity
  - Annual productivity loss from heat stress in Australia: $6.9 billion (Zander et al. 2015)

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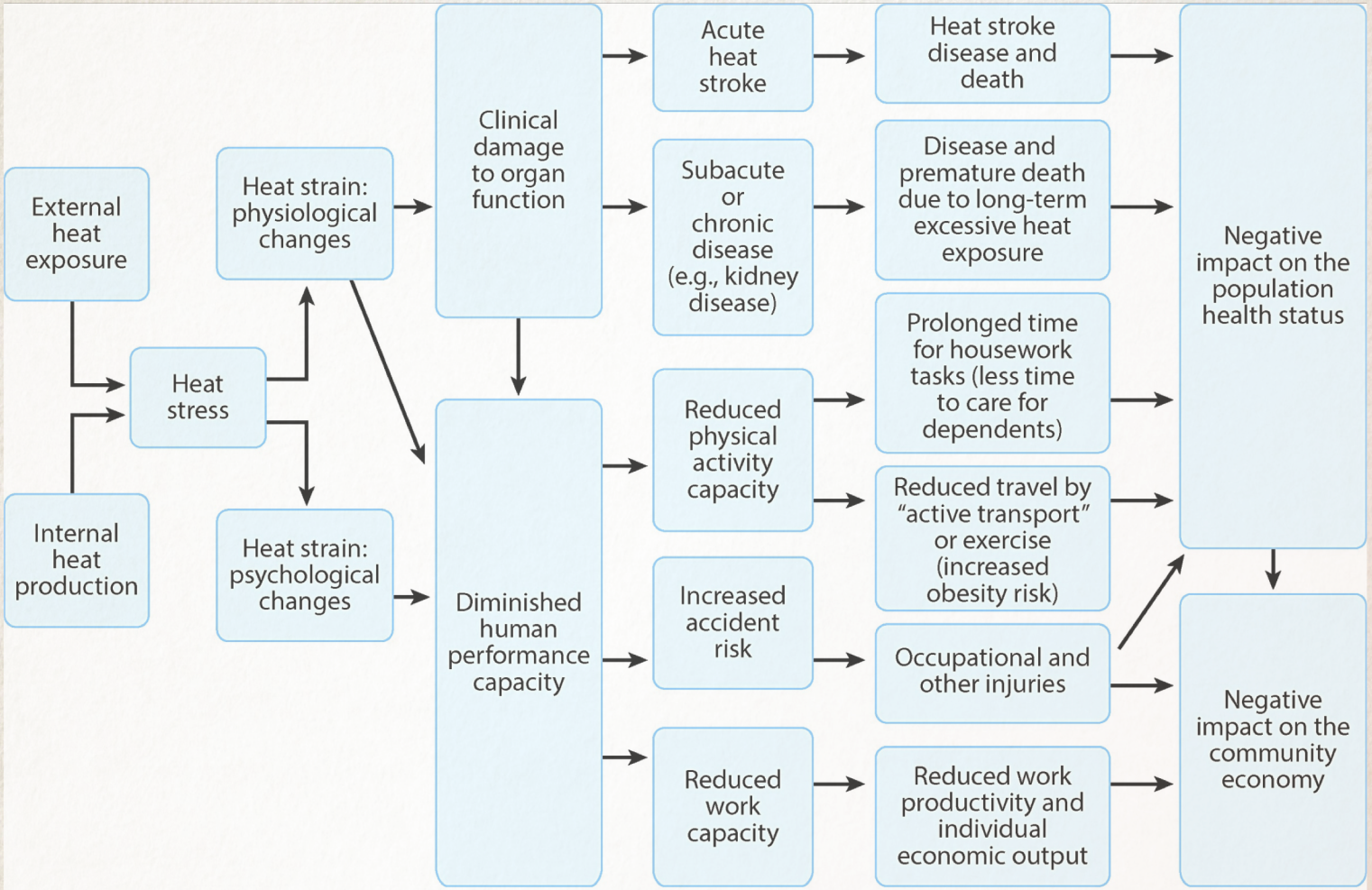
How and Why Heat Matters



Kjellstrom T, et al. 2016.
Annu. Rev. Public Health 37:97–112

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Case Study	Location	Year
Electrical Grid Maintenance	Darwin Region	2015
Volunteer Fire Fighters	Outer Darwin	2015
Pharmacists and Mental Health Professionals	Darwin	2016
Open Cut Mine-Site	Monsoon Tropics	2017

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Environmental Symptoms Questionnaire; Activity Survey; Medical incident analysis

	score (inter-quartile range) Yes	ESQ (inter-quartile range) No
At work		
Rest in shade		
Rest in front of fan		
Pour water over head		
Change clothes		
Ice/wet towels		
Ice packs		
Rest in air-con vehicle		
Rest in air-con building		
Slushies		
Food		
No work strategy		
At home		
Rest under fan		
Shower		
Spa/bath		

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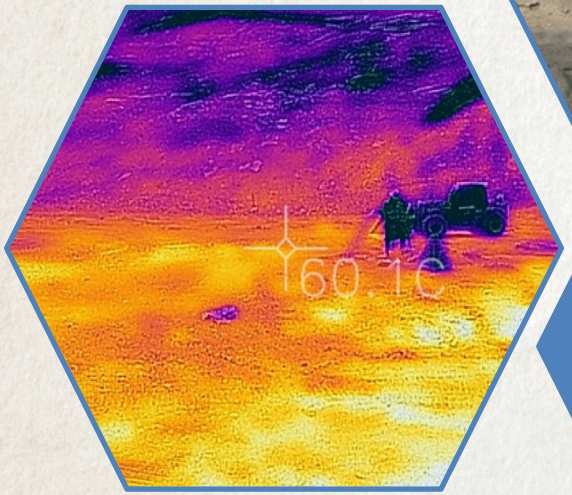
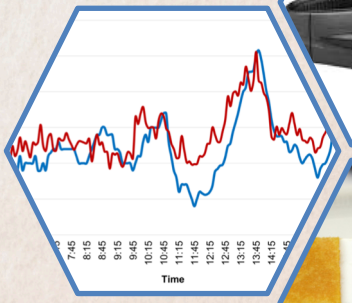
(Video) Ethnographic Observation, Site 'Walk-throughs'

Interviews

Physiological monitoring: Respiratory Rate; Heart Rate; Core Temperature; Urine Specific Gravity

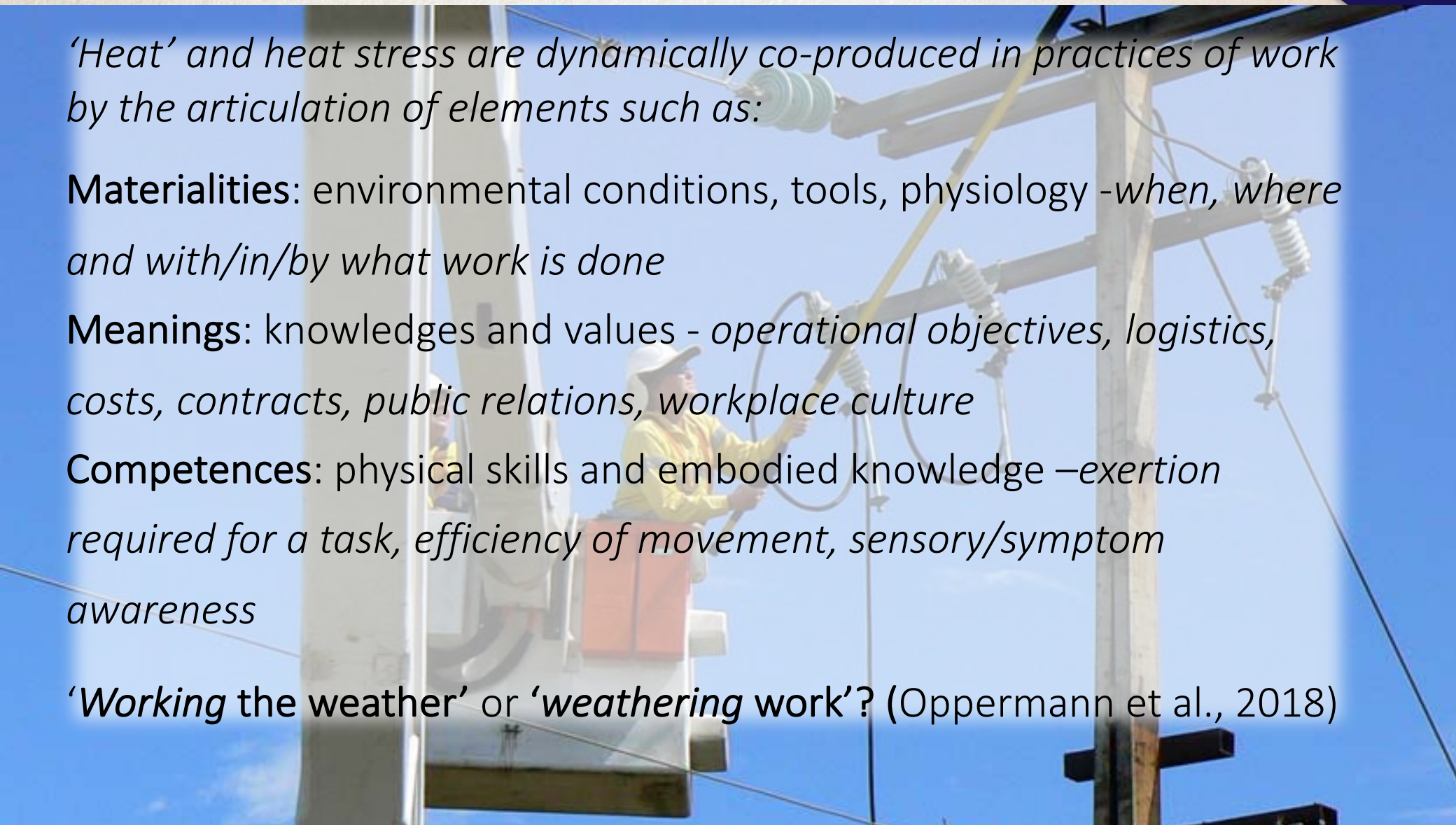


Environmental Monitoring & Thermal Imaging



Multi- and Trans-disciplinary Methods

Outdoor work in Darwin: survival of the fittest practice?



'Heat' and heat stress are dynamically co-produced in practices of work by the articulation of elements such as:

Materialities: environmental conditions, tools, physiology -*when, where and with/in/by what work is done*

Meanings: knowledges and values - *operational objectives, logistics, costs, contracts, public relations, workplace culture*

Competences: physical skills and embodied knowledge –*exertion required for a task, efficiency of movement, sensory/symptom awareness*

'***Working*** **the weather'** or **'*weathering* work'? (**Oppermann et al., 2018)

Everyday adaptation

The *right* knowledge:

- humid heat and chronic exposure
- cooling, exposure and exertion (as well as hydration)

Not ‘ceasing work’ but ‘working *smart*’, through improved practices, e.g.

- rotation - staff and roles
- sequencing and scheduling jobs
- seasonal planning
- mechanical aid/replacement and material supports
- cultural change and awareness

Political will and funding…

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Thank you

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www.cdu.edu.au/northern-institute/Heat-Stress-Research-Partnership

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