

# Untapped Potential of Computational Material Science In Kenya

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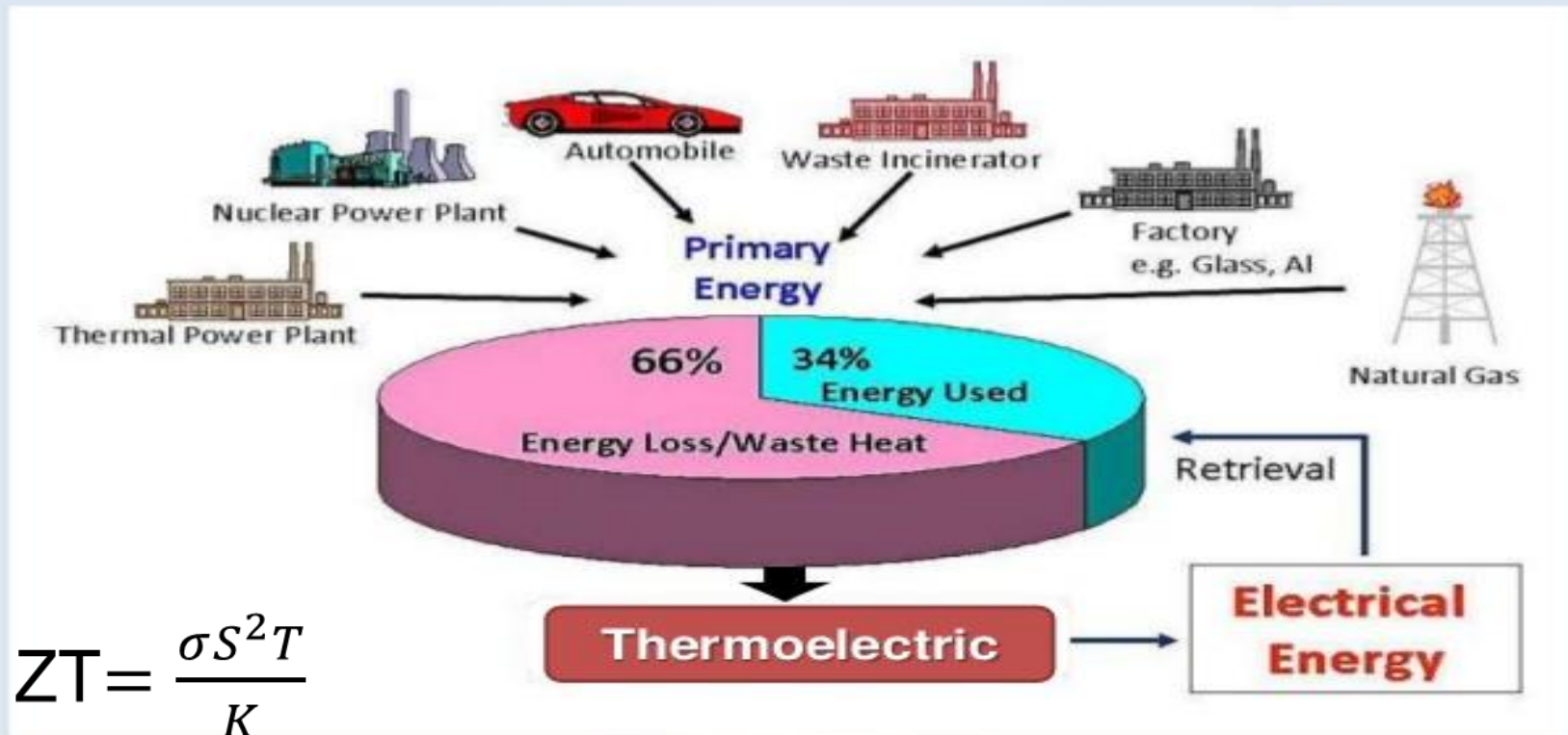
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# Harvesting solar energy



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# Waste Heat to Electricity



# Computational Infrastructure

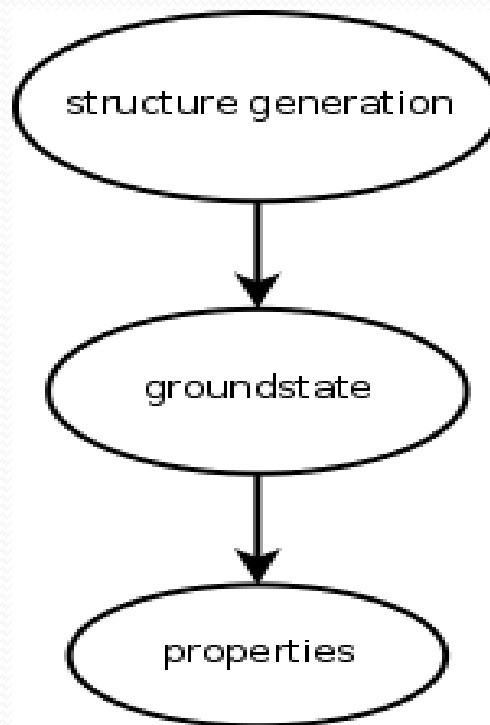
## 1. Hardware

- Running simulation
- Storage of data

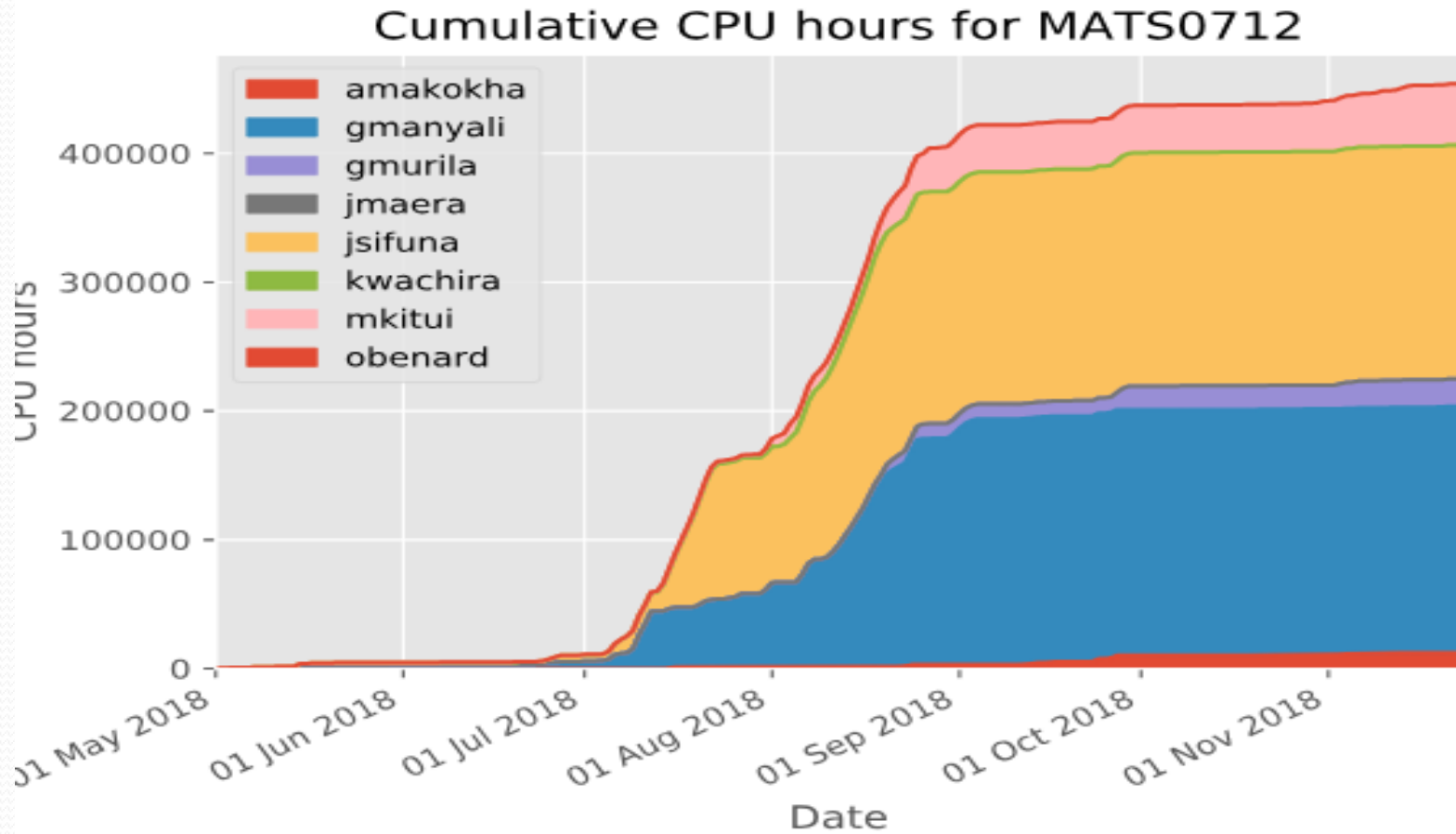
## 2. Softwares

- Codes for DFT calculations
- Quantum ESPRESSO, VASP, GPAW, Yambo, CASTEP

# Sample DFT calculation

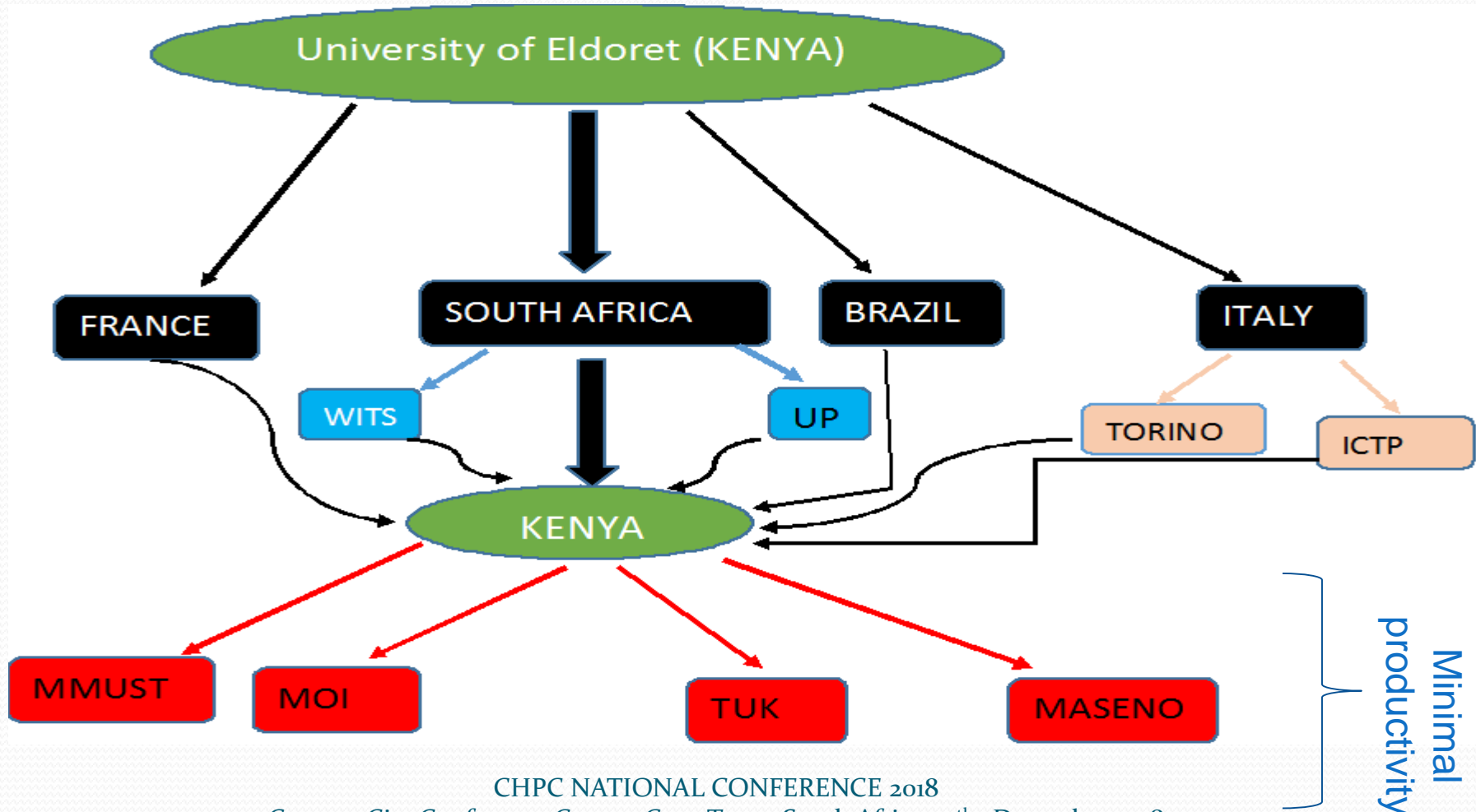


# CHPC resources

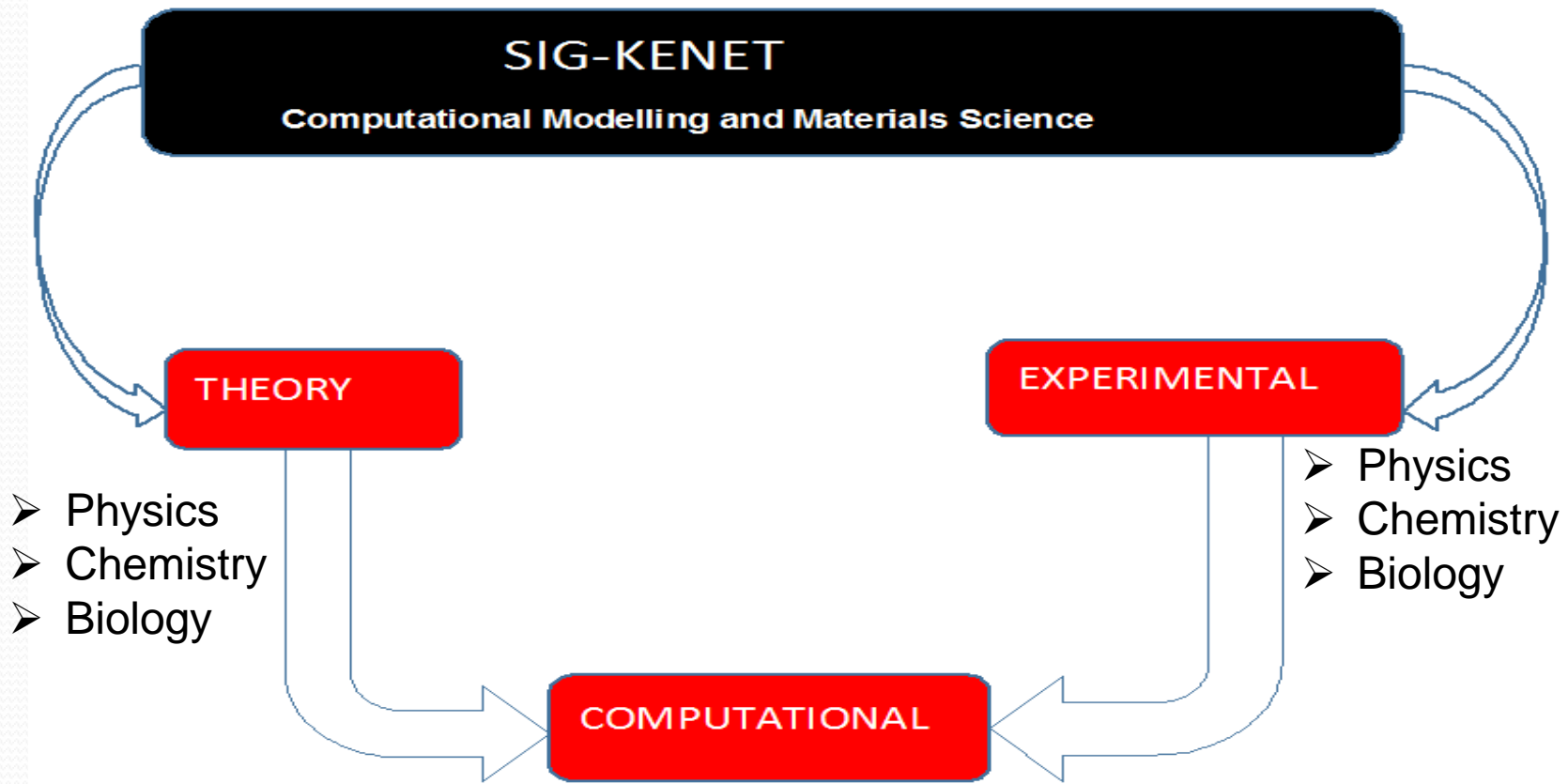




# Growth of Material Science Groups In Kenya



# Assembling scientific communities



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# One more challenge...



# Gap between academia & industry



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# Collaborations 2018-2020

- Elastic and thermal properties of thin films by surface Brillouin scattering.
- Thermoelectric properties of  $\text{SrIrO}_3/\text{SrTiO}_3$  perovskite superlattices
- Institutions  
MMUST- Kenya  
WITS- South Africa
- Institutions  
MMUST- Kenya  
TUK-Kenya  
Cantabria-Spain

# Acknowledgement



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Thank you very much for your kind  
attention