**Sustainability Guidelines, Frameworks, Methods, Models, Metrics, Prototypes**

## Guidelines / Concepts/ Best practices

s. argawal best practices etc.?

aspects mentioned by Nauman?

## Frameworks / Methods / Models

* Generic reference model for sustainability goals (with 5 dimensions) ??  
  (Penzenstadler?)

Models with focus on Software Development Lifecycle (see lund paper)

* Argarwal et al -> (model?) -> no: ENHANCE existing model with BEST practices
* Shenoy / Eretta -> ???
* Betz / Caporale model
* **GREENSOFT** – reference model for green software engineering
* Mahmoud / Ahmad -> build on GREENSOFT – enhance with two-level model -> read again & check what can be combined here?!

(?)

* Carbon Footprint calculation (impacts of software and its engineering … Dick, Naumann, 14/15) 🡪 method for process calculation, can be enhanced -> to be used WITH secomo IN GREENSOFT ☺

Sustainable PROGRAMMING – best practices and even languages

* ECO -> Zhu, et al (2015) -> “energy-aware programming”
* Whitepaper by ibm, mentioned in greensoft?!

## Metrics / Measures

* Albertao (?)
  + “Albertao measures sustainability performance of a software project according to standard quality properties” (what does SUST mean IN and FOR … penzenstadler)
* Capra et al (2012) -> general: how much energy consumed?
* Johann et al. (2012) -> “useful work done”
* Noureddine (2012?) -> framework to MONITOR energy consumption!

## Prototypes or others

* GreenTracker (Amsel etc.)