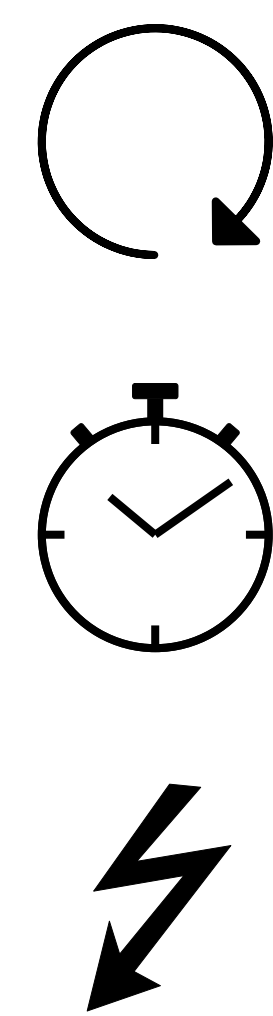
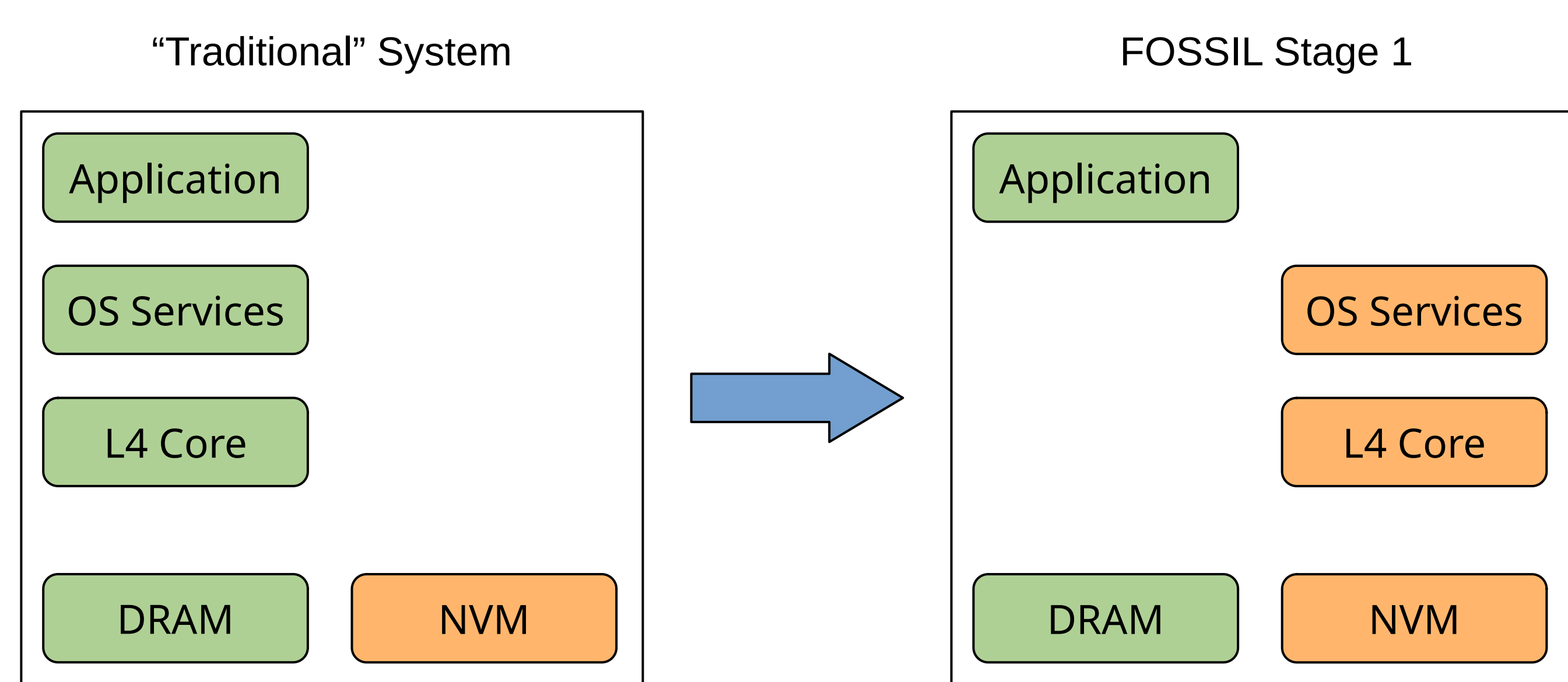
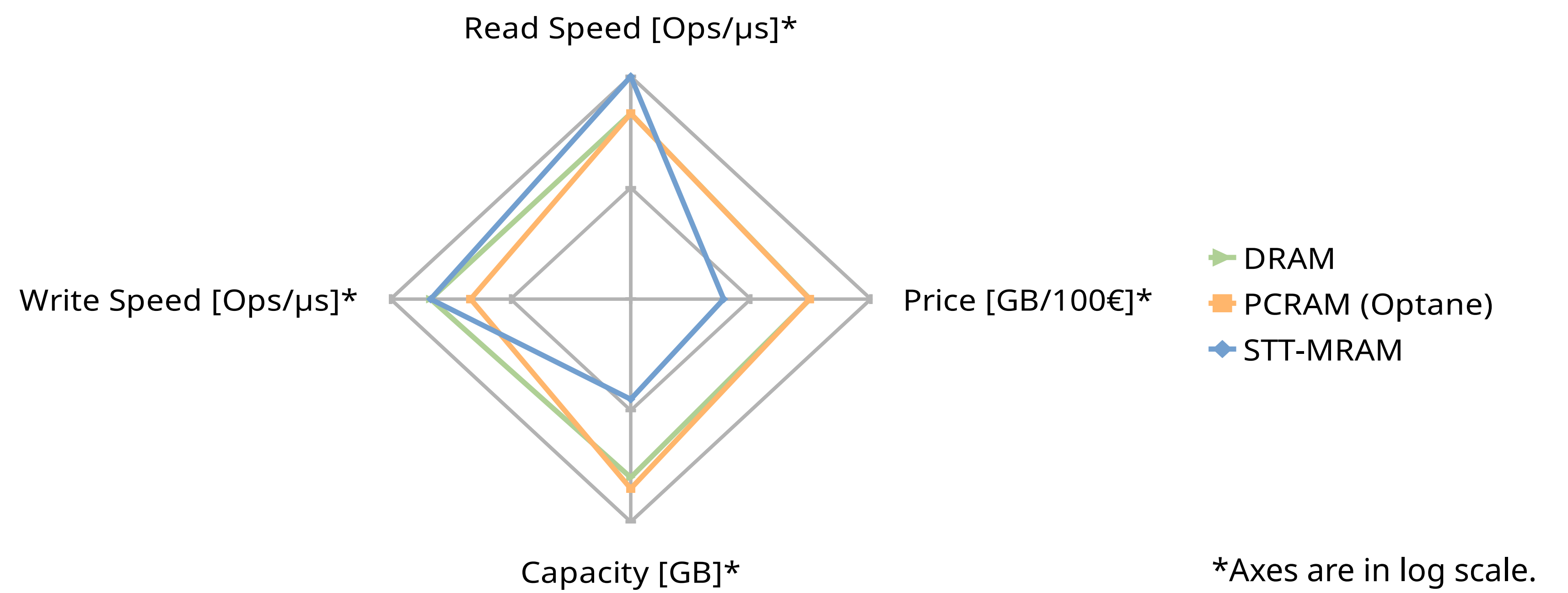


FOSSIL: Operating System Support to Leverage Byte Granular Non-Volatile Memory Technologies

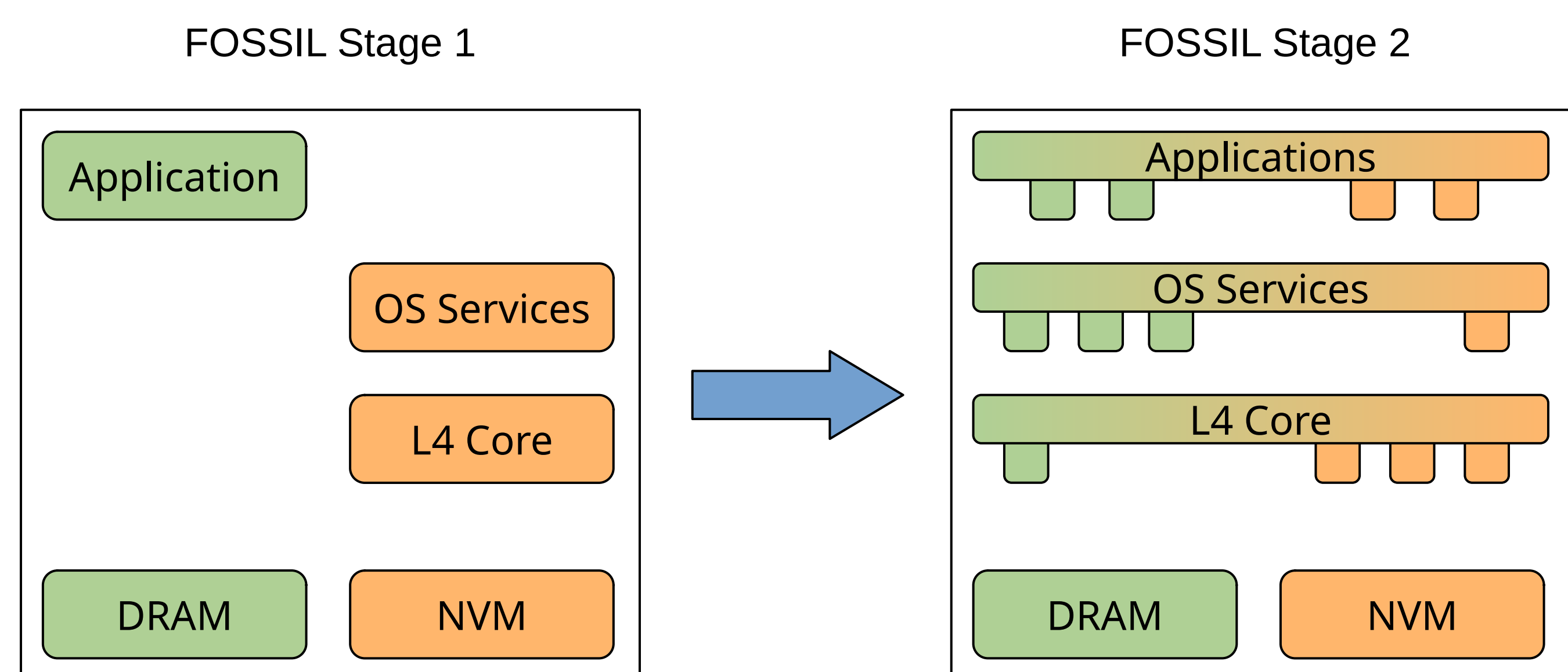
Till Miemietz, Michael Roitzsch, and Hermann Härtig

- We will face systems with heterogeneous memory
- Technologies differ a lot in key parameters
- NVM is way more than Optane!
- How to enable OSes to benefit from NVM properties?



- Stage 1: An L4 microkernel OS on NVM
 - Recovery time
 - Application Performance
 - Energy Efficiency
- Evaluate performance of NVM types and frameworks

- Stage 2: Detailed studies of data placement
 - Which memory objects should go where?
 - How to make this decision transparent?
- Constant monitoring of metrics from stage 1
- Adapt OS primitives to heterogeneous memory



- Finally: Find guidelines for building (microkernel) OSes on NVM
 - What properties does NVM need to have in order to be viable for deployment in real systems?
 - What can an NVM-aware (microkernel-based) OS look like?
 - How to design new and adapt existing interfaces to make applications interact smoothly with OS abstractions?

