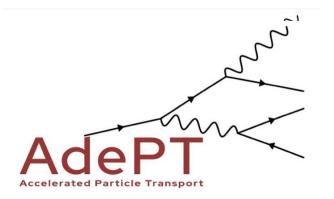# **Wrap Up**

Ben Morgan (for the AdePT and Celeritas Teams)

Co-Working

- AdePT/Celeritas already sharing code, methods, discussion
- **From start of projects, have had regular monthly catch ups**
  - ***Presentation of results, technical discussions etc***
- Also presentations/working meetings through Geant4 R&D Task Force and at Geant4 Collaboration Meetings
- As AdePT and Celeritas have shown, all code open source/development on GitHub with PR process and CI testing
  - *Both have fed back into development/use of VecGeom and Geant4 (e.g. VecGeom improvements, G4HepEM).*
  - *Alongside all of the detailed validation and benchmarking work reported in this meeting and ongoing*

Plan for Consolidation

- **At highest level**, common front end (Geant4 `G4VTrackingManager`, `G4VFastSimulationModel`) to offload to Celeritas/AdePT via runtime choice.
  - ***Single point of contact/configuration*** *for exploration by experiments*
  - *Also allows development of common "Apples to Apples" problems for validating/benchmarking of AdePT and Celeritas.*
- **At intermediate level**, identify common/divergent interfaces for CPU/GPU simulation workflows (e.g. Scoring, Geometry/Navigation, Physics).
  - *Common: same approach as above*
  - *Divergent: understand why, find "best"*
  - *Balance reducing code/interface duplication against need to still have freedom to explore different implementations (e.g. VecGeom/ORANGE surface models)*
- **At lowest level**, identify common infrastructure such as device management, data structures and gradually share/reuse.