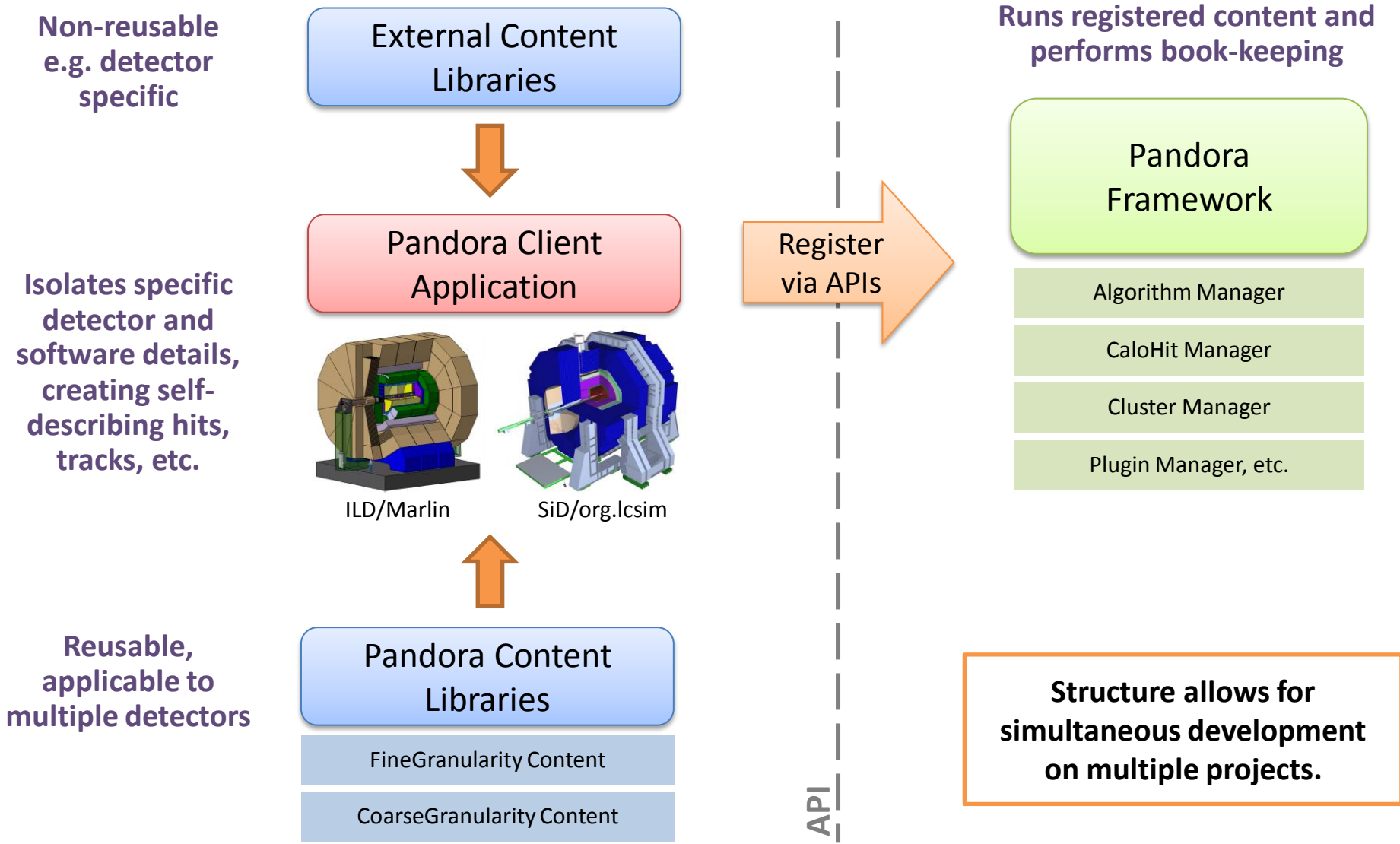


PandoraPFA Development

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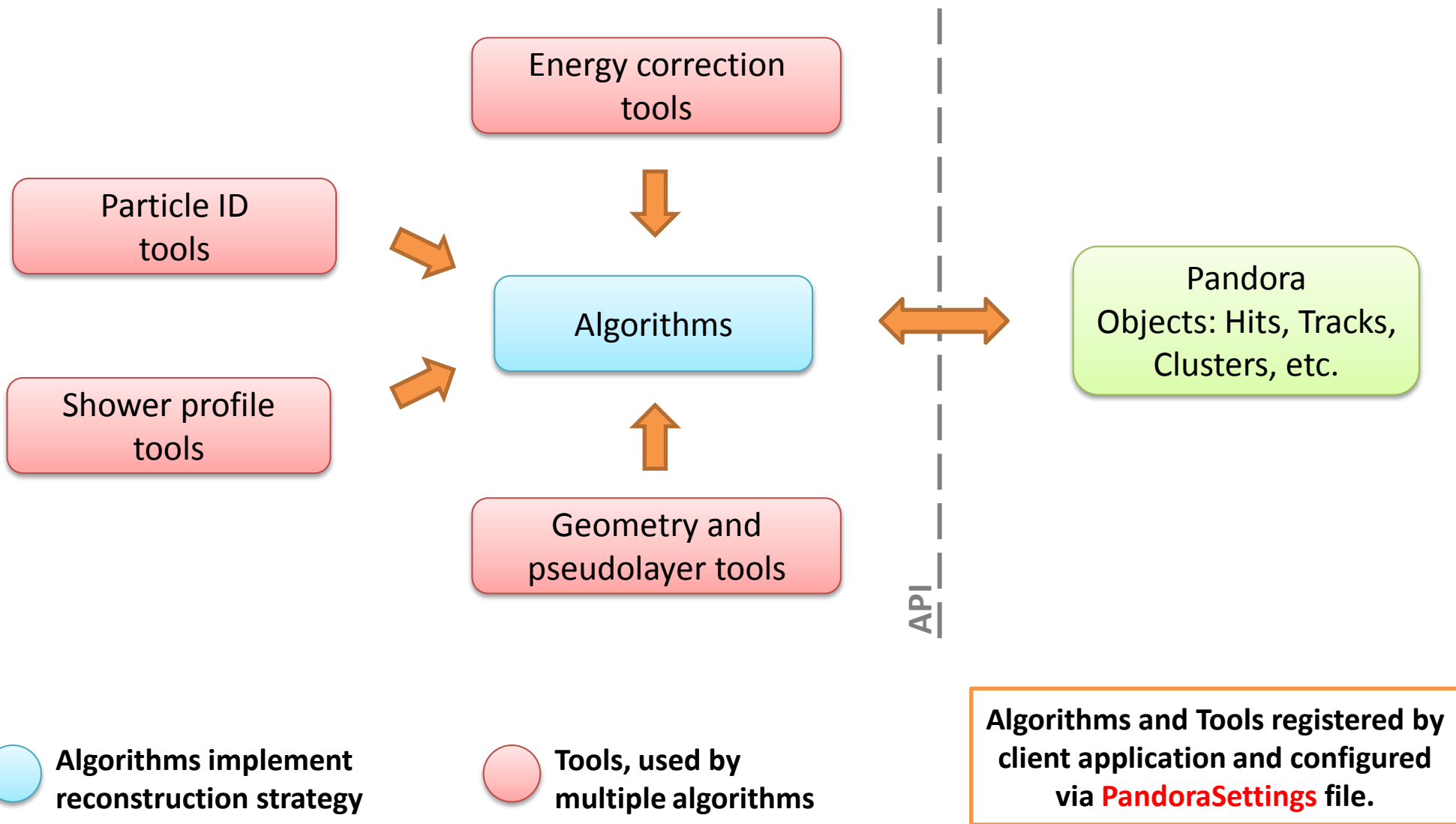


Pandora Framework



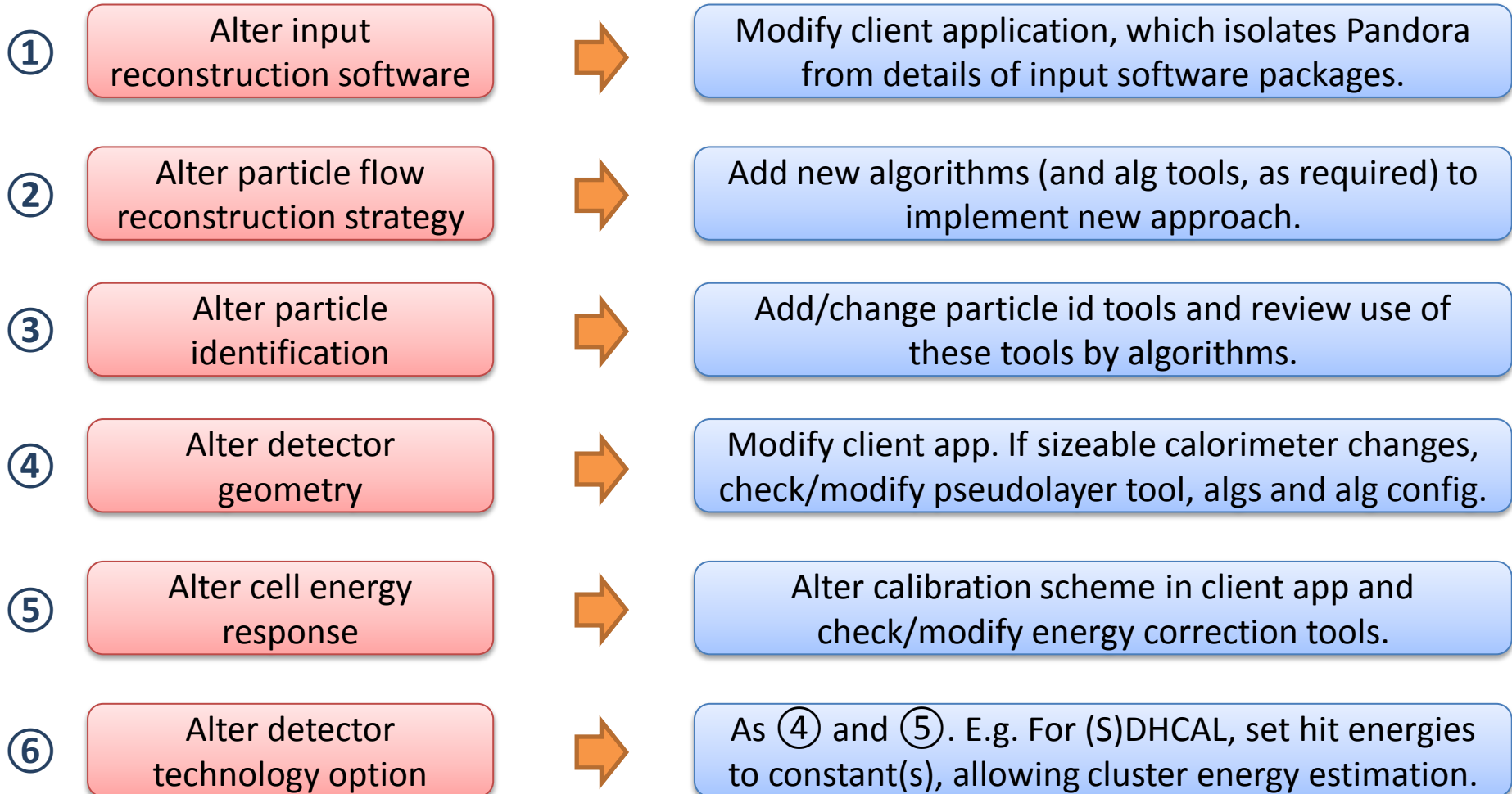


Pandora Development





Required changes when ...





Development Procedure



- **Need to consider proposed change and identify whether modifications to PFA and/or particle identification are necessary. If still in doubt about required modifications, contact authors.**
- **If there is proposed change to the detector, require simulated events, with reconstructed inner detector tracks and digitized calorimeter hits. These (almost certainly) need to be available before starting to develop with Pandora.**
- **If proposed changes are for new algorithms or algorithm tools (e.g. particle id), can immediately start to develop alongside Pandora framework. Good idea to contact authors for advice about how the new content will interact with existing algorithms and tools.**
- **Once development is (nominally) complete, validation procedures typically use single particle samples (initial tests or particle id validation), or Zs decaying at rest into light quarks (jet energy validation). The **PandoraAnalysis** package can prove useful at this stage.**



Example: ILD Tracking



- As we have heard, ILD tracking software has changed recently. Pandora client application for ILD (MarlinPandora) must be updated to address this.
- Application must pass reconstructed track properties and track states to Pandora. It must also identify track-track associations and perform track-quality checks:
 - Tracks must be tagged as “able to form a PFO” and/or “able to form a clusterless PFO”.
 - Requires detailed knowledge of reconstruction quality, issues and pathologies.
 - Hope to be able to identify split or fake tracks, etc.
 - There will be important differences compared to previous software.

