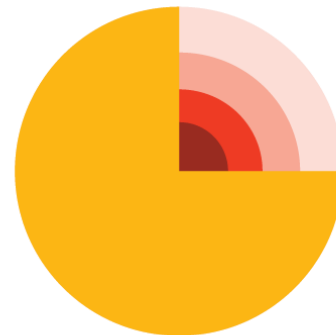


WP2 telco

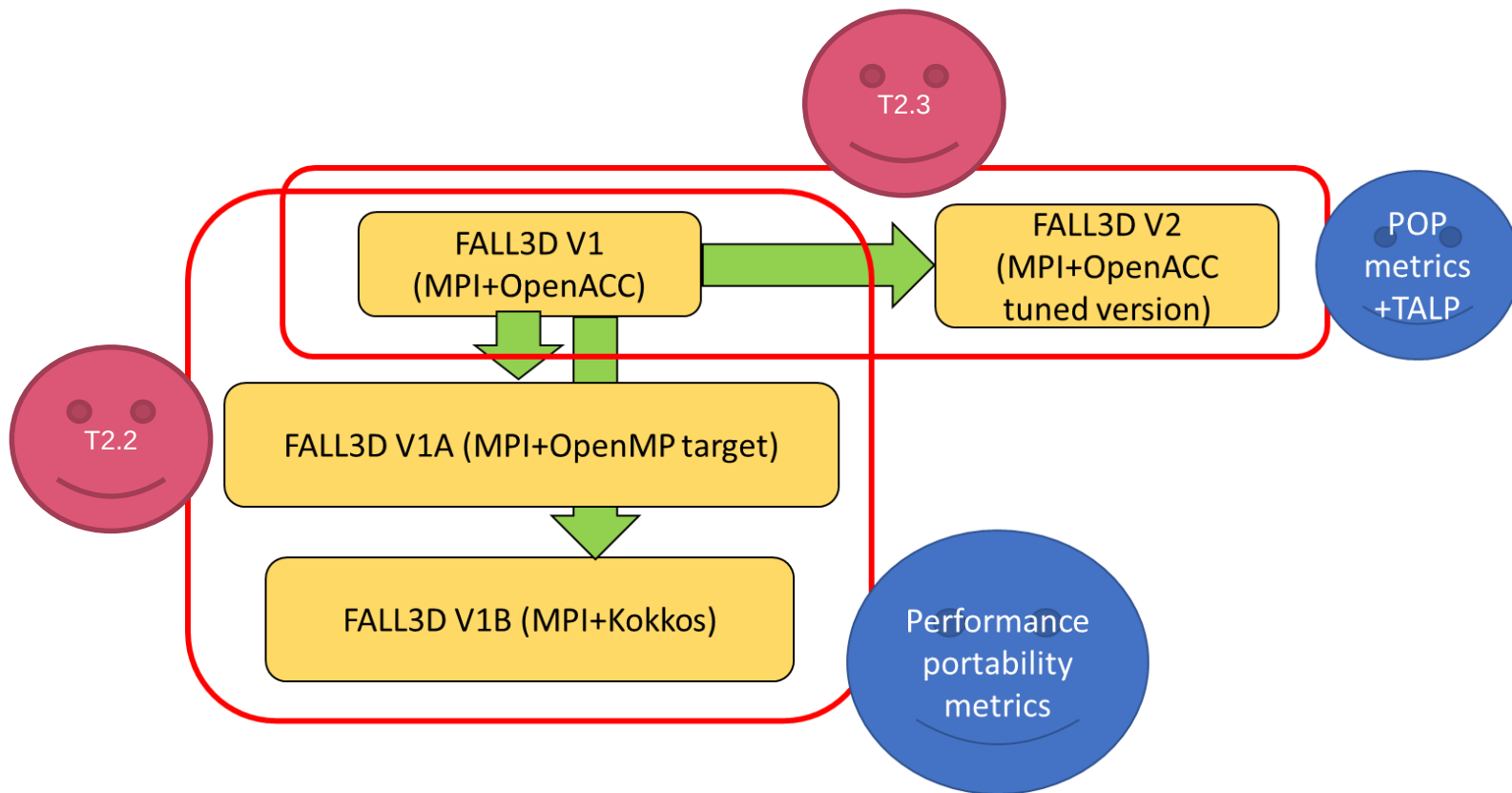
30/05/2023



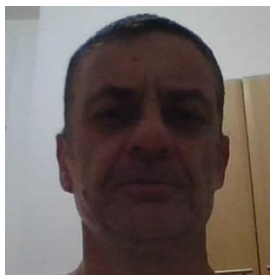
ChEESE-2P



WP2 Big Picture (revived)



Working plan: the CINECA WP2 team



Piero Lanucara



Giorgio Amati



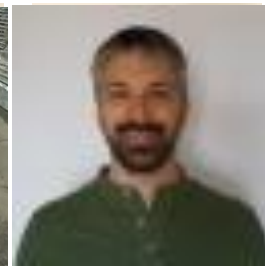
Luca Ferraro



Alessandro
Masini



Michael Redenti Fabio Di Sante



Nitin Shukla

- Transversal expertise suitable to WP2. In particular:
 - T2.2, T2.3 tasks and WP2 leadership
 - Algorithmic improvements (T2.3)
 - Fortran, C, C++
 - MPI, OpenMP
 - Acceleration support: CUDA, HIP, OpenACC, OpenMP target, SYCL, GPU libraries among the others...



Working plan: the extended team



- Extended team for driving development and overall WP2 activity.
Composed by:
 - CINECA researchers
 - Main partner (as in [CODES - cheese2](#) link)
 - Other partners
- The key idea is that CINECA will drive the development in WP2 (differently from ChEESE1). Two CINECA persons in the loop
- 1 key person driving the development from a pure language perspective (e.g. C, C++., Fortran expert)
- 1 key person driving the development process together with the main partner
- Finalised CINECA list. Available at: [CINECA WP2 support - File - SACO - Servicio de Almacenamiento Compartido de la Organización \(csic.es\)](#)
- **Please, signal me any issue within the end of May**



CINECA support to Code audit (Tbd)

- Initial assignment for code audit at [WP2.1 - File - SACO - Servicio de Almacenamiento Compartido de la Organización \(csic.es\)](#)
- As many codes choosed Leonardo, some effort from CINECA team can be envisaged.
- We recommend code owners to take CINECA team in the loop, at least for any code targeted to Leonardo (see previous slide for a more detailed list)
 - **T2.1 management: please, concretize this support before the T2.1 starting activity (soon)**
 - **CINECA management: please, explore the chance to have an initial budget for development, testing on Leonardo machine (soon)**



Mini-apps for Code audit (Tbd)

- Can mini-apps be used for code-audit? (yes/no)
- Two basic considerations should drive this choice:
 - Are the performance and parallelisation characteristics of the mini-app sufficiently similar to the full app? What do we learn about the full app by analysing the mini-app behavior?
 - In the end, we have to convince the reviewers that the performance and scalability of the full app has improved.

T2.1 management: please, finalise this discussion before the T2.1 starting activity (very soon)



Dissemination in WP2 (Tbd)

- Mainly part of T2.2
- Internal (to CINECA) and external (the rest of WP2 team) support activity
- Vertical (devoted to a specific code or set of codes features)
- Transversal (including parallelization layers, performance portability tools, language features...)
- Mostly CINECA driven (with remarkable exception for some specific topics)
- Part of a specific workplan and/or transversal to more than one flagship code (e.g. linear algebra libraries...)
- **T2.2 management: please, finalise a draft calendar devoted to vertical and transversal dissemination activities**



Working plan: FALL3D

- The "FALL3D extended team" produced a (final) draft of the expected working plan for FALL3D (to be used as a template for the rest of flagship codes)
- Available for sharing and commenting at: [FALL3D WP20230530.docx \(live.com\)](https://www.fall3d.org/wp20230530.docx)
- Some preliminary comment from WP2 lead
 - **Nice structure. It contains all the relevant informations**
 - **The T2.2 part could be detailed and enriched (this task is driven by CINECA so this is mainly a recommendation to CINECA team only)**
 - **From a pragmatic point of view, try to focus on tools and techniques in T2.2 that can be used by many codes**
 - **Keep align the contents with milestones and deliverables (overall)**
 - **remember that this is a "live document"; it can be modified during the project lifetime**



Report of WP2 activities (template)

No.	Code	Notes	Lead
1	SeisSol		LMU
2	SPECFEM3D		CNRS
3	ExaHyPE		TUM
4	Tandem		LMU
5	xSHELLS		CNRS
6	HySEA		UMA
7	FALL3D		CSIC
8	OpenPDAC		INGV
9	LaMEM		UM
10	pTatin3D		SU
11	ELMER/ICE		CSC



Wrap-up and & Next Action items

The first WP2 targets are:

- ➡ ☐ Deliverable 2.1 (M12): First code audit report
- ☐ Milestone MS5 (M36): exascale code preparation

Action items (from the today's discussion)

- ☐ T2.1
 - ☐ Main urgent actions
 - ☐ ...
 - ☐ ...



Wrap-up and & Next Action items

The first WP2 targets are:

- ➡ ☐ Deliverable 2.1 (M12): First code audit report
- ☐ Milestone MS5 (M36): exascale code preparation

Action items (from the today's discussion)

- ☐ T2.2 & T2.3
 - ☐ Main urgent actions
 - ☐ ...
 - ☐ ...

