# Looking forward to HL-LHC: experiments views

## ALICE

- Operates according to the new model designed for Run3 and Run4
- The computing model favors local data access - further storage consolidation is welcome

## ATLAS

- Several operational changes ongoing. Conservative & aggressive R&D activities towards HL-LHC. TDR by 2024
- successfully runs on a diverse set of resources. Engaging with industrial partners on R&D projects, enhancing opportunistic resource usages

## CMS

- Run 3 is in many ways a testbed for HL-LHC, maximizing the physics reach
- Aware of the use of network: Improving monitoring is a priority!
- CMS has been working with slim data formats for analysis for several years
- Efficient use of HPCs is expanding: goal to have this be transparent to central operations

## LHCb

- 30x increase in throughput from the upgraded detector: a big challenge in data handling & network & resources
- Progress in using HPCs. DIRAC developments to support HPCs.
- Analysis Facilities: bottom-up approach, collecting use cases towards a more structured activity



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**DPM EoL** affecting some sites: transition periods might affect availability of resources. Direction and supervision is needed

**Data Challenges** are useful for the experiments and sites. Important to re-evaluate the (next) targets soon

WLCG **tokens transition** timeline v1.0 agreed. Work in progress. No major problems expected here

**Analysis Facilities** are new elements in the system that can provide specialised hardware/software (GPUs, ML tools)

- Modern analysis approaches, e.g. declarative, Pythonic, HEP specific and from the data science community. Interactive
- Reduced data formats are a must

More **HPCs** could be integrated if minimum requirements are met, though HPCs differ considerably

- Can we rely on such resources for pledging?

**OS evolution:** plan from GDB, endorsed by the WLCG MB. It might need to be revised?

Rising **electricity costs**, increasing **HW costs** and **delivery issues** everywhere

- It clearly affects our extrapolation model for future resources
- Sites may need to reduce power consumption: preferences from the experiments - mitigation plans set up

Exploiting **non-x86** architectures coming: GPU, ARM, …

Broad consensus that we should accept **HEPscore** and use it for WLCG pledges