

WLCG Resources – Process & update

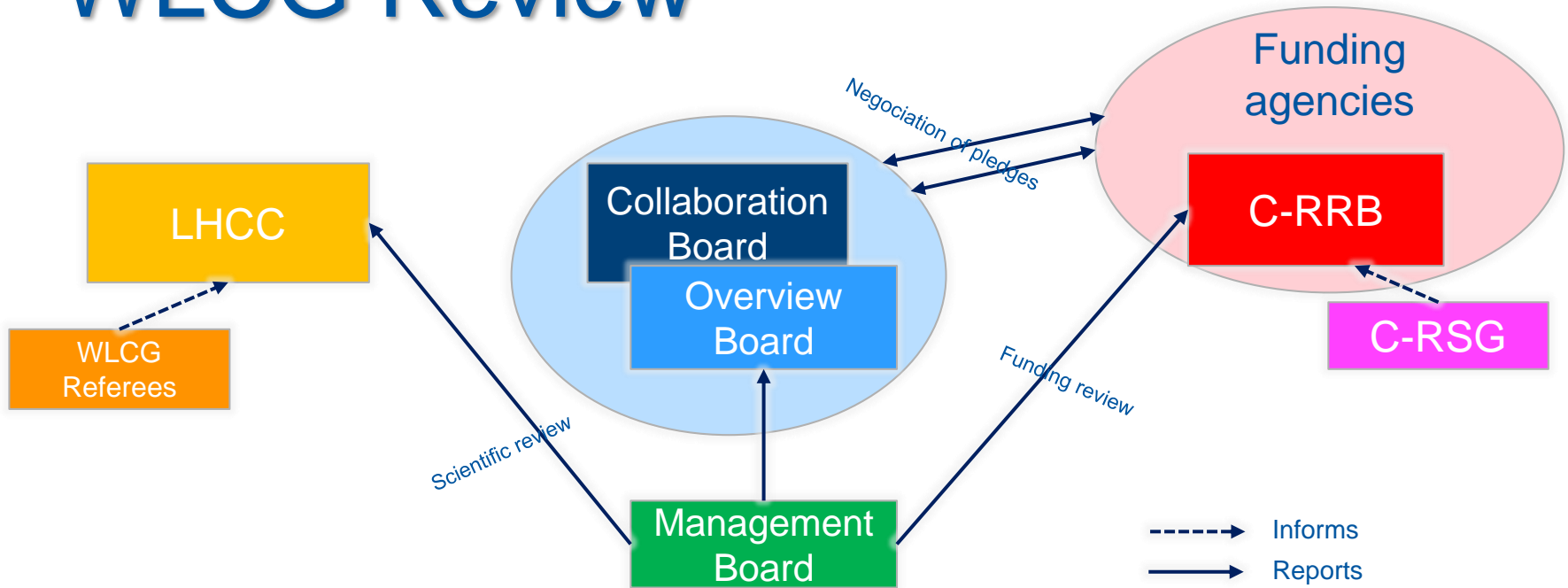
Ian Bird

LHCC Referees' meeting

CERN, 9th May 2017



WLCG Review



Roles of LHCC and C-RSG (MoU)

Concerning all technical matters, the WLCG Collaboration shall be subject to review by the **Large Hadron Collider experiments Committee (LHCC)**, which makes recommendations to the **Research Board (RB)**.

3. Concerning all resource and legal matters, the WLCG Collaboration shall be subject to the **Computing Resource Review Board (C-RRB)**. The C-RRB is chaired by CERN's Chief Scientific Officer. The C-RRB membership comprises a representative of each Funding Agency, with voting rights, and (ex-officio) members of the WLCG Management and CERN Management, without voting rights.

The C-RRB shall approve annually, at its autumn meeting, on the advice of an independent, impartial and expert review body - the Resources Scrutiny Group ("RSG"), which shall operate according to the procedures set out in Annex 9, the overall refereed resource requests of each LHC Experiment for the following year. At the same meeting it shall take note of the Computing Resource Levels pledged for the same year to each Experiment by the Institutions. If it emerges that the pledged Computing Resource Levels are inadequate to satisfy the refereed requests of one or more Experiment, the C-RRB shall seek further contributions of Computing Resource Levels. Should **a shortfall persist, the C-RRB shall refer the matter to the LHCC, which may require a scaling down and/or prioritisation of requests** in order to fit the available Computing Resource Levels.

In doing so [the C-RSG] shall interact as necessary with the Experiments and in particular with representatives who are knowledgeable about their Experiment's computing models/needs. It shall also examine the match between the refereed requests and the pledges of Computing Resource Levels from the Institutions, and shall make recommendations concerning any apparent under-funding for the coming years. It is not the task of the RSG to negotiate Computing Resource Levels with the Institutions.

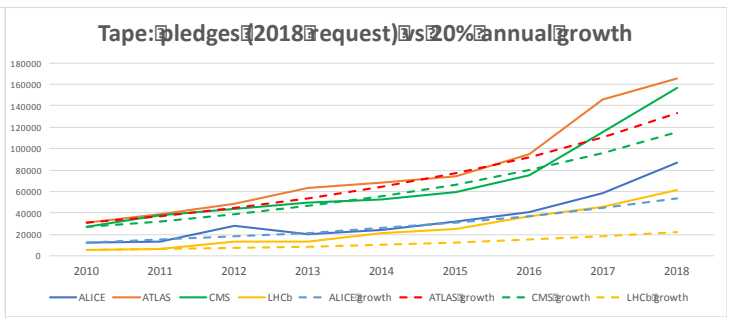
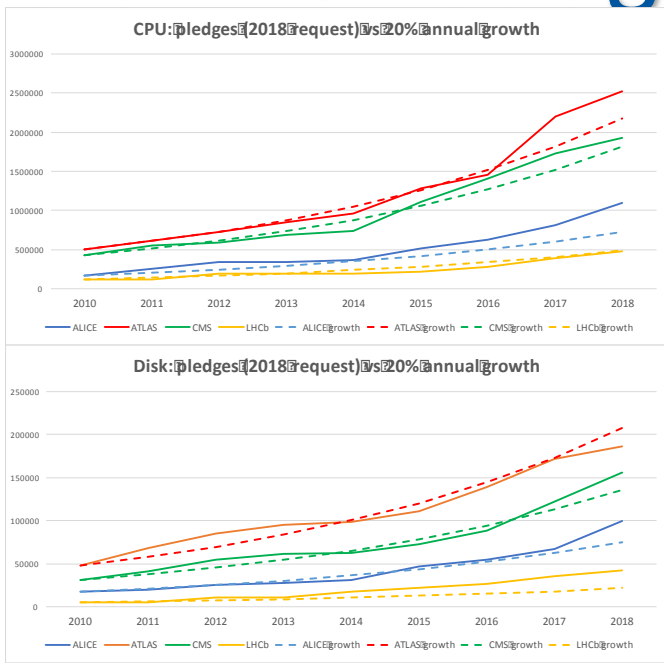
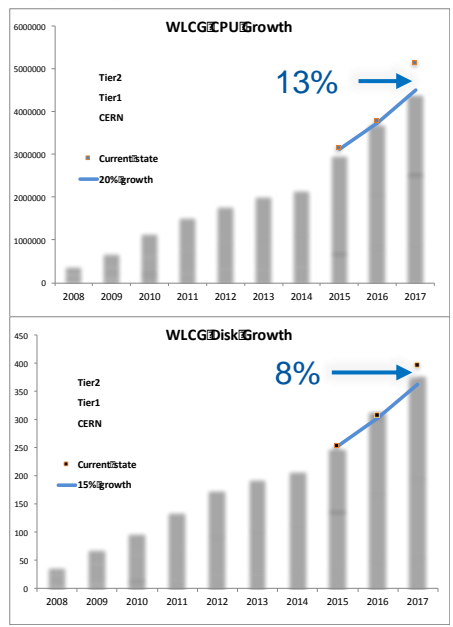


Resource pledging process

NB. This is modified (by RRB) wrt the MoU ideas

- In year n:
 - C-RSG review in Spring to confirm requests for year n+1
 - Needed as procurements at this scale take ~1 year
 - C-RSG review in Autumn – 1st look at requests for year n+2
 - Often also "adjustments" requested for year n+1
 - But this is too late to affect (most) procurements
 - Also FA's confirm pledges for year n+1
- Initially had a 3-5 year outlook, but this is impractical:
 - Requests difficult to foresee that far ahead (LHC conditions, schedule, etc. – usually not confirmed until Chamonix of the running year)
 - Budgets mostly not known on that timescale: FA's do not discuss budget outlook
- For Run 2; in 2013 we made an outlook for 2015, 2016, 2017

Comments on flat budgets



Extrapolations from 2010:

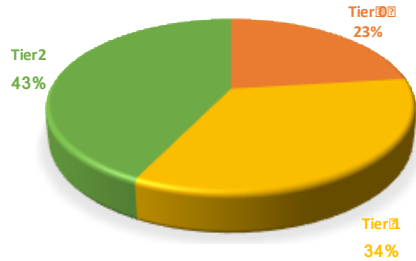
- Ignore no investment in 2013,14
- Deviations from “flat budget” are generally not enormous, and are corrected
- Jump in 2017 – LHC performance
- Tape needs still increase

- We need to clarify what is meant by flat budgets:
 - We assume: **constant budget/investment even in long shutdown years**
 - This did not happen in LS1

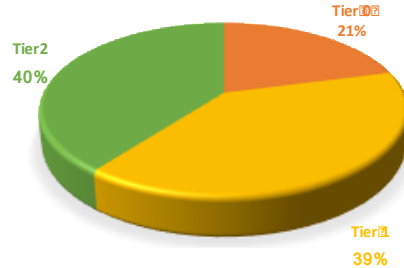


Pledged resources 2017

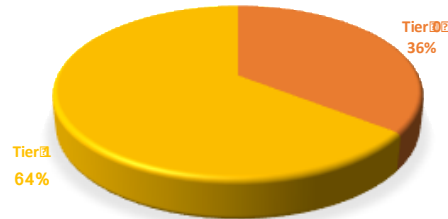
CPU (HS06)



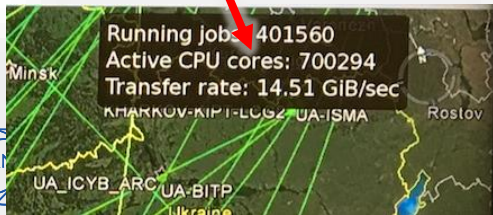
DISK (PB)



TAPE (PB)

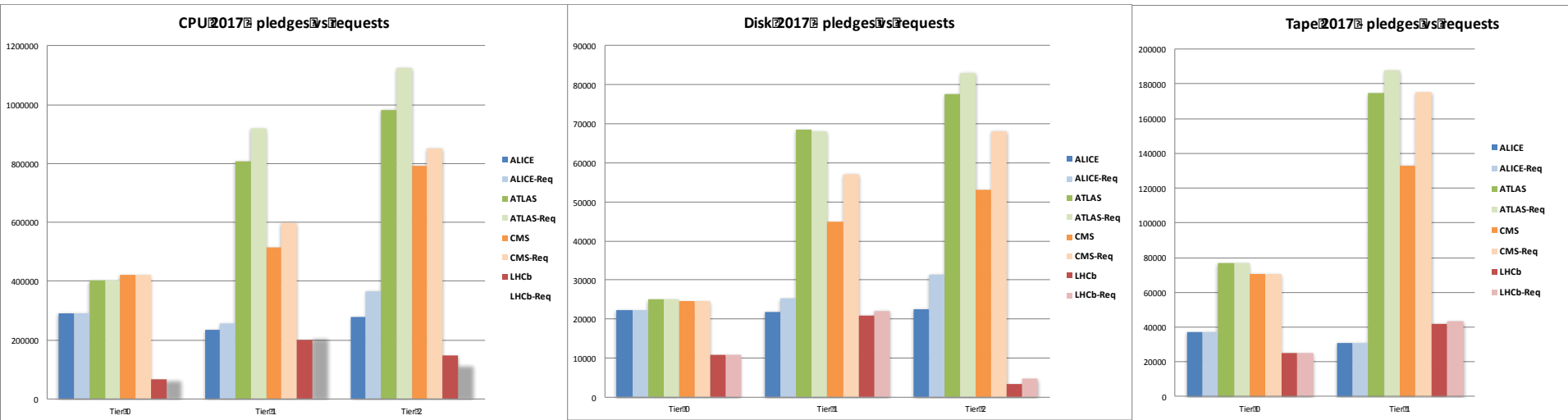


- 5.2 M HS06
 - >500 K cores (if bought today)
 - Actually many more



- 985 PB Storage
 - 395 PB disk
 - 590 PB tape

2017 Pledge situation



Not all is deployed yet for 2017 – a few delays
Full resources expected by June