Ian Bird

WLCG Management Board

CERN, 17th February 2015

Planning for the future

Topics

- ❑ Follow up on requests about upgrade costs for Council

- ❑ WLCG planning for HL-LHC

- ❑ Further future – FCC etc

1) LHC Upgrades and computing

❑ CERN Council asked for better understanding of costs for detector upgrades and computing

❑ At December Council it was agreed that HL-LHC should make a proposal to be part of the ESFRI roadmap

  ▪ ESFRI==European Strategy Forum for Research Infrastructures

    • E.g. ELIXIR, ESS, XFEL, CLARIN, CTA, SKA, …

  ▪ Implies recognition as a major research infrastructure and opens way to significant EC funding lines

  ▪ Computing (E-NEEDS) are a part of the overall project

❑ The proposal to ESFRI is being written now, including section on computing ➔

WLCG

YEARS/ANS CERN

Computing part of the proposal

- ❑ E-NEEDS: (computing part)
  - ▪ What will be the data management and open data policy of the RI? (Would data become accessible from a repository to the public? Would the RI be interfaces to e-infrastructures for science?)
  - ▪ What is the plan for supporting advanced data management and how will it be funded?
  - ▪ What is needed (if applicable) from external e-infrastructure services (resources for storage, computing, networking, tools for data management, security, access, remote analysis etc.)?
  - ▪ Will the RI contribute to the development of e-infrastructure commons in the field or in general?
  - ▪ Will the RI policy on data include training services for "data practitioners" to enable the effective use of data repositories and data analysis tools by non-scientists?
- ❑ Other: (relevant for the entire project)
  - ▪ What will be the access policy of the RI …… access to data etc?
  - ▪ What are the linkages with existing platforms, and networks, …
  - ▪ What is the expected contribution of the RI to address H2020 societal challenges?
    - • Computing can surely contribute here…
- ☞ Your input welcome!
  - ▪ Each bullet point is max 2-3000 characters!

2) Planning towards HL-LHC

❑ In addition we need to start to develop the computing models for evolving towards HL-LHC so that we can (eventually) make some statements about costs

❑ Need to agree common working baseline expectations and performances

❑ Probably need to provoke some difficult discussions

- Do today's models scale to HL-LHC? Suspect not.
- Distinction between "online" and "offline"?
- Physics performance vs costs of computing?
- Etc.

HL-LHC

❏ Intend to use WLCG workshop at CHEP to start some discussions and perhaps organise working groups or task forces to start to work on this

❏ Have as input the work that was done for the ECFA workshops

❏ Needs strong input from the experiments

❏ We need to understand what the role of WLCG will be in this

❏ Failing to develop commonalities will lead to too high costs

  ▪ LHCC, Funding agencies, & etc. are following this and asking hard questions now

☛ Input and suggestions on how to organise this very welcome!

3) Longer term

- ❑ Have been asked to attend FCC meeting in Washington
  - ▪ To talk about computing costs for FCC ☺
  - ▪ FCC: >2035
- ❑ Better to address what the process is for evolving today's global infrastructure to something that will be available on that timescale
  - ▪ Bearing in mind we have possibly many international or global HEP challenges: Neutrino facility, ILC, CLIC, FCC and others as well as large experiments such as Belle-II that ask to use "WLCG"
  - ▪ And not forgetting the possible commonalities with related projects (SKA, LSST, CTA, etc) where facilities may be heavily shared
- ❑ How should WLCG position itself to help build a common global infrastructure that evolves through these coming facilities?

HEP Timescale