

We will be having our regular bi-weekly Infrastructure WG telecon on Monday, October 26, at 12 Noon CT.

## Agenda

- cost sheet change control process / workflow
  - ◆ <http://dev.lsstcorp.org/trac/attachment/wiki/InfrastructureWG/CostSheetChangeControlDiagram.pdf>
  - ◆ main takeaway 1: all cost sheet changes will be managed via tickets
  - ◆ main takeaway 2: this process will ensure that related documents remain in-sync
  - ◆ we will be using a more secure ticket system for cost sheet tickets (not trac)
    - ◇ downside: institution memory of the history of a discussion, admin responsibility for maintaining security, backups, etc.
  
- mapping document
  - ◆ <https://www.lsstcorp.org/docushare/dsweb/Get/Document-8188/WBSCostMappingDiagram.pdf>
  - ◆ shows how the WBS/MREFC elements relate to the cost sheet elements
  
- new cost summary with baseline sheet
  - ◆ <https://www.lsstcorp.org/docushare/dsweb/Get/Document-8189/CostSummaryWithBaseline-v62.xls>
  - ◆ motivation: see how the costs change over time as revisions are made to the cost sheet
  - ◆ main takeaway 1: meaning of cells C3, D3 and row 3 going rightward define "overbudget", "underbudget"
  - ◆ main takeaway 2: do not panic yet
    - ◇ Lease (floorspace) does not take into account the increase in drive sizes over time (will decr cost)
    - ◇ Lease (floorspace) does not include med stor db (will incr cost)
    - ◇ 3yr step for drives (will decr cost)
    - ◇ full review (described next)
    - ◇ etc...
  
- updated cost sheet
  - ◆ <https://www.lsstcorp.org/docushare/dsweb/Get/Document-6284/Infrastructure-Costs-v62.xls>
  - ◆ major updates include:
    1. Updated storage estimates to match doc-1779 file version v57 docushare version 60
    2. Updated Archive site AOS and CSS disk storage
    3. Updated the Base site med disk requirements
    4. Updated the DAC site med disk requirements
    5. Added in a separate line item for controllers with medium disk
    6. Account for Drive Size Increases Over Time
    7. Consistently apply 3-year replacement policy for storage
    8. Add rows showing the 10-year average cost over the survey years
    9. CommunityAccess tab: Update TF from 45 to 50
    10. ArchSite AOS Medium Storage: Combine file storage and database storage
    11. Set leasing costs at Base Site to Zero
    12. P&C missing for medium storage on ArchAOS, ArchCSS, BaseAOS, BaseCSS, DACCSS
    13. BaseSite CSS Medium Storage: Split storage into file-based and database-based
    14. Do not pay maintenance for medium storage that has been replaced
    15. Change floorspace cost at ArchSite from \$136/sf/yr to \$175/sf/yr
    16. Change Power Costs at ArchSite from \$0.05/kWh to \$0.075/kWh
    17. Change Power Costs at BaseSite from \$0.12/kWh to \$0.16/kWh

- next steps with cost sheet
  - ◆ full review each of the elements of the cost sheet (boxes of the mapping document)
    - ◇ more readable description of the formulas being used
    - ◇ identification and documentation of assumptions
    - ◇ identification and documentation of external data input
  - ◆ serves two significant purposes
    - ◇ allows for better internal reviews (validation of models and information used)
    - ◇ provides justifications for external reviews
  - ◆ results in an updated (or replacement of) Document-1684 and related documents ("Explanation of Cost Estimates")
- faintsources costs
  - ◆ summary of current estimates
  - ◆ more spindles?
  - ◆ CPU increases?
- storage model costs
  - ◆ i.e. the cost of going to min. # spindles for CSS database storage to meet performance requirements
  - ◆ summary of current estimates
  - ◆ large costs associated with this - need validation from group - error in sheet? revise model? change performance requirements?

## Notes

Attendees: JeffK, ChrisC, RayP, K-T, JacekB, GregoryDF, RonL, MikeF

- need to think through how to trigger a baseline update as the cost sheet gets revised (MikeF, JeffK)
  - ◆ change control, granularity mismatch, signoff, etc.
- update cost sheet to include all elements of the MREFC non-labor infrastructure costs (in order to eliminate "column C" of the cost sheet) (MikeF)
- change terminology in the cost sheet away from "Operations" (MikeF)
- think through the pros/cons of including the (MREFC) development cluster and the integration cluster in these sheets/this process (MikeF)
- MikeF will get direct access to Primavera
- get clarification and revise the faintsources/forcedsources cost estimate (MikeF, with input from Jacek/K-T)
- pushing the discussion on storage model costs (minimum spindle requirements) to the next meeting
- FDP review is Dec15-17