

# HabEx



# Lessons Learned

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- Good
  - We made the delivery
  - The exoplanet yield story is compelling
  - The observatory science is compelling
  - The STMs are almost complete
  - Established eta-Earth value consistent with LUVOIR
  - Requirements were traceable
  - Error budgets were completed
  - Technology roadmaps were completed
  - All but one technology expected to be at TRL 4 by the final report
  - Good telescope, starshade, coronagraph and pointing control designs
- Not so Good
  - Starshade almost broke over size
  - Did not settle how to observe binaries
  - Did not settle the need for polarimetry
  - Instrument computer-aided design (CAD) was weak
  - Some work deferred to public version
  - Could not include the cost/schedule
  - We did not complete margin tables
  - Need a DRM-based slew propellant estimate instead of the an allocation
  - Did not have a servicing story



- Need a report manager
- Need more help with writing, analyses and figure development
  - Too few were doing too much at the end leaving no one available for end-to-end consistency check
- Need to work the report outline and story early and with the whole STDT/Design Team
  - Should help with consistency and greater team involvement
- The report review forced delivery of 1<sup>st</sup> draft material
  - Too many authors ignored other deadlines
- Sam's writing rules were not followed by many authors – we need to do better
- We need more instrument CAD support
- We took 4.5 months to produce the report (non-ITAR)
- Cost did not move much from architecture estimates; technology risk improved
- The sharepoint site was not difficult to use
  
- Other lessons?