CASC Sustainability Workshop

Administrative Perspectives

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Strategic value of advanced computing

- Top universities pursue research & discoveries that advance knowledge across fields of inquiry
- Advanced computing is **fundamental** for research across domains of sci & eng, and becoming so for medicine, social sciences, and even humanities
- Powerful advanced computing capabilities provide:
  - scientific advantage for pursuing the most challenging problems
  - competitive advantage for attracting researchers who want to leverage that scientific advantage
  - discoveries, publications, profile/prestige
- In short, Advanced Computing is good, solid investment for Universities and is here to stay…)

Strategic value of advanced computing

- At UT, TACC has
  - Helped recruit top faculty in computational science and engineering
  - Supported >> $100M+/year of research at UT from scientists who use TACC resources *and* from TACC staff researchers
    - And much more from researchers across the US!
  - Increased UT's visibility worldwide among research communities using supercomputing
- Programmatic opportunities (e.g., the "soon-to-be" UT Medical School will integrate advanced computing & vis at outset)

Sustainability concerns

- TACC obtains federal funding for systems AND people to support US open science, but
  - When federal systems awards/funding come in, UT Austin has to fund infrastructure (e.g. data center), complementary systems (e.g. storage, network) and also has to pay for power & cooling
- The institutional investments have helped UT and TACC achieve leadership while supporting national open science community
  - but are increasingly expensive
- Moreover, UT must be able to maintain staffing levels after an externally funded national resource is decommissioned

- *In the long run, Universities will not be able to afford cost-sharing the Nation's goal/responsibility to sustain US leadership in computational science and engineering.*