# ATLAS Input to Rucio, FTS and Network

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# Key requirements and concerns

- Changes in workflows and effects of more / larger files (100GB and more?)
  - Better for Rucio/FTS scalability to have file size increase by order of magnitude than number of files
  - But brings greater reliance on network reliability (transfer timeouts, dropped packets)
  - More workflows in the future with larger (secondary) inputs, more data transfers
  - Unknown impact of new analysis paradigms and increased use of analysis facilities
- WAN access from jobs
  - At some point this was popular but has largely died off
  - Especially with more emphasis on managing the network we cannot have uncontrolled chaotic access across the WAN
- QoS awareness at all levels from funding to storage
  - Resource providers need to be able to quantify what they provide in their pledge
    - Changing pledge structure takes years
  - Breaking the disk/tape paradigm requires coordinated QoS knowledge in Rucio, FTS and storage
- FTS as a crucial service
  - Coordination between multiple FTS instances (within and between VOs)
  - Network awareness and scheduling: FTS is the obvious place to handle this
    - Requires the above point
- Human resources
  - Long term sustainability of FTS and Rucio
    - FTS needs to be seen and supported as a critical component of HL-LHC computing
    - Rucio also needs investment, particularly from outside ATLAS as the number of communities increases