

DAX Replan Status

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Large Synoptic Survey Telescope

DAX Replan: In Brief



- Starting point: a fairly detailed framework of JIRA epics based on LDM-240 (Becla)
- Updated with experience gained in construction to date in tandem with other T/CAMS as they elaborated their own requirements
- Add new WBS and work for middleware and frameworks (Supertask, log framework)
- 60 planning packages spanning S17-F20
- Top-down work estimates based on experience and judgement
- 28.5 FTE years of scheduled work
- \$9.45M cost - \$8.14M remaining budget = \$1.3M overrun

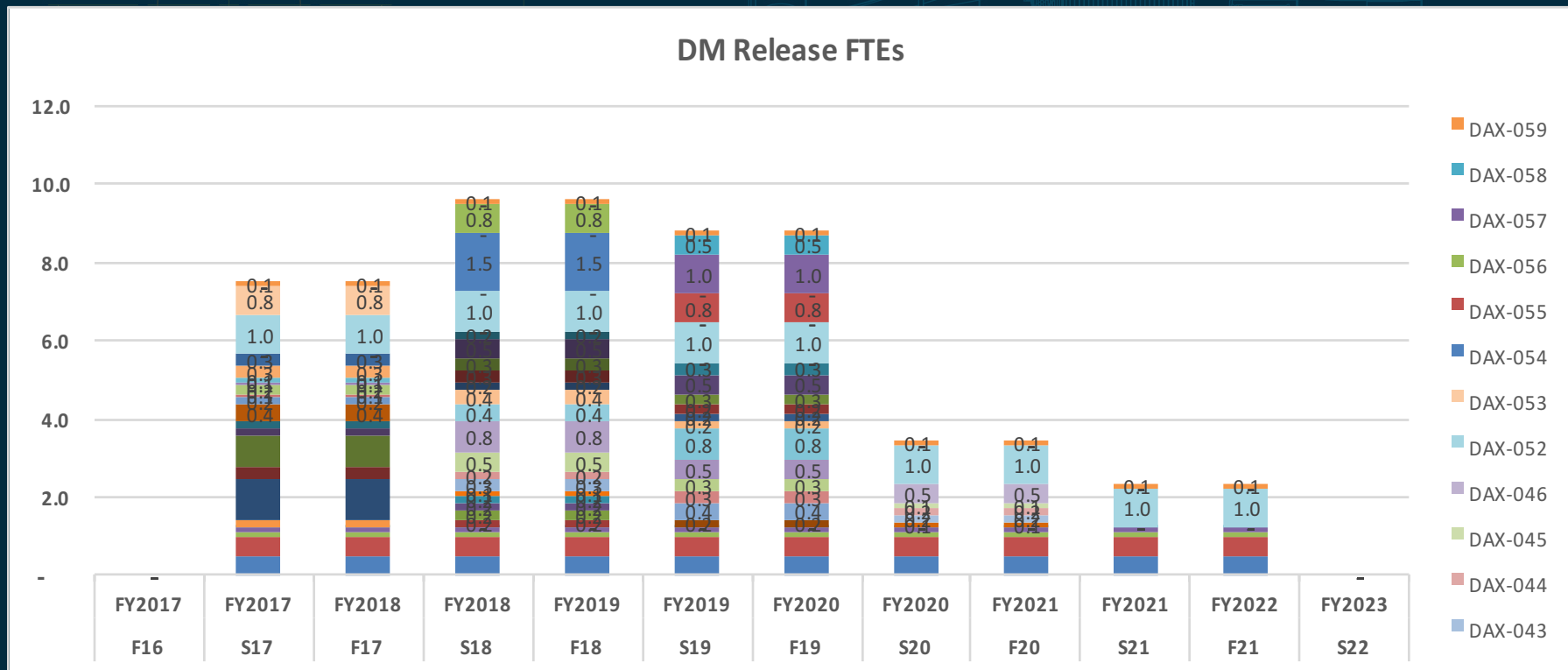
DAX Replan: Sequence Highlights



Year	Selected Deliverables	Scale Testing
2017	Replan complete, PDAC+WISE, disconnected queries, data distribution/replication, auth*n, results export, Supertask/ingest protos for DRP, L1/AP db	30% DR1
2018	Secondary index, non-partitioned tables, query estimation, result streaming, worker fault tolerance, global metadata, provenance, reformatted EFD, deep drilling db	50% DR1
2019	Master fault tolerance, result caching, partial results, image regeneration, MOPS db	75% DR1
2020	Next-to-db processing, monitoring, schema evolution, software migration plan	100% DR1



DAX Replan: Staffing Profile



Note: includes full-time T/CAM; current staffing 6.8 FTE

DAX Replan: Dependencies



Needed by DAX:

- Specifications/requirements from Arch
- Infrastructure (auth*n, scale testing, PDAC) from NCSA

Needed from DAX:

- Backend service APIs and instances for SUIT & SQuaRE
- Supertask and Butler features for AP/DRP
- DB designs and prototypes for AP
- Service definitions, operating procedures, compute sizing for NCSA

DAX Replan: Some Descope Options



- Reduce Qserv features (e.g. result caching, partial results, query estimation) \$60k - \$100k ea.
- Reduce service endpoints (e.g. implement fewer VO interfaces) \$100k - \$300k
- Reduce internal support (e.g. no data in PDAC beyond WISE) \$85k per dataset
- Cut next-to-db processing \$160k
- Cut image regeneration \$100k