

# NSF's National Center for Optical-Infrared Astronomy -- NCOA --

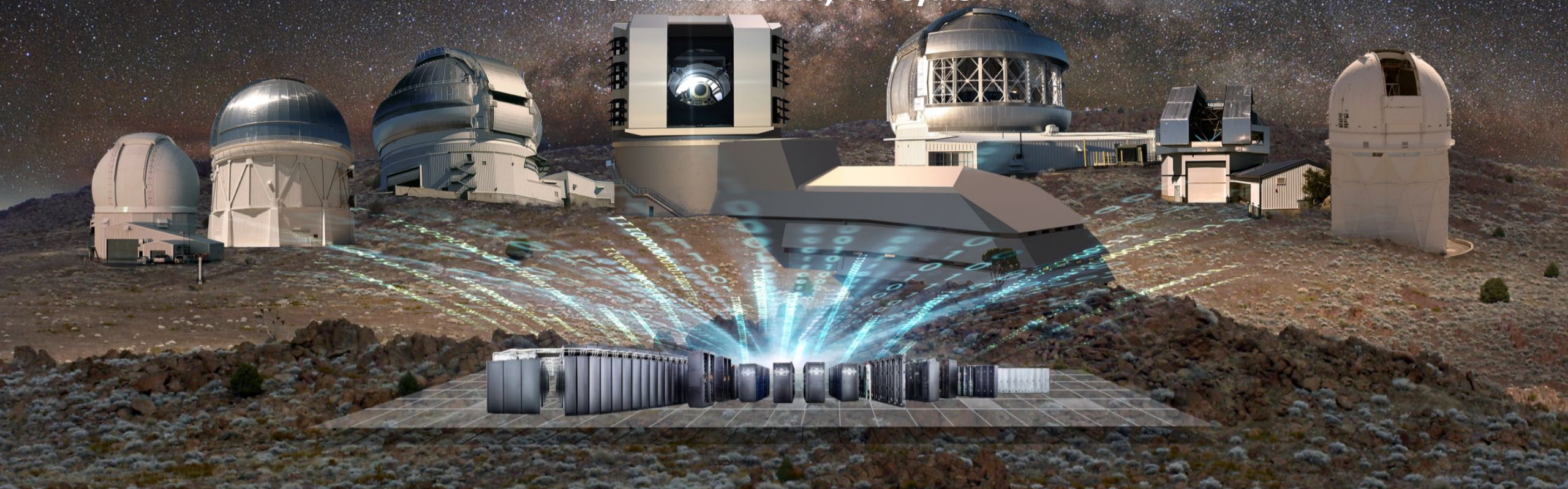
## *Planning Status Report*

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# ***NSF Vision for NCOA***

- **NCOA** will be the ***foundational hub*** of the U.S. optical-infrared (OIR) System in the era of LSST and data intensive science.
- **NCOA** will be the ***preeminent*** U.S. national center for ground-based, night-time, OIR astronomy, serving the astronomical community and positioned for a leadership role in international partnerships.
- **NCOA** will provide ***strategic leadership*** for the federal and non-federal OIR System.



# ***OPPORTUNITY NOW***

- The National Optical Astronomy Observatory (NOAO) was created in 1984 by combining NSF's night-time and solar OIR astronomy assets at that time.
  - The National Solar Observatory was split off in 2009 due to divergent missions.
- With the impending operations of the Large Synoptic Survey Telescope (LSST), *a restructuring of NSF-funded OIR assets now is the logical next evolutionary step.*
- The NCOA concept is responsive to 15 years of NAS/NRC studies and advisory reports about inefficiencies in the complex of NSF-funded optical observatories.





# ***NSF-FUNDED OIR ASSETS***

## **Existing operations awards**

- **NOAO**

- NSF sponsored Federally Funded Research & Development Center (FFRDC)
- Formed 1984; some facilities date to 1958

- **Gemini Observatory**

- International partnership
- Full operation from 2001

Both managed as independent organizations by Association of Universities for Research in Astronomy (AURA), as outcomes of recent management competitions

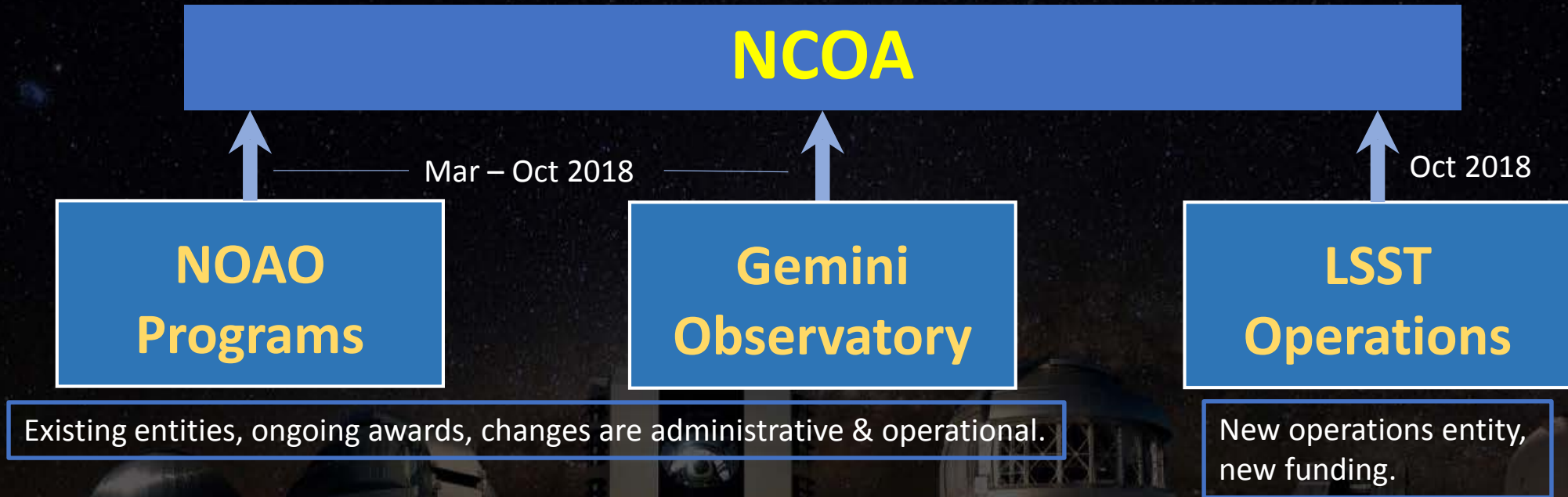
## **Planned (under construction)**

- **LSST Operations**

- NSF, DOE, domestic & international partners
- First funding FY 2019
- To be managed by AURA in early years (AURA manages construction)



# WHAT WOULD NCOA BE?



***NCOA would bring LSST operations, Gemini Observatory, and NOAO under a single administrative framework, with autonomy and accountability to the partners of LSST and Gemini, and managed by a single managing organization.***





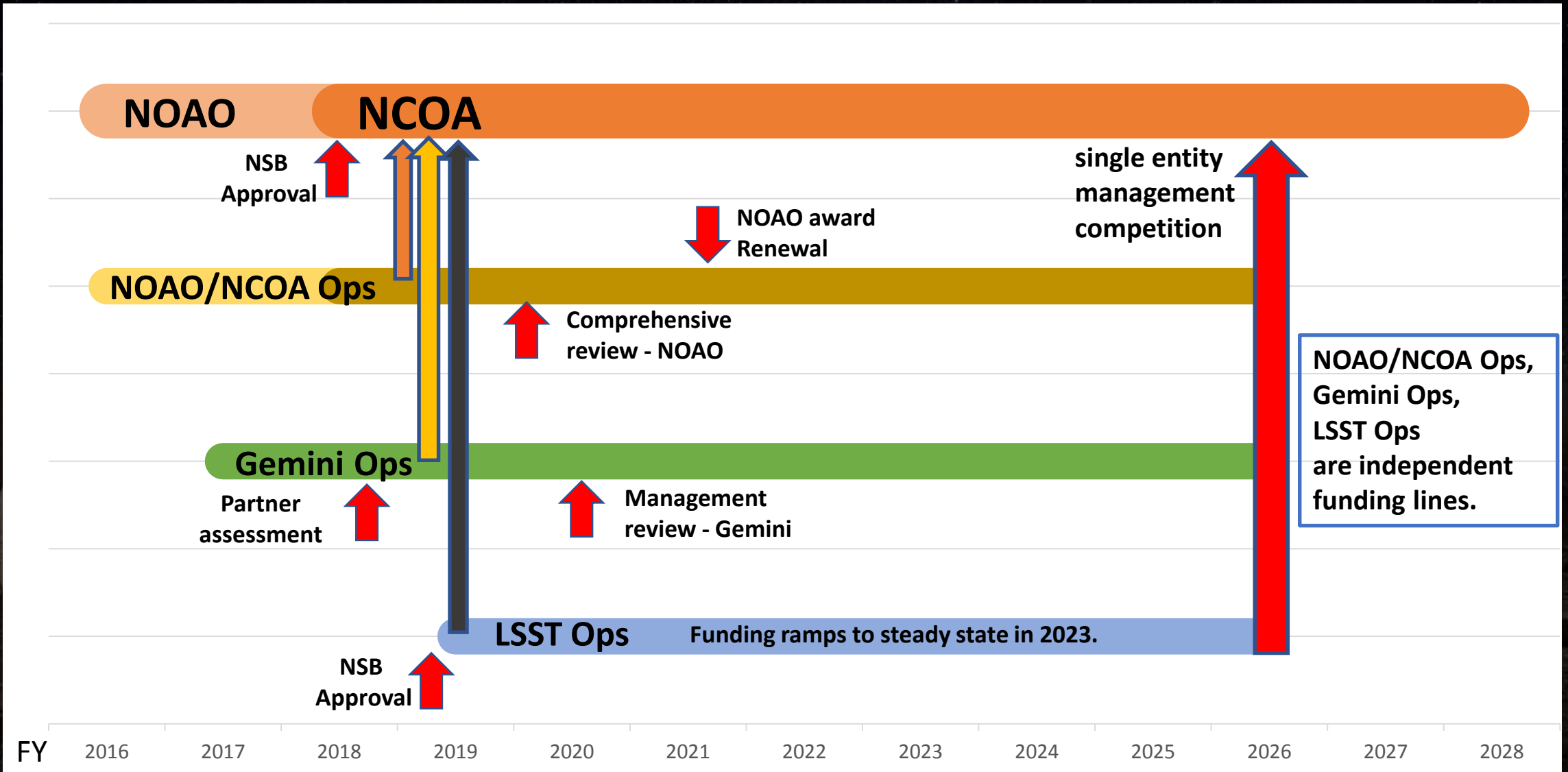
# ***WHY FORM NCOA?***

## **Significant benefits to all stakeholders**

- **NSF OIR assets collectively well-positioned for scientific leadership in the era of LSST with the key strategic theme of data-intensive astronomy;**
- **U.S. world-competitive in OIR astronomy with unified strategic planning and data-science mission, and with collaborative federal and non-federal OIR System engagement;**
- **A national focal point for domestic, international, & philanthropic collaborations; and**
- **Cost and management efficiencies.**



# NCOA Timeline







# ***Future NSB Actions on NCOA***

## ***1. ~Feb 2018, NSB asked to authorize definition of NCOA.***

- Request for NSB approval is contingent on NSF (program, business, legal) acceptance of the Plan for the Organization, Management, and Operation of NCOA and the Implementation Plan, both from AURA, the managing organization.
- Not a funding action; but package to include AURA NCOA Plans; NSF reviews, analyses, & oversight plans.
- Changes are administrative to purpose, mission, and scope with name change to NCOA.
- These changes require approval of NSF Director.

## ***2. ~May 2018, NSB asked to authorize an award for LSST operations.***

- A new organizational entity.
- A funding action in response to a formal proposal, separate from the NCOA approval action.





# ***NSF Vision for NCOA – Call to Action***

- NCOA will be the *foundational hub* of the U.S. optical-infrared (OIR) System in the era of LSST and data intensive science.
- NCOA will be the *preeminent* U.S. national center for ground-based, nighttime, OIR astronomy, serving the astronomical community and positioned for a leadership role in international partnerships.
- NCOA will provide *strategic leadership* for the federal and non-federal OIR System.

***The need for NCOA has been justified; the opportunity exists now to make it happen, and the challenge is in implementation.***