

Radar Next Program

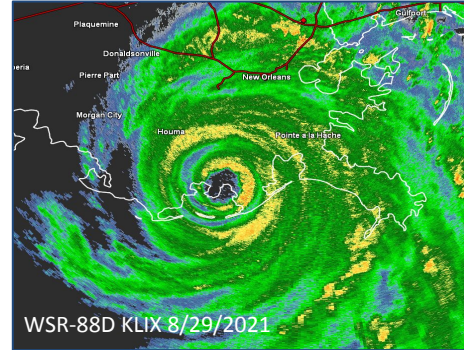
Friends and Partners in Aviation Weather

Randy Silver, NOAA/NWS

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service

NEXRAD Program: Current Operational Weather Radar

- Network of 158 S-band Doppler weather radars jointly operated by NWS, USAF, FAA
- Provides mosaic coverage of most of the Continental United States
- Most impactful NOAA observational asset supporting severe weather, flash floods, and air traffic management
- Only weather radar that supports the broader weather enterprise:
 - Emergency Managers
 - Media
 - Commercial weather sector
 - Academia
 - General Public
- Installed in the 1990s with a 20-year expected design life
- Continuously improved over the past 30 years to extend useful life to the 2030s



Annual Benefit of Current NEXRAD System (2024\$)

\$1.2 B

Reduced fatalities and injuries from tornadoes, severe winds, and flash floods



\$176 M

Reduced fatalities, injuries, and aircraft damage from general aviation accidents



\$7.5 B*

Reduced commercial aviation delay costs

(*Range: \$3.8B-\$9.8B; Primary Estimate = \$7.5B)



\$8.9 B*

Current total

(*Range: \$5.2B-\$11.2B; Primary Estimate = \$8.9B)

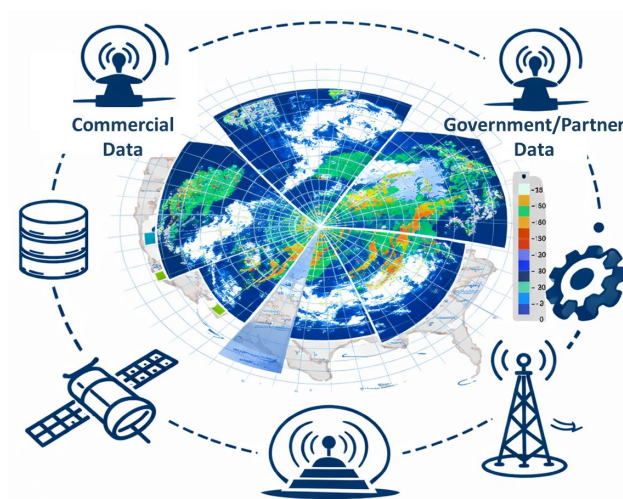
NEXRAD Societal Benefit Study conducted by MITRE: <https://repository.library.noaa.gov/view/noaa/71986>

Safe and Efficient Flight

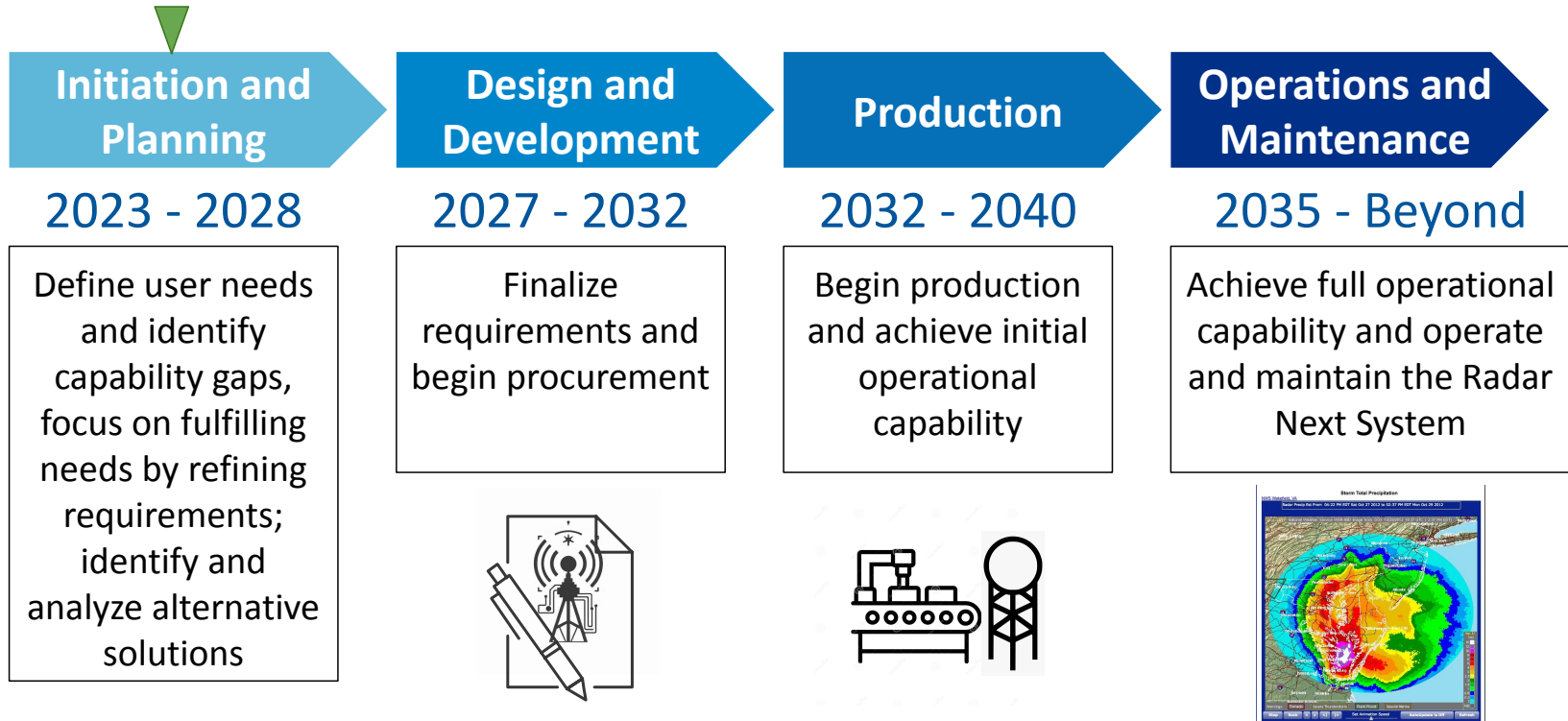


Immediate/Ongoing Actions to Implement Gap-Filling Strategy

- Leverage commercial data
 - NSSL - 29 Climavision radars via Cooperative Research and Development Agreement (CRADA)
 - NWS - 15 Climavision radars via National Mesonet Program (NMP)
 - 3 StormQuant radars in Florida
 - Purchase additional commercial data as funding allows
- Mature NSSL's MRMS to develop a real-time data integration
- Transition AWIPS to the Cloud to better integrate supplemental observations
- Develop data standards for commercial radar data
- Lowered elevation angles at 27 radars to expand coverage with NEXRAD
- Working to raise tower/cut trees at Gray, ME to improve coverage



Radar Next Program's Notional Timeline



Note: These dates are notional and subject to change as Program evolves.



Questions?

radar.next@noaa.gov