



GRUAN as a Potential “Force Multiplier” for the Global Observing System (I):

A VIEW FROM NOAA/NWS

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Agenda



- **NOAA Observation Systems Committee (NOSC)**
 - Integrates & Optimizes NOAA Observation Portfolio
- **Proposed NWS Restructuring/Reorganization**
 - Observations are prominent...vital to forecast process
- **NWS Observation Portfolio**
 - Tracking 139 systems; 47 are NWS supported systems
- **Global Climate Observing System (GCOS)**
 - GCOS Reference Upper-Air Network (GRUAN)
- **Questions/Final Comments**



NOAA Observing Systems Council (NOSC) Observing Systems Committee (OSC)



- Coordinates Earth observing and environmental data management activities across NOAA
- Provides guidance in development of NOAA integrated Earth observation and environmental data management system architecture
- Provides recommendations to NOAA Executive Council

- The Observing Systems Committee (OSC), one of two standing committees, maintains cognizance over NOAA Earth observation systems



NWS Proposed PPA Restructure



PPAs

Observations



Central Processing



Analyze, Forecast, Support



Disseminate



Science & Technology Integration



Existing Programs

Surface, Ocean & Upper Air Observations, Aircraft Obs, Radiosondes, NEXRAD, ASOS, Buoys, Snow Surveys, Profilers, National Mesonet, Observations Support

Data Collection/Display, AWIPS, Model Implementations, Supercomputing, Advanced Hydrologic Prediction System

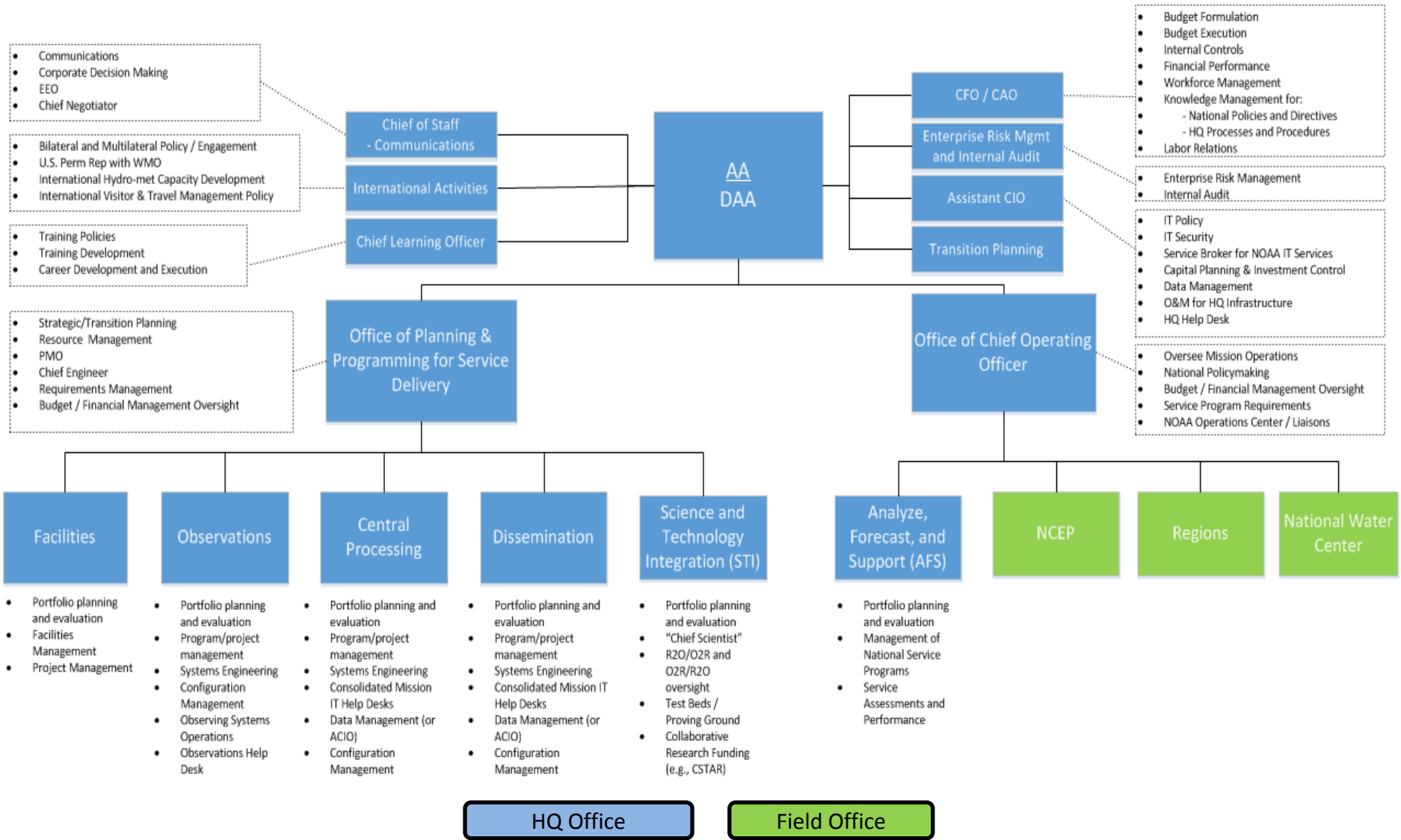
WFO Forecasts & Warnings, National Service Centers, River Forecast Centers, CWSUs, Tsunami Services, Decision Support Services, WCM Program

IT & Dissemination Systems; Telecommunications Gateway, NOAA Weather Radio; NEXTGEN, Ground Readiness, NOMADS

Research/Development/Assess, Environmental Modeling Center, Test and Demonstration, WRN Pilots, Testbeds, Training, CSTAR, Education & Outreach, SOO Program



Proposed NWS Organization



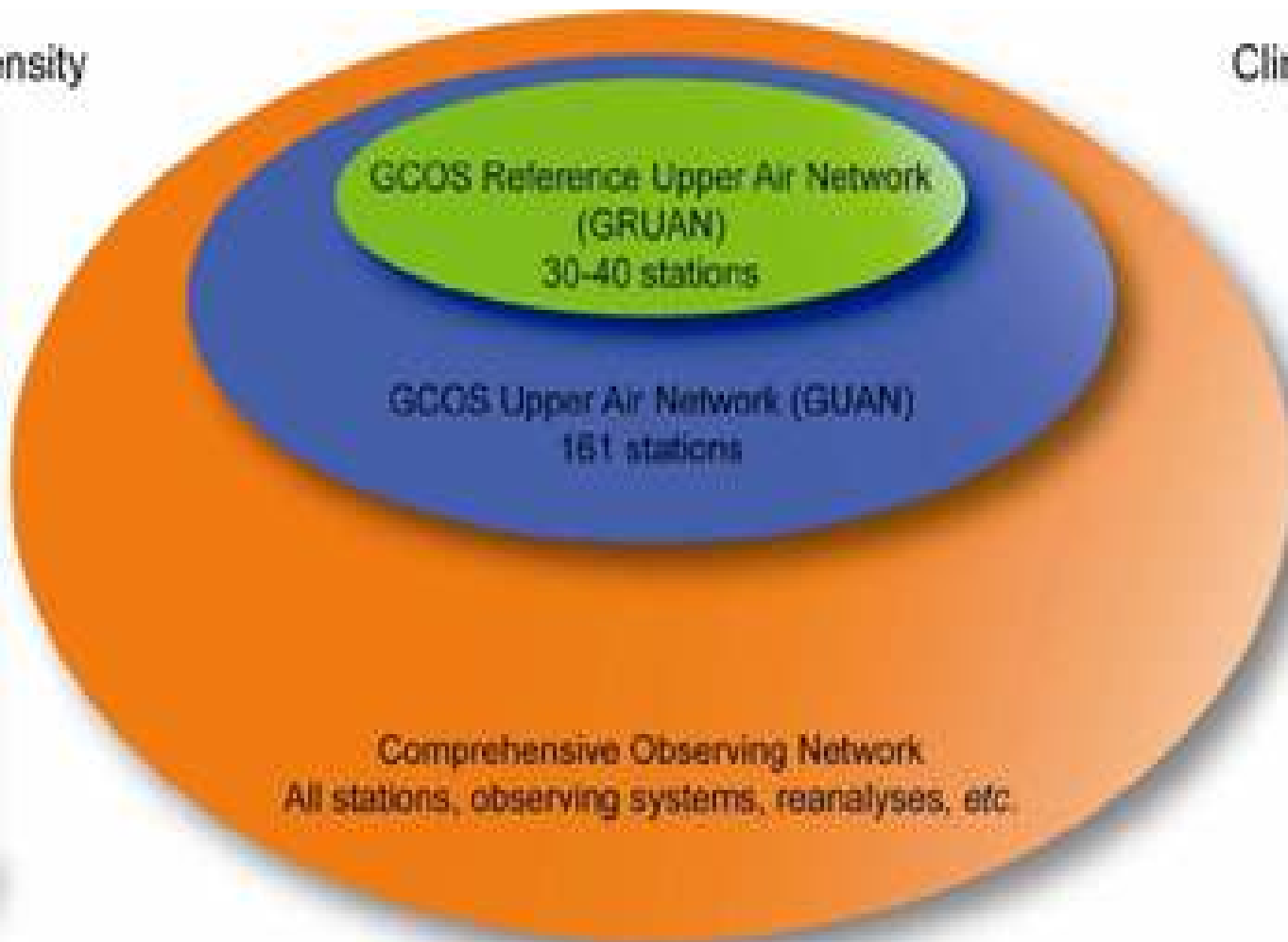


GCOS Cascade of Upper-Air Networks



Spatial density

Climate-driven





Questions/Final Comments

- Data from GRUAN network is assimilated into our operational atmospheric and climate data assimilation systems; helps improve weather forecasts and climate monitoring aspects of NOAA
 - Climate quality observations validate our climate reanalysis products and help monitor climate trends
 - One very useful aspect of GRUAN upper air data will actually be holding them back from the atmospheric assimilation system, and using them as independent validation; something we do to measure sensitivities of our operational models
 - Reference quality of GRUAN data makes them useful for verifying NWP model outputs, and for validating and correcting other data being assimilated into NWP models
- High precision and high vertical resolution measurements aid in developing a deeper understanding of processes affecting the atmospheric column