

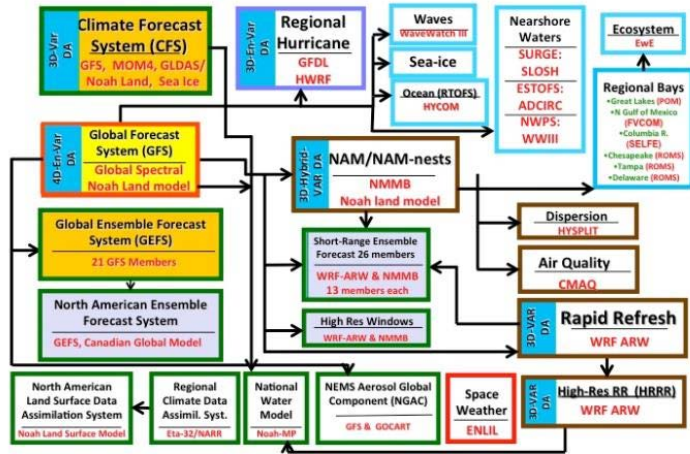
Welcome!

Key Elements for Model Development

- **Unified Forecast System (UFS)**
 - A community-based, coupled, comprehensive Earth modeling system
 - UFS numerical applications span local to global domains and predictive time scales from sub-hourly analyses to seasonal predictions
 - Designed to support the Weather Enterprise and to be the source system for NOAA's operational numerical weather prediction applications.
 - Evidence-based decision making using agreed-to targets and metrics
- **Strategic Implementation Plan (SIP)**
 - Combines implementation activities with near-term strategic action
 - Led by NWS/NCEP/EMC with NOAA and external partners
- **Earth Prediction Innovation Center (EPIC)**
 - Accelerate R2O2R via an end-to-end community capability
 - Drive R&D with operational priorities based on community input
 - Establish the UFS as the modeling system of choice for the NWP R&D community (crowd-source model development) AND serve as the source of future operational models based on the community's Unified Forecast System

Evolve!

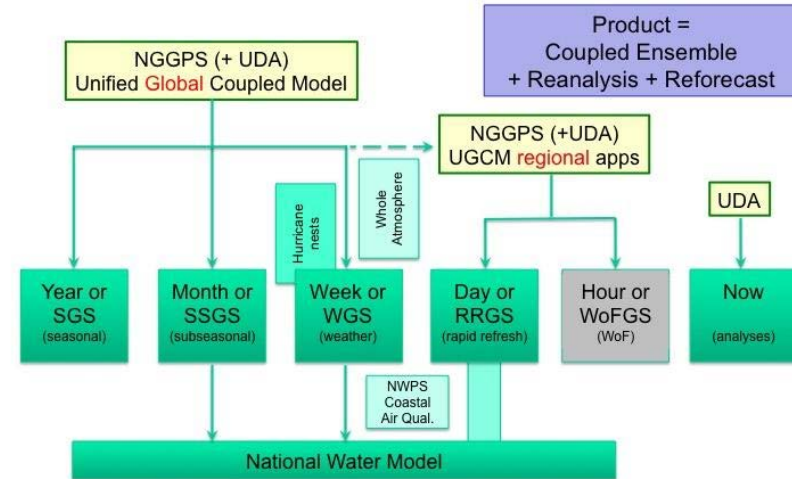
Production Suite ca. August 2016



Courtesy Bill Lapenta

Starting from the quilt of models and products created by the implementing solutions rather than addressing requirements

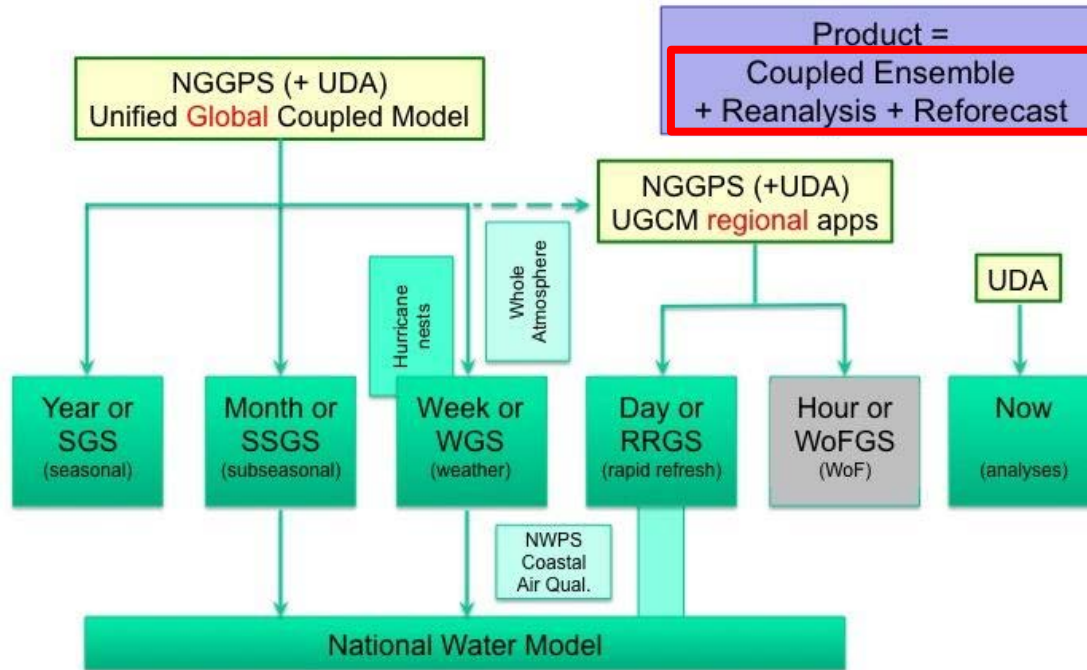
... we will move to a product based system that covers all present elements of the productions suite in a more systematic and efficient way



UDA: Unified Data assimilation
 SGS: Seasonal Guidance System
 SSGS: Subseasonal Guidance System

WGS: Weather Guidance System
 RRRS: Rapid Refresh Guidance System
 WoFGS: WoF Guidance System

Ensembles are a common characteristic of UFS applications



Hot Topics

- Defining R2O. There is a [document](#) in the UFS milieu that describes the transition of research to operations (R2O) within the context of the Unified Forecast System (UFS). There are other activities (e.g., the JCSDA, EPIC, JTTI, the NCAR-NOAA MoA) that are striving for the same thing. All of these activities must coalesce into a common paradigm of R2O that ends with innovations effectively implemented into Operations.
- Building the Community. There needs to be a common understanding of roles and responsibilities among all of the development efforts, including how EPIC will help (rather than replace) these development efforts.
- Ensuring operational orientation of SIP/EPIC activities.
- Balancing the rate of innovation with the rate of implementation.
- Evidence-based decisions on removing elements from the NCEP Production Suite as part of Suite Simplification.
- Balancing collaboration with competition.
- Leveraging the Cloud to ameliorate the lack of HPC capacity for community development.