



NWS Science and Technology Vision Enabling NextGen

Don Berchoff
Director, Office of Science & Technology
Industry Day Presentation
July 20, 2010

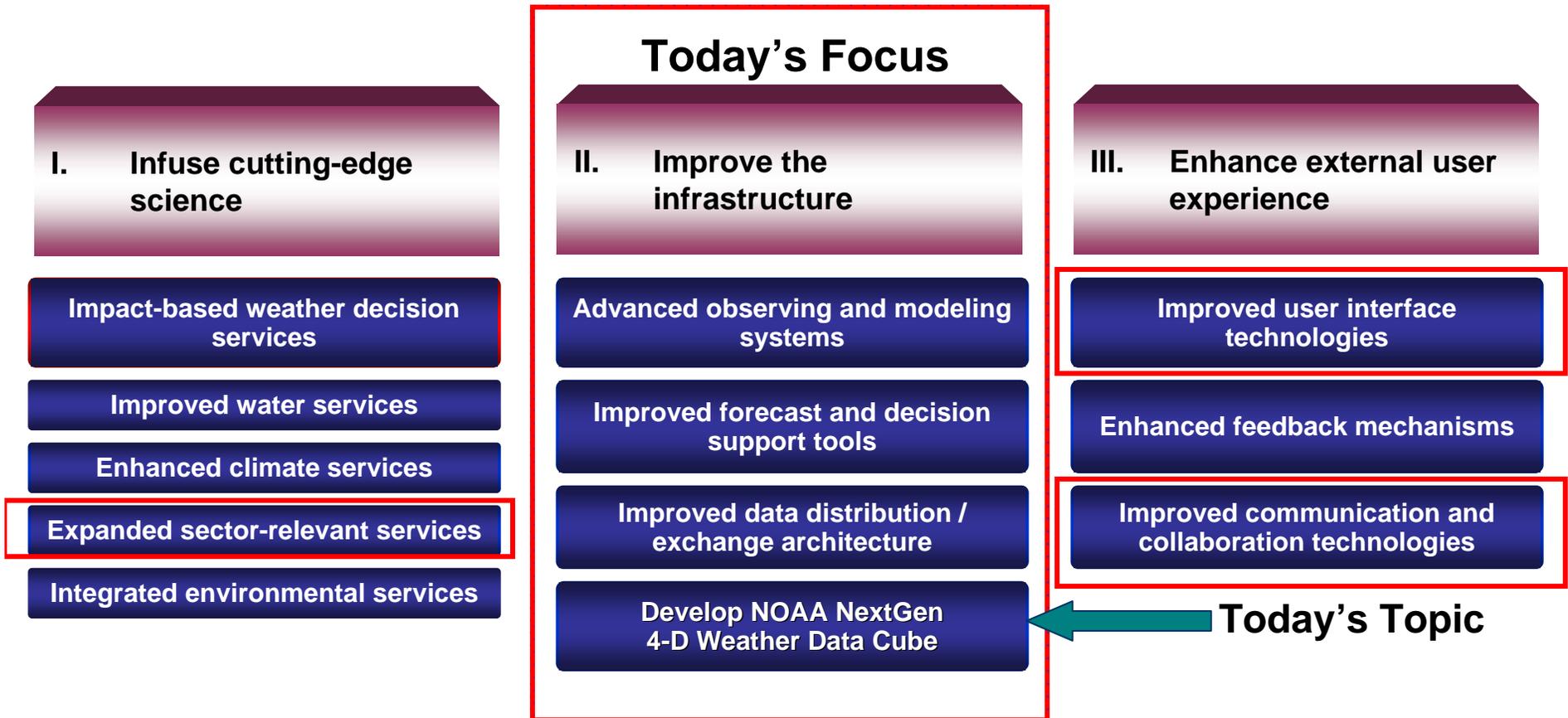


Overview

- Science and Technology Vision
- Realizing the Vision
- Current IT Architecture
- Future IT Architecture Enabling NextGen
- Translating Technology to Serve NextGen Needs for FAA and Aviation Community



A Technology Vision for the National Weather Service





Realizing the Vision

S&T Roadmap Strategic Themes (Requirements)

1. Integrated Observation and Analysis System

2. Integrated Environmental Modeling System

3. 4D Datacube

4. Next Generation Forecast and Decision Support System

5. Transformational Dissemination, Outreach, and Feedback Technologies

Projectize the roadmap and merge with existing development

- National Mesonet—sub-SFC thru PBL
- Satellite (GOES-R, NPOESS, COSMIC)
- Radar (Dual Pol, MPAR)

- High Performance Computing
- Hybrid Data Assimilation
- Next Generation Global Model
- Mesoscale Probabilistic Capability—neighborhood/airfield scale

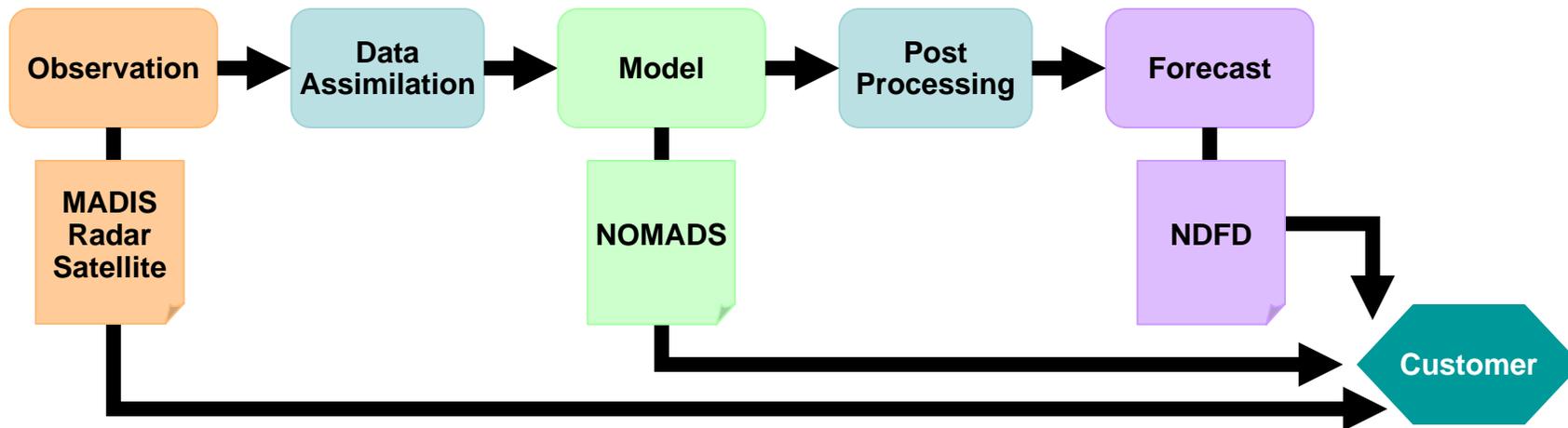
- Web-services
- Robust GIS

- Advanced Collaborative Tools
- AWIPS-II extended and beyond
- Interoperability

- Network-Enabled Verification Service
- Advanced Communications Capability
- Smart Data Push/Pull



Current IT Architecture

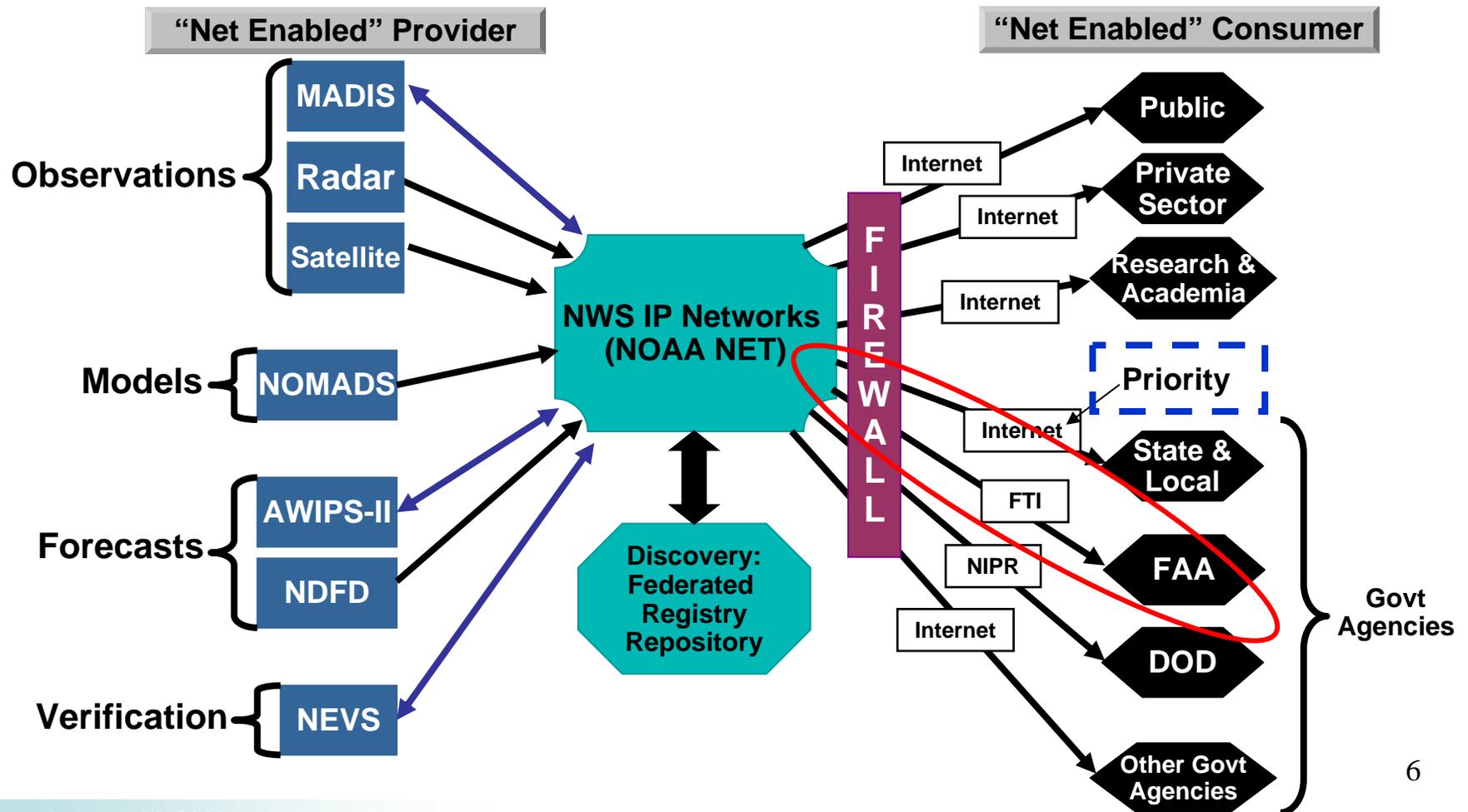


Legacy Systems

- Stove Piped Connectivity
- Expensive
- Non-Standard software and architecture
- Difficult for customers to access
- Limited quality control

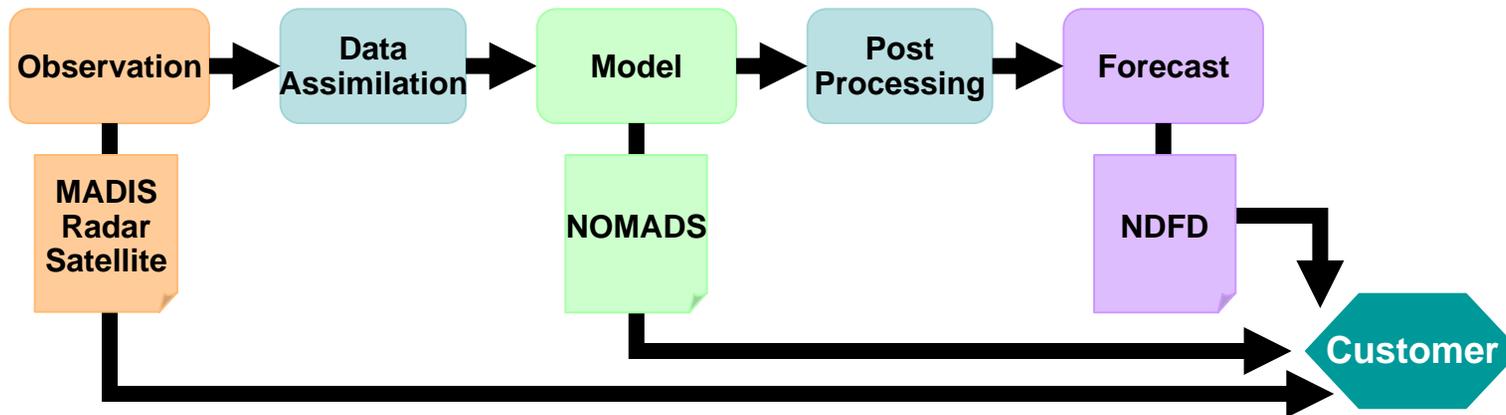


Future IT Architecture Enabling NextGen

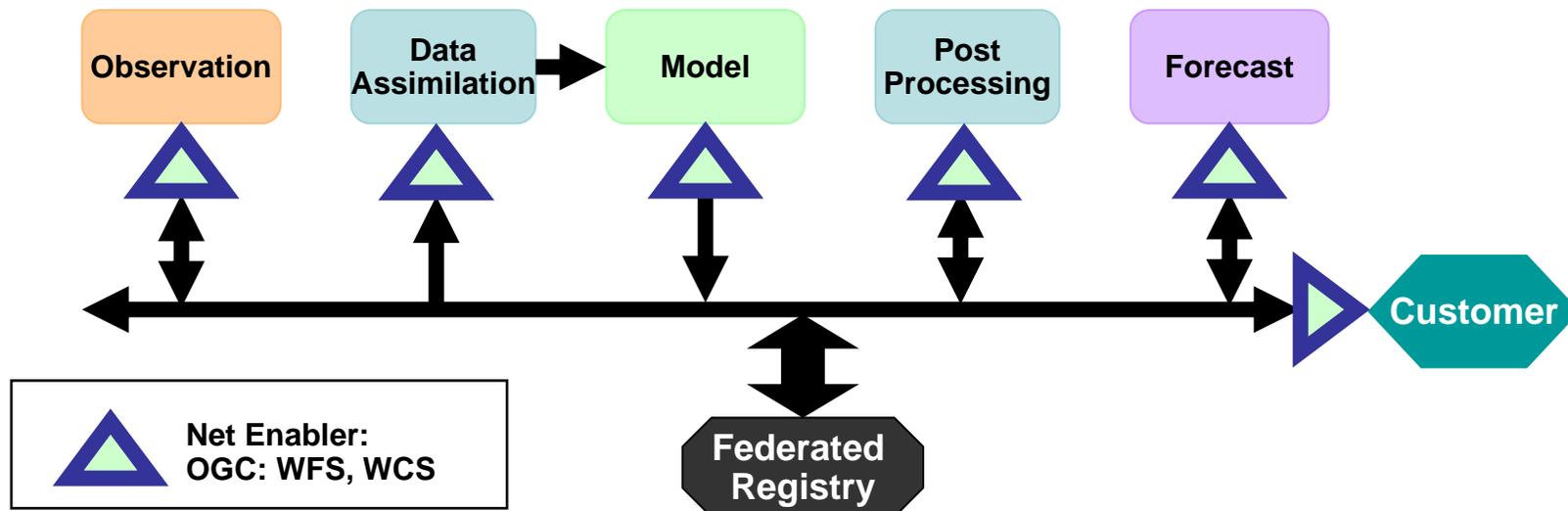




NextGen Weather is the 'Pathfinder' that allows the change from this:

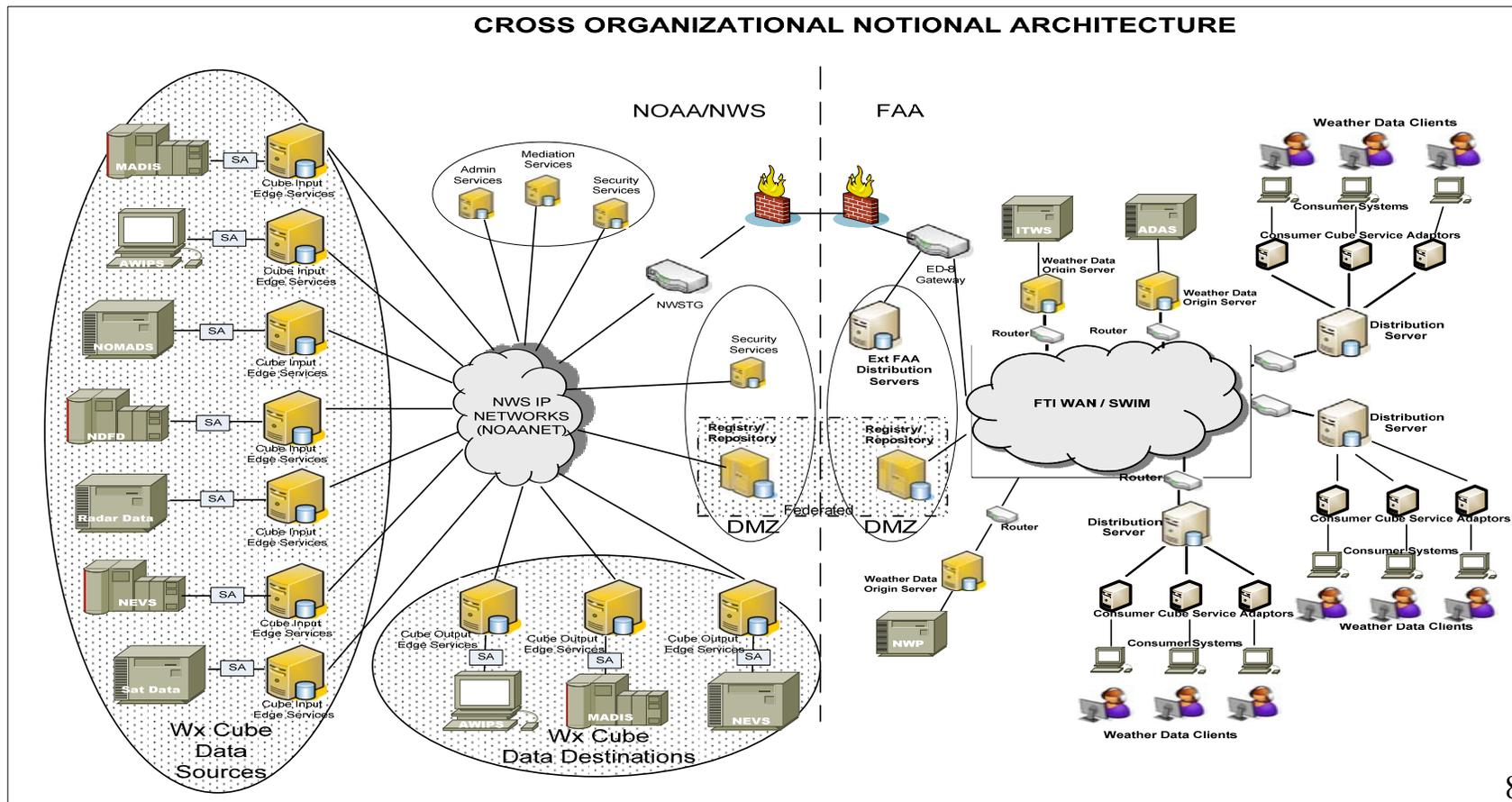


...to this:





Translating Technology to Serve NextGen Needs for FAA and Aviation Community





Questions?