

# Ecological Forecasting Roadmap Infrastructure & Process Team

Christopher Brown, NESDIS  
Nicole Kurkowski, NWS  
Frank Parker, PPI  
Franklin Schwing, NMFS

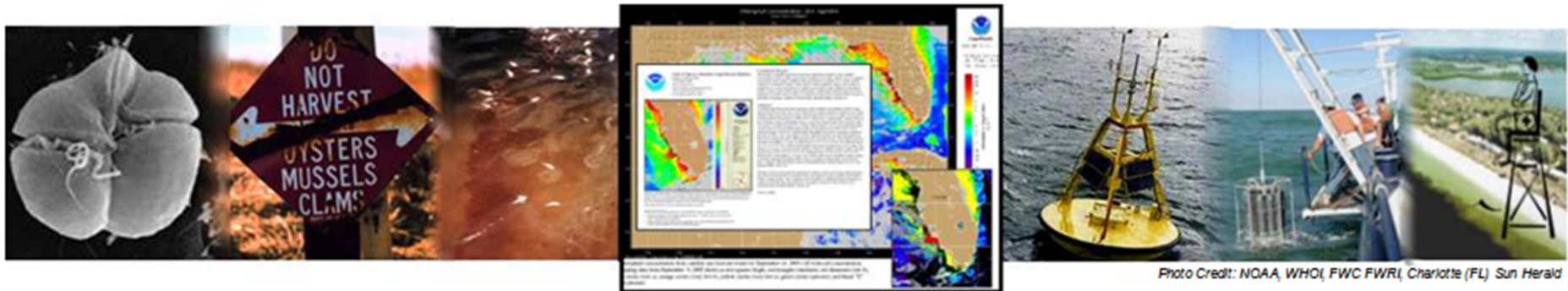
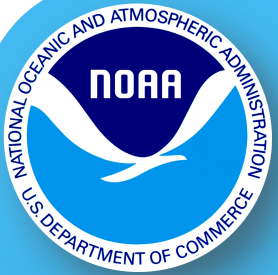


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# Purpose of Infrastructure & Process Team

- Support thematic, technical teams
- Develop a common national EF infrastructure
- Enhance processes to facilitate transition of ecological forecasts to operations



# Diverse team

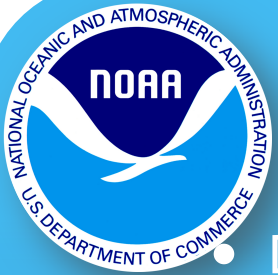
## EF Roadmap - Infrastructure & Process Team Members

### Team leads

Nicole Kurkowski	NOS	OST/PPD/SPB
Chris Brown	NESDIS	STAR/CoRP/SCSB
Frank Schwing	NMFS	OST/SID
Frank Parker	PPI	PPI

### Team members - 09/01/14

AJ Zhang	NOS	CO-OPS/OD/PMAB
Alan Leonardi	OAR	AOML
Avichal Mehra	NWS	NCEP/EMC/MMAB
Barry Choy	NWS	NCEP
Beth Turner	NOS	NCCOS/CSCOR/RERB
Becky Baltes	NOS	IOOS
Chris Kelble	OAR	AOML
Chris Caruso Magee	NWS	NCO
Craig Stow	OAR	GLERL
David Green	NWS	OCWWS
Danielle Tillman	OAR	OPPE
Deb Fauquier	NMFS	OPR/MMSTCD
Deke Arndt	NESDIS	NCDC/CSMD/CMB
Ed Clark	NWS	OCWWS/HSD/Hydro Services Branch
Eric Bayler	NESDIS	STAR
Hendrik Tolman	NWS	NCEP/EMC/MMAB
Hernan Garcia	NESDIS	NODC
John Adler	OMAO	DS/Exec Affairs Div
John Bratton	OAR	GLERL
John Cortinas	OAR	OARO/Ofc of Weather and Air Qulaity
Lisa Fong	PPI	PPI
Ming Ji	NWS	NCEP/Ocean Prediction Center
Pat Burke	NOS	CO-OPS/OD/PMAB
Peter Stone	NOS	CO-OPS/OD
Scott Cross	NESDIS	NCDDC
Sean Corson	NMFS	OHC/Chesapeake Bay Ofc.
Shanna Pitter	OAR	OPPE
Stephani Zador	NMFS	AKFSC/Res. Ecology and Fusheries Mgmnt. Div.
Thomas Noji	NMFS	NEFSC/Ecosystem Processes Div. (Sandy Hook)
Tony Siebers	NWS	NCEP/OPC/Ocean Forecast Branch
Wendy Levine	NWS	OSP



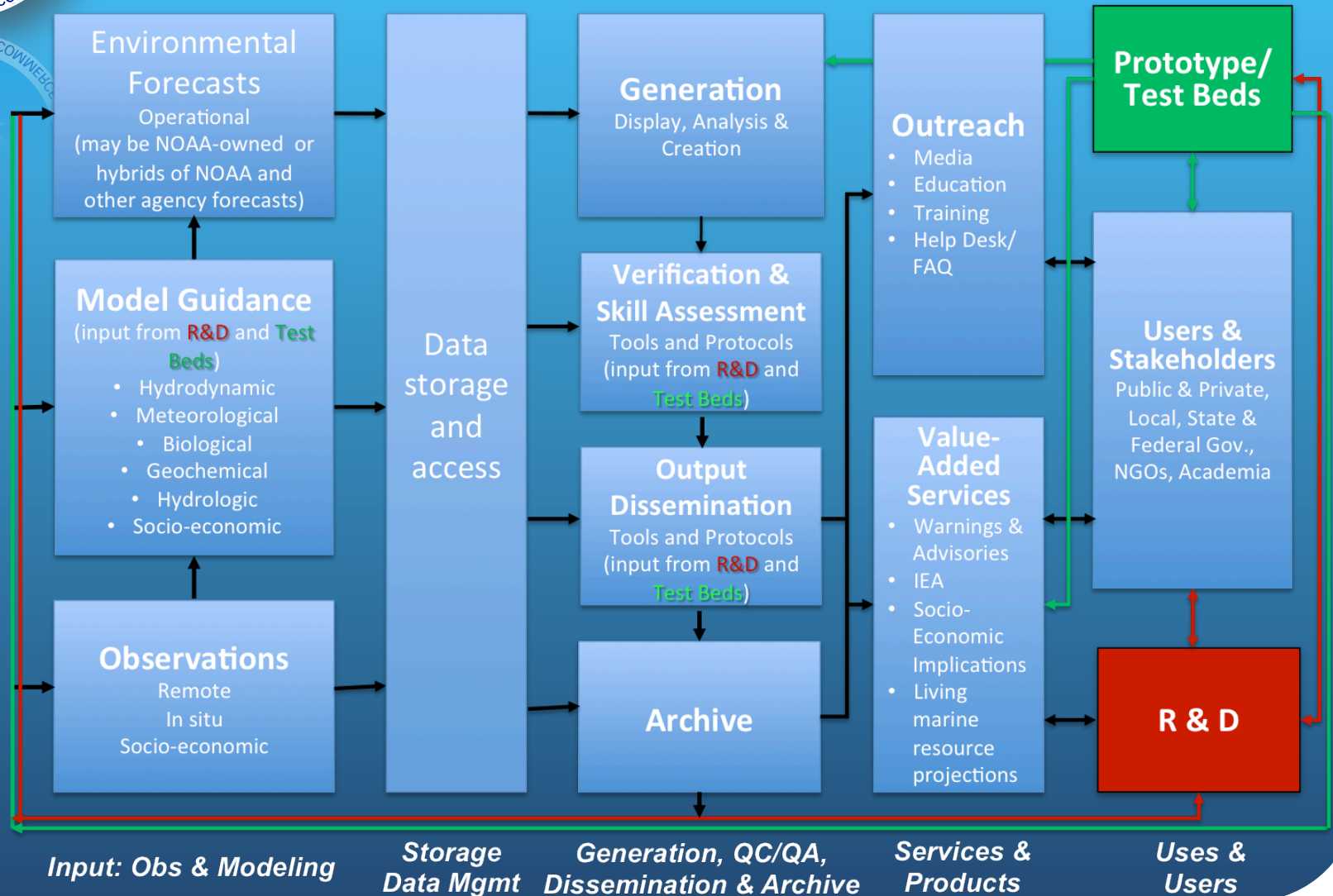
# Example of Major Tasks and Accomplishments

- Document requirements and components of a common national EF infrastructure
- Define EF R2A process
- Define a “One NOAA” product
- Evaluate and recommend Environmental Processing System(s) for ecological forecasting
- Review NOAA’s modeling plan for coverage and forecast variables
- Compile best practices for efficient and robust data management and access
- Develop skill assessment tools for operational ecological forecasts
- Develop protocol for supporting scenario-based modeling and connecting ecological forecasts to ecosystem-based management approaches



# Conceptual Framework for Common National EF Infrastructure

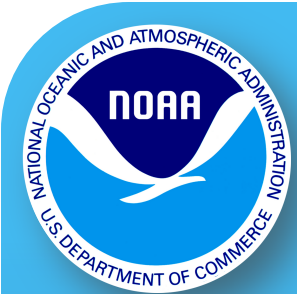
## Operational Ecological Forecasting Framework



# List of Environmental Variables Required by Technical Teams

Variable	Ecological Forecasting		
	HAB	Pathogen	Hypoxia
Temperature	X	X	X
Salinity	X	X	X
Dissolved Oxygen		X	X
Chlorophyll Concentration and its Anomaly	X	X	
Remote sensing reflectances	X		
Attenuation Coefficient		X	
Nutrient Concentration (NO3, PO4)		X	X
River Flow			X
pH		X	
Current velocity	X		
Upwelling Potential	X		
River plume location	X		
Species counts/biomass & toxicity / virulence	X	X	
Forcing for Atmospheric, Hydrodynamic, or BGC models	X	X	X





# Current Activities

- Continuing development of EF infrastructure
- Initiating transition of pilot projects to applications
- Engaging and learning from partners and users

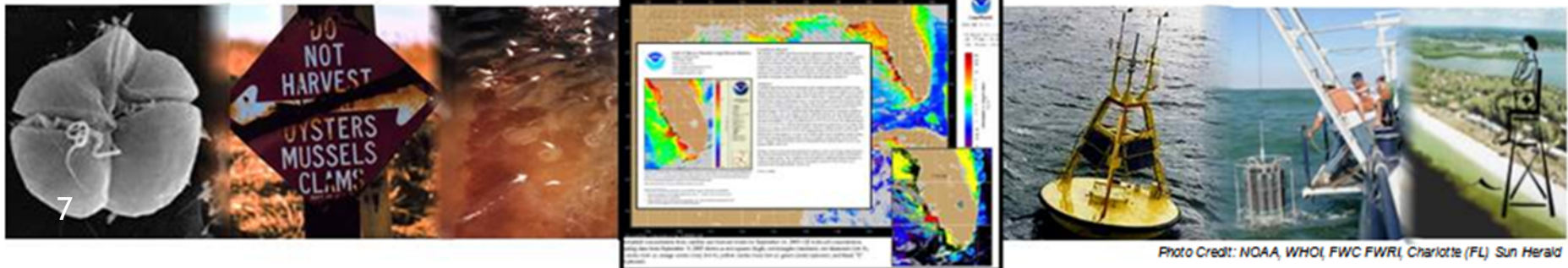
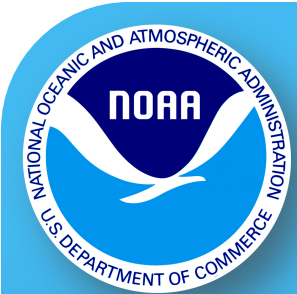


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# Looking Ahead...

- How can the I&P team assist ecological forecasting-related efforts in AK?
- Is assistance needed in connecting current AK efforts with NOAA data and/or modeling capabilities?

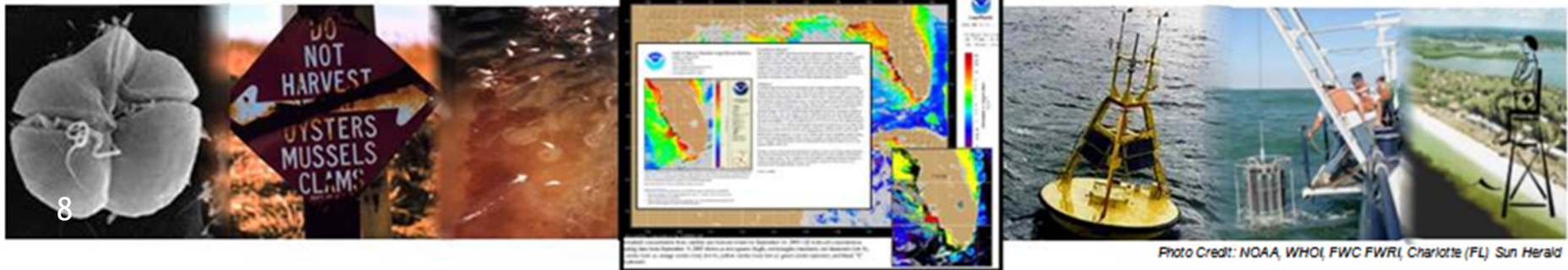


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