



**NOAA**  
**FISHERIES**

Office of Science and Technology

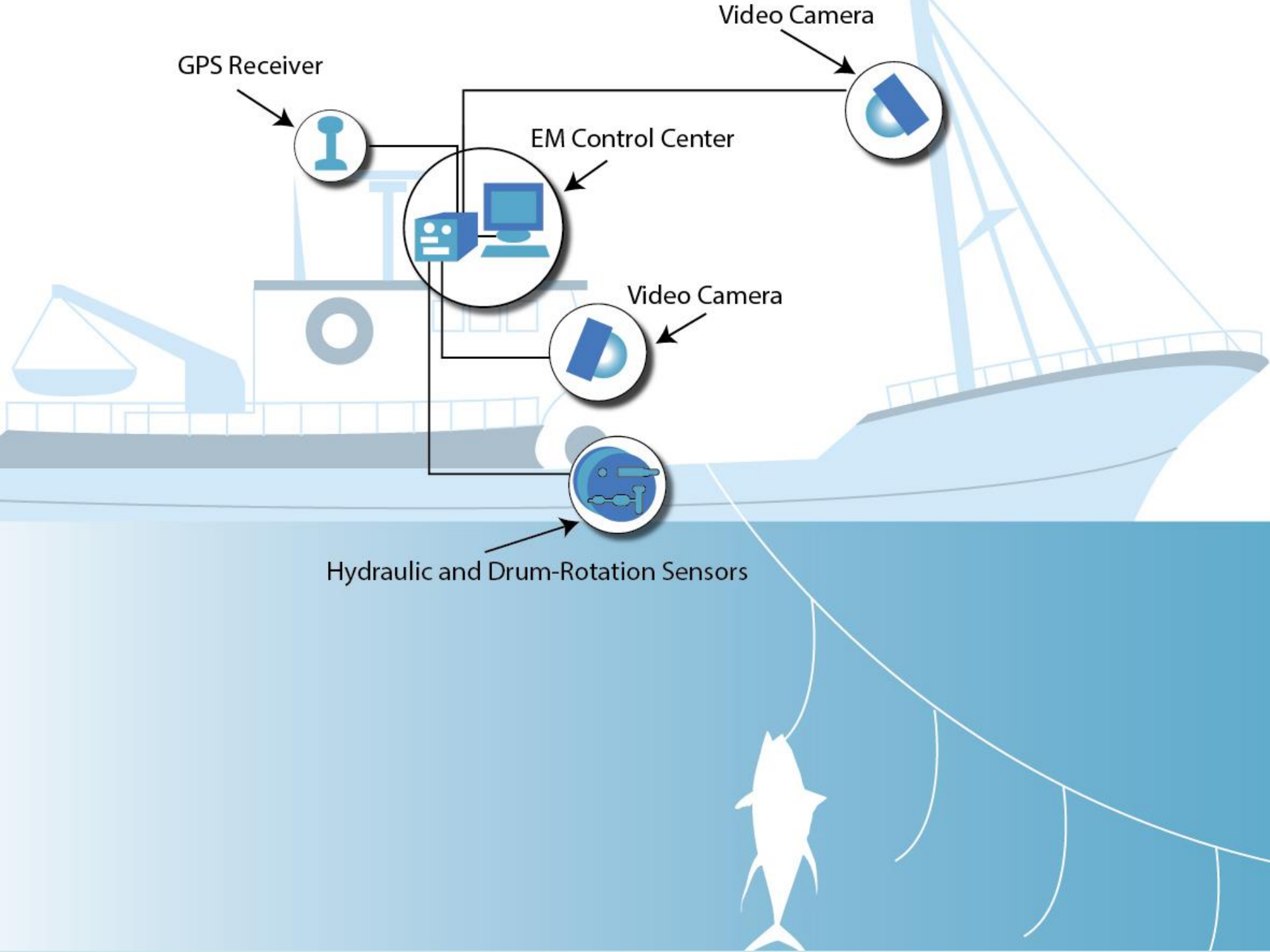
# Integration of Electronic Monitoring into Fisheries Stock Assessments of the United States

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GPS Receiver

Video Camera

EM Control Center

Video Camera

Hydraulic and Drum-Rotation Sensors

# Electronic monitoring in the United States



- Non-Pollock trawl
- Pollock trawl
- Rockfish trawl
- Pacific cod longline
- Small boat fixed gear

- Whiting mid-water trawl
- Non-whiting mid-water trawl
- Fixed-gear
- Groundfish bottom trawl



- Groundfish
- Mid-water trawl

•*Pilot stage*

- Atlantic Highly Migratory Species
- Pelagic longline

- Pelagic long-line (deep-set)

# Program objectives

- Auditing self-reported data
- Compliance
- Discards/Bycatch
- Catch accounting



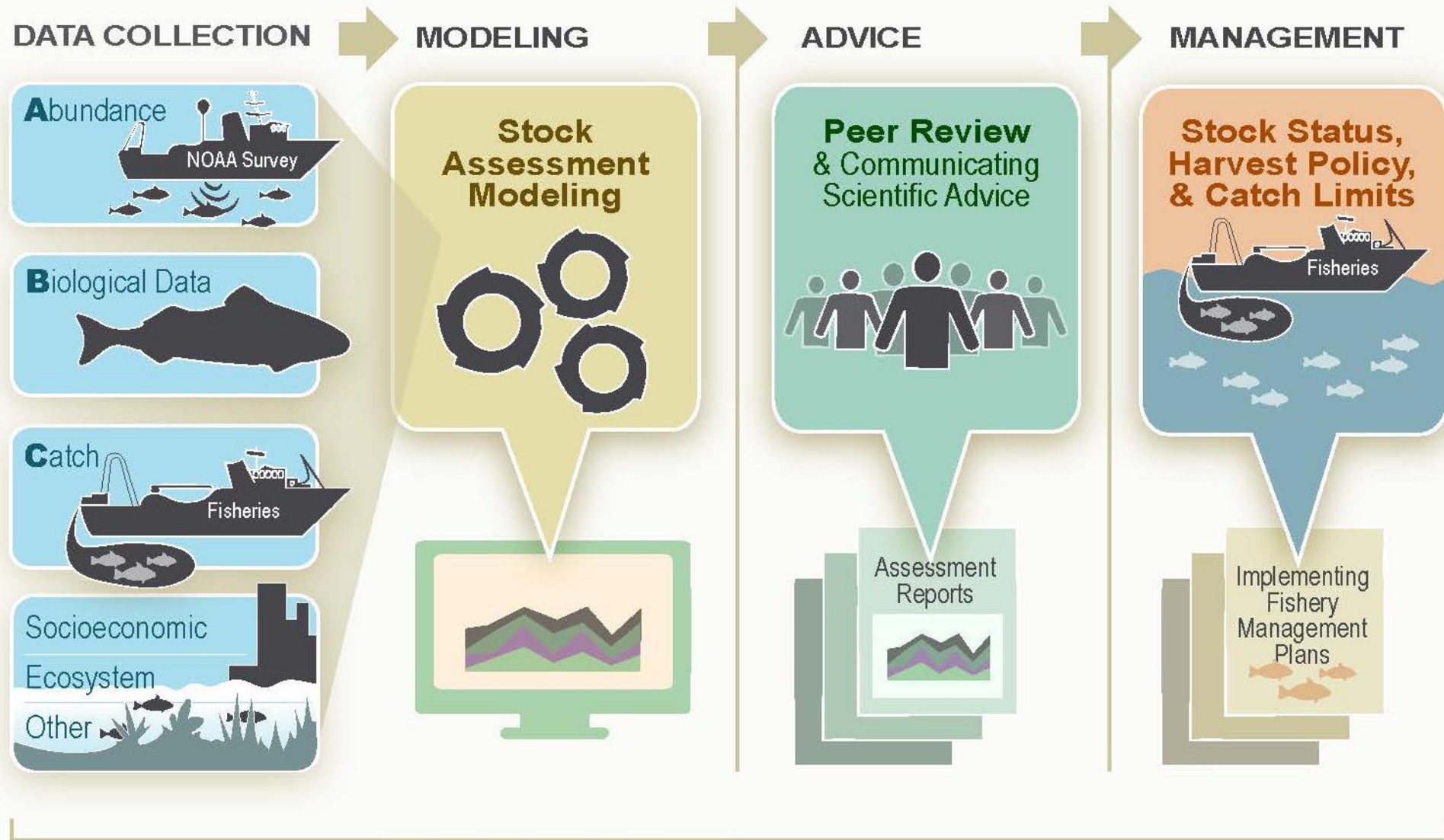
# NOAA Fisheries Stock Assessment Process

The Science Behind Sustainable Fisheries Management

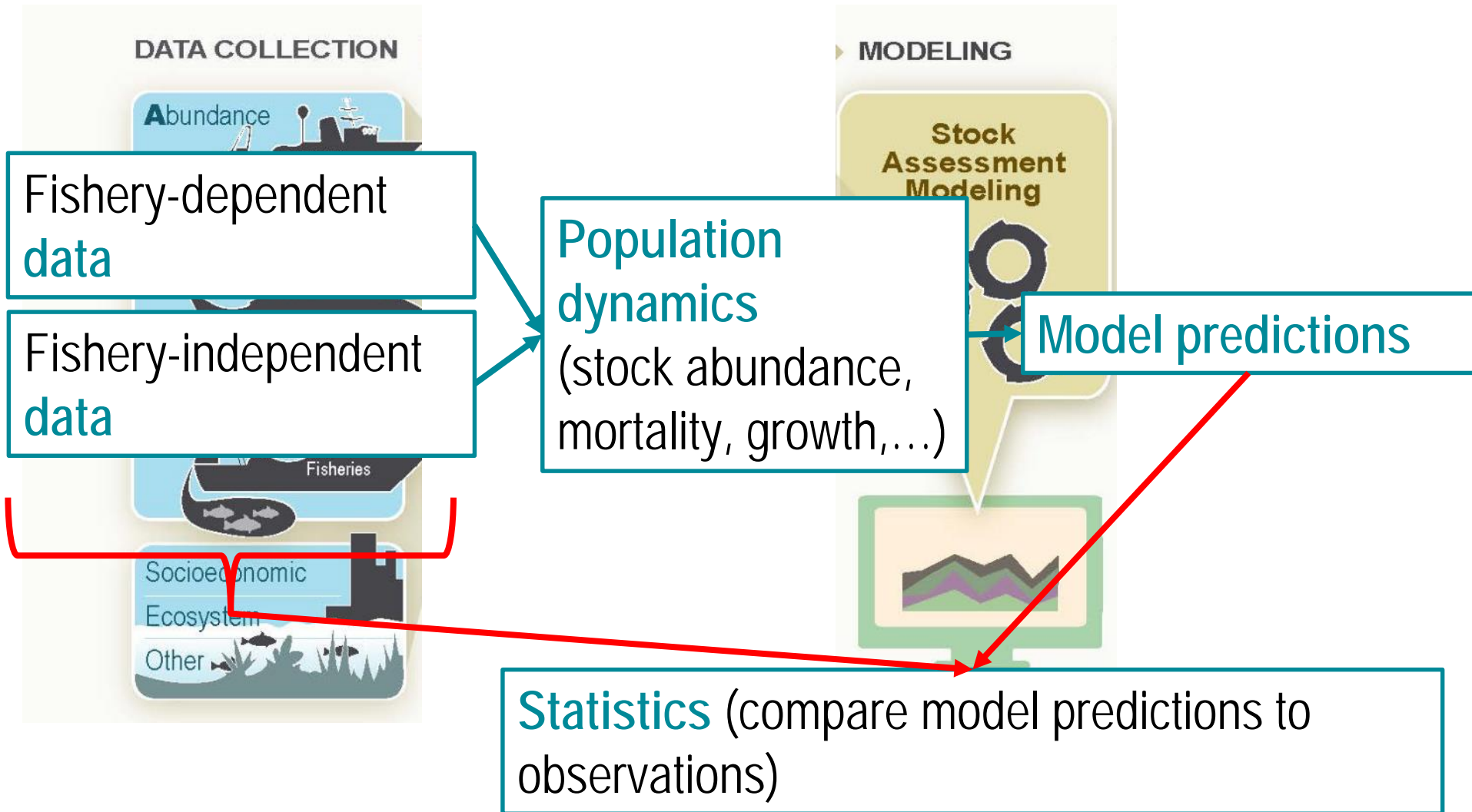


**Healthy Fish Stocks**

= Sustainable Jobs,  
Fisheries, and Food



# Stock Assessment Modeling



# Where does electronic monitoring fit in?

## Fishery-dependent data:

Catch data

1. Dockside monitoring
2. Logbooks
3. Observers
4. Electronic monitoring



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WESTERN PACIFIC PELAGIC FISHERIES  
DAILY LONGLINE FISHING LOGBOOK

NAME OF VESSEL \_\_\_\_\_

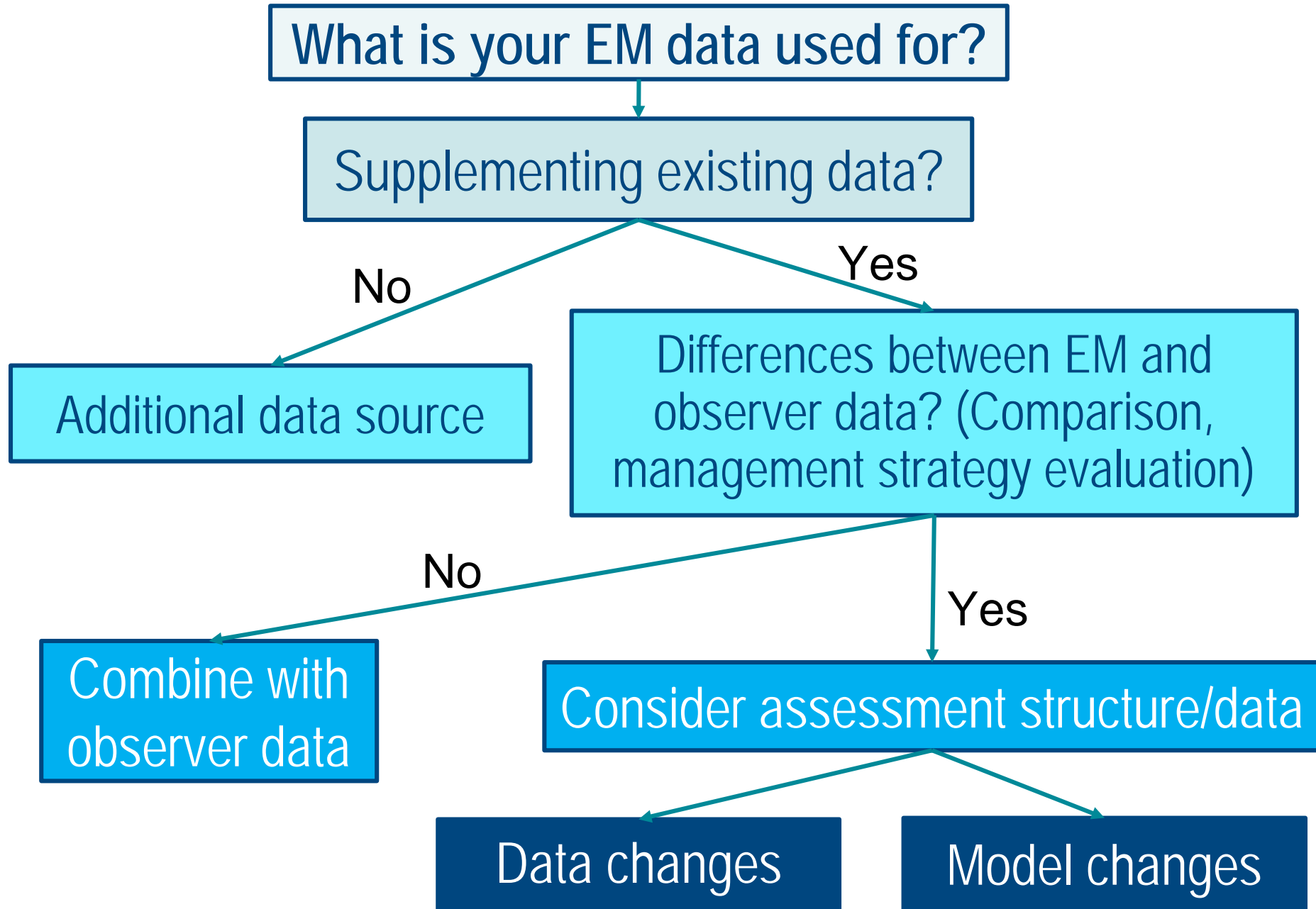
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## EM Considerations

- Cost
- Space
- Safety
- Reviewable data
- Species ID
- Biological samples



# Considerations of Combining EM and Observer Data





# Key takeaways of electronic monitoring

- It is prevalent, and growing
- Expands/changes data for stock assessments
- Take care integrating this data
- No one-size fits all approach
- Understanding data helps with the design of programs
- Publication by 2019, considerations and options

# Thank you

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