Indicators to Assess and Manage Progress towards the Chesapeake Bay Watershed Agreement

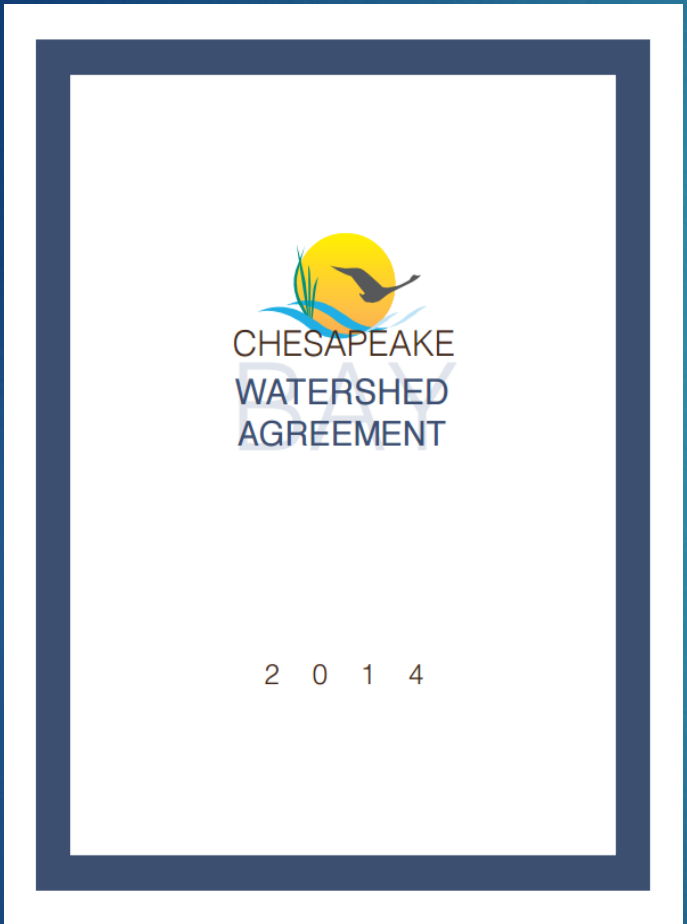
THE CHESAPEAKE BAY PROGRAM INDICATORS FRAMEWORK

NATIONAL CONFERENCE ON RESTORATION | DOREEN VETTER | APRIL 19, 2016

Today's talk

I. New CBP Indicators Framework – why, what & how
II. Adaptive Management & Collaboration
III. Communicating our Work: Transparent and Accountable
IV. Next Steps

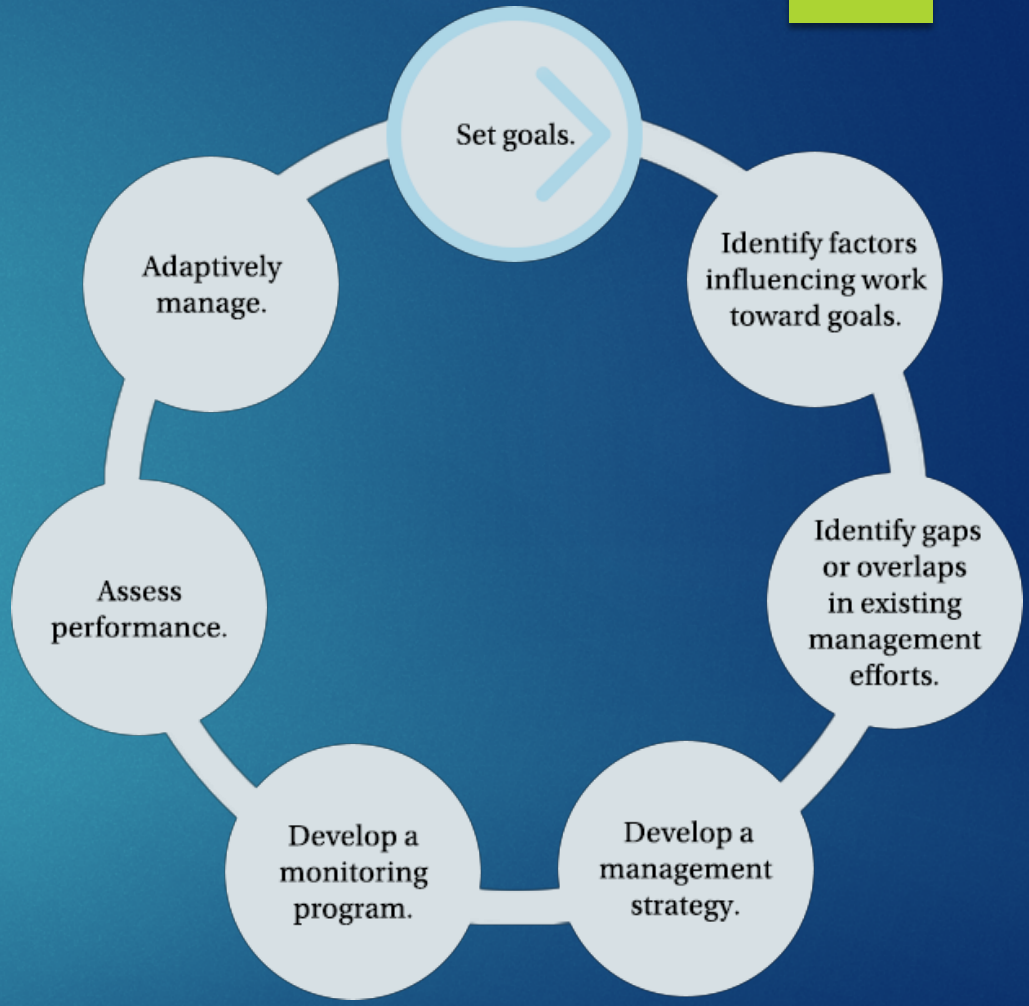
New Directions



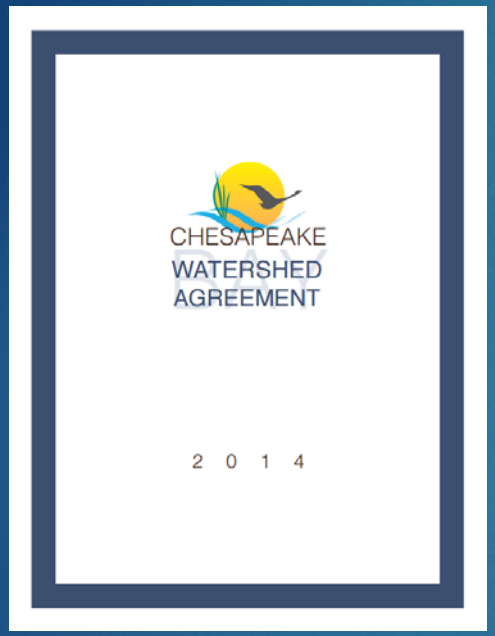
1. New Goals
2. New Outcomes

The Adaptive Management Decision Framework

NEW guiding principle of the Watershed Agreement.



Reflecting the Need



Outdated Indicators Framework

Indicator Framework Goals

1. Align indicators to the CBP Agreement.
2. Support adaptive management.
3. Communicate progress.

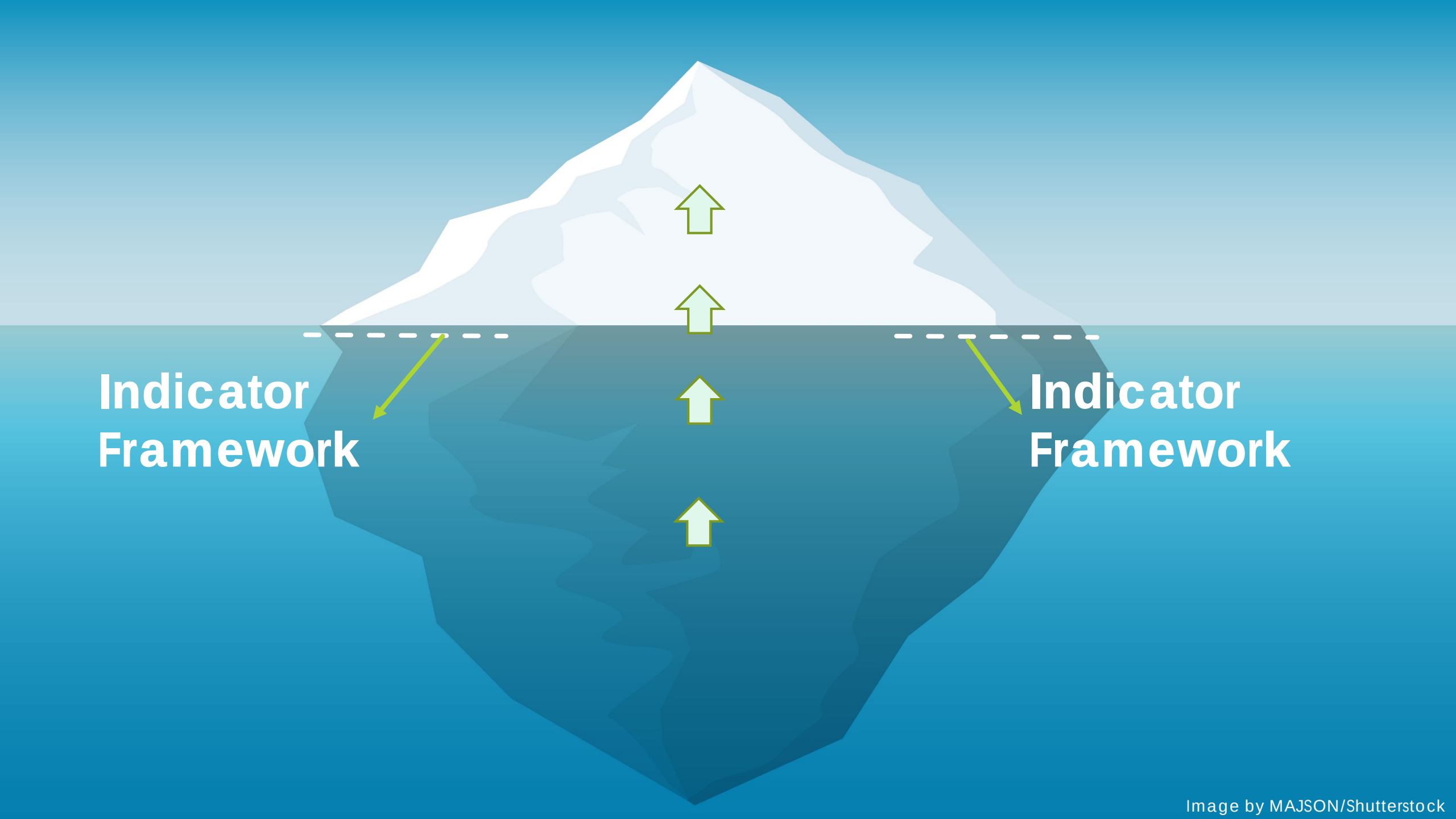
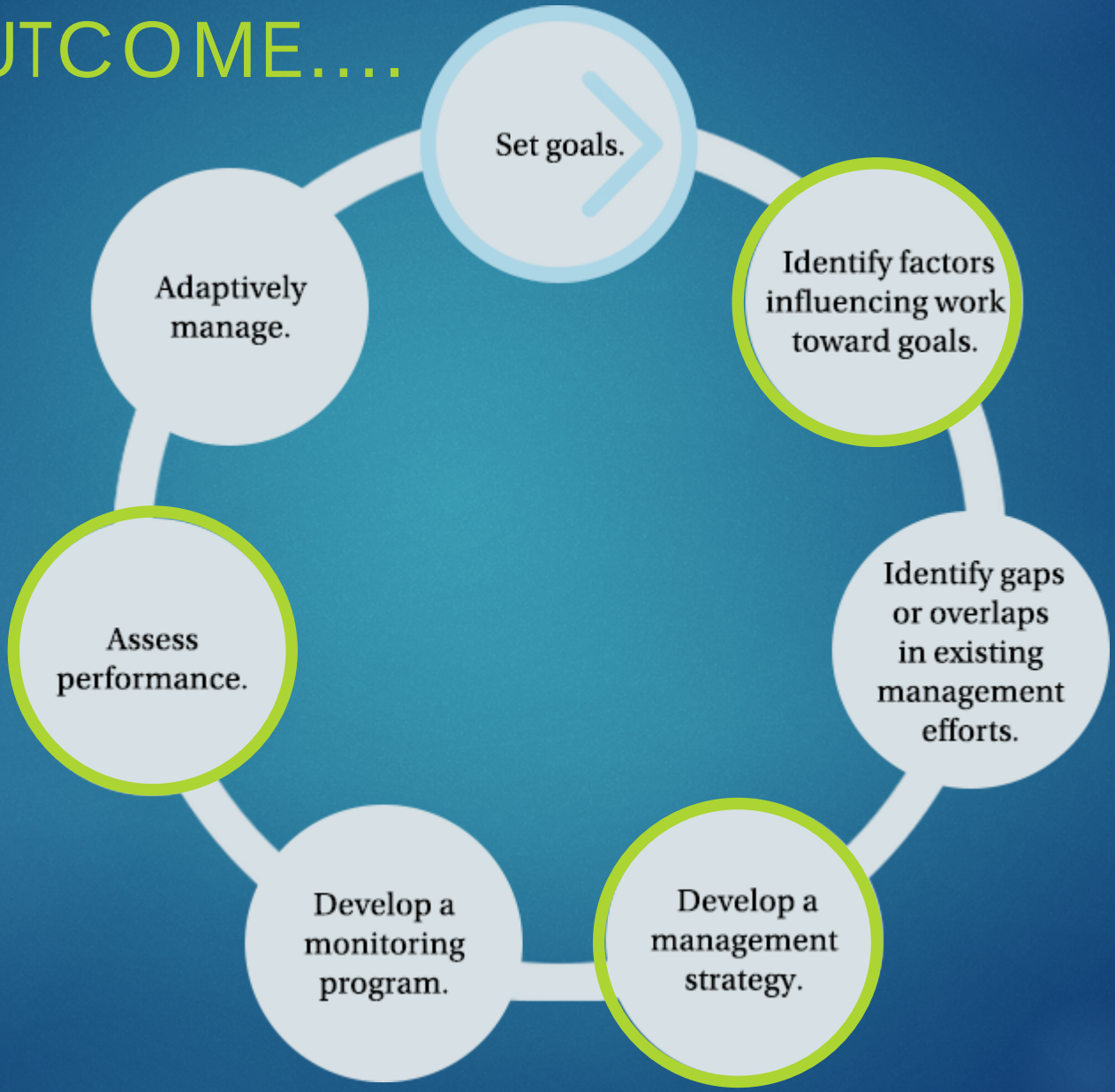
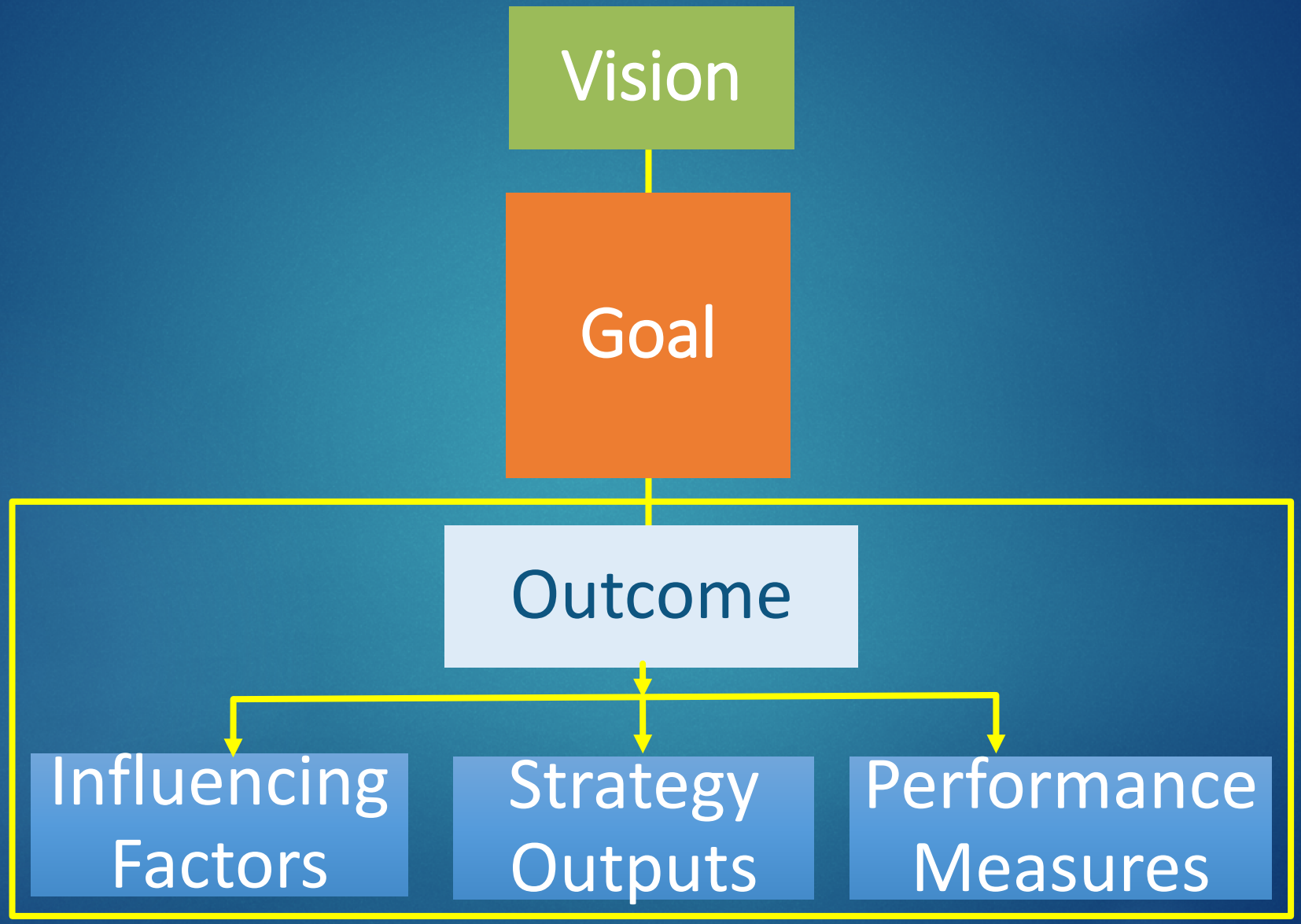


Image by MAJSON/Shutterstock

Chesapeake Bay Decision Framework

FOR EACH OUTCOME....

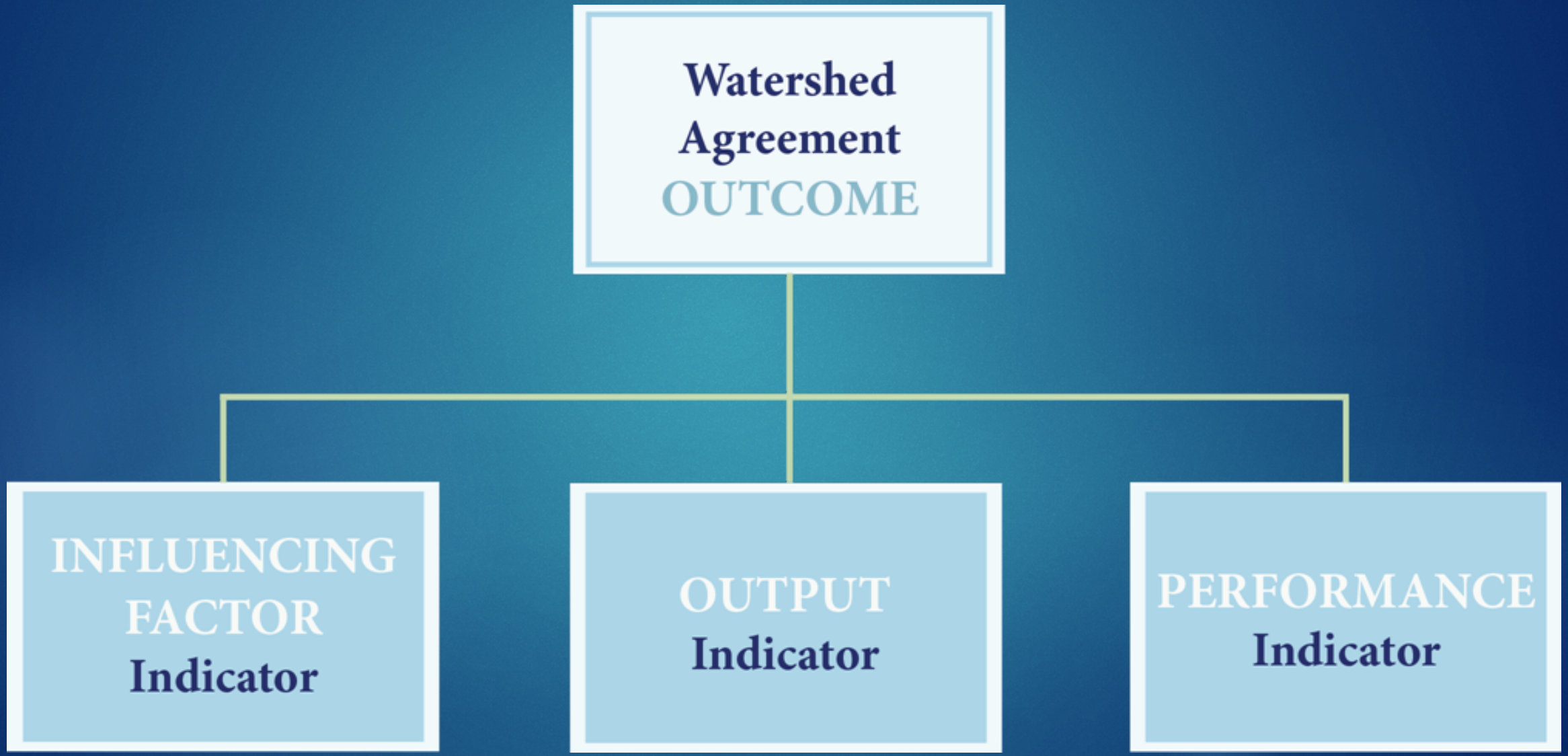


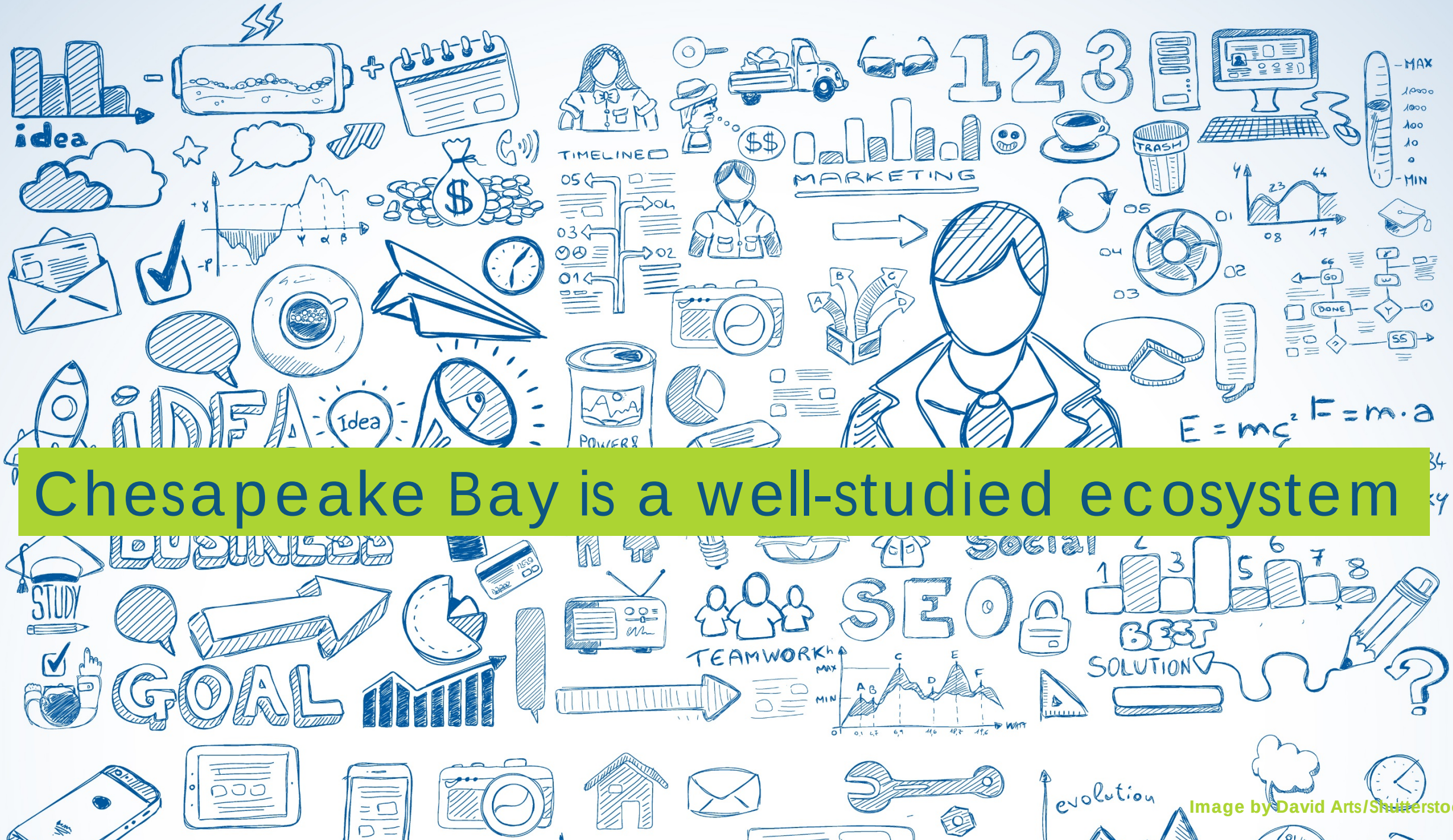

Vision
Goal
Outcome
Influencing Factors
Strategy Outputs
Performance Measures

Information Needs

- What KEY factors impact achievement?
  - → **INFLUENCING FACTORS**
- Are we doing what we said we would do?
  - → **OUTPUTS**
- Are we achieving the outcome?
  - → **PERFORMANCE**

Indicators Framework





Chesapeake Bay is a well-studied ecosystem

What's DIFFERENT?

Image by Pepe Ramirez/Shutterstock

Image by Shai_Halud/Shutterstock

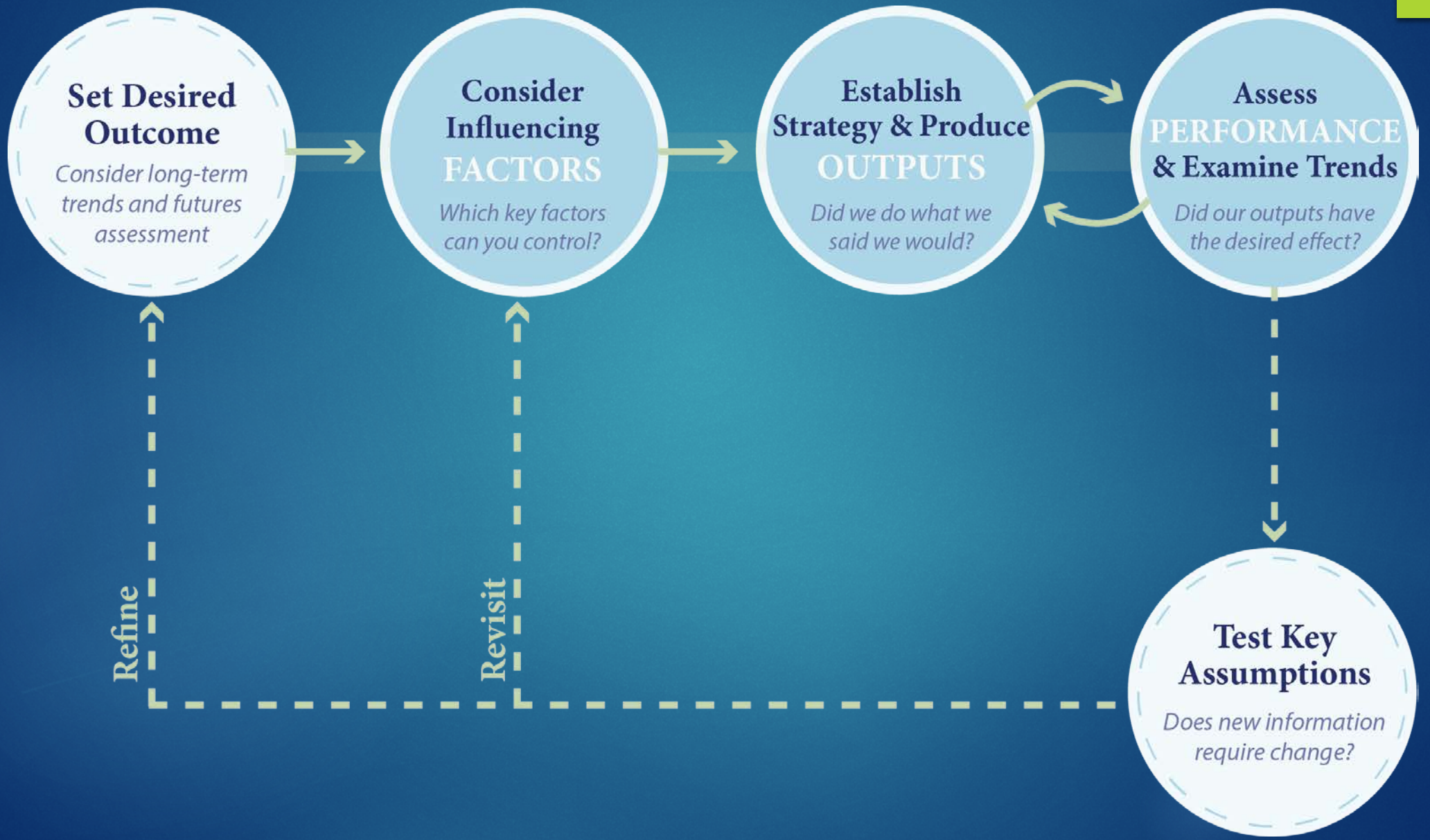
Support CONNECTIONS between outcomes

Performance Indicators

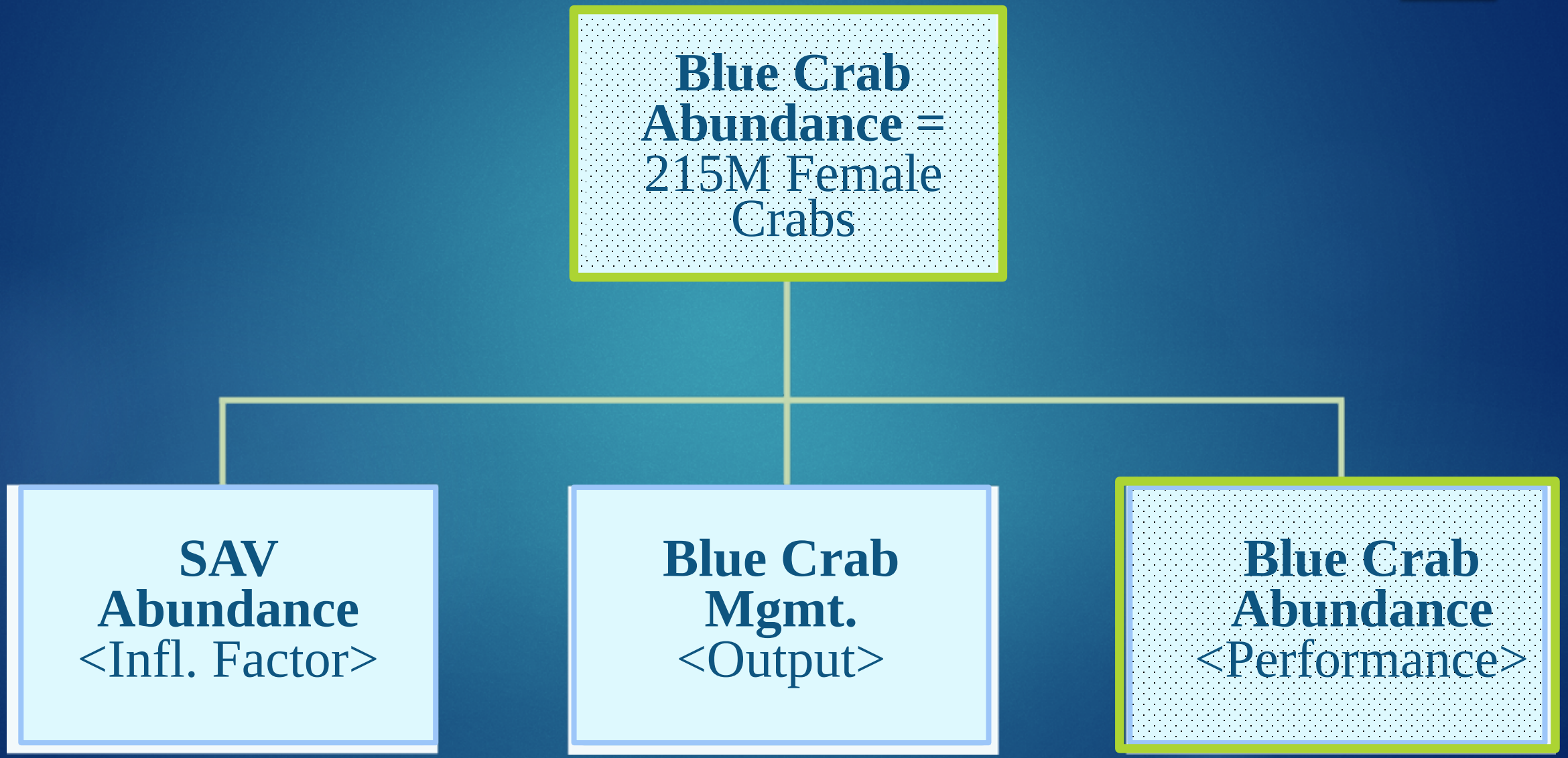
Blue Crab Abundance <Performance>

Blue Crab Abundance = 215M Female Crabs

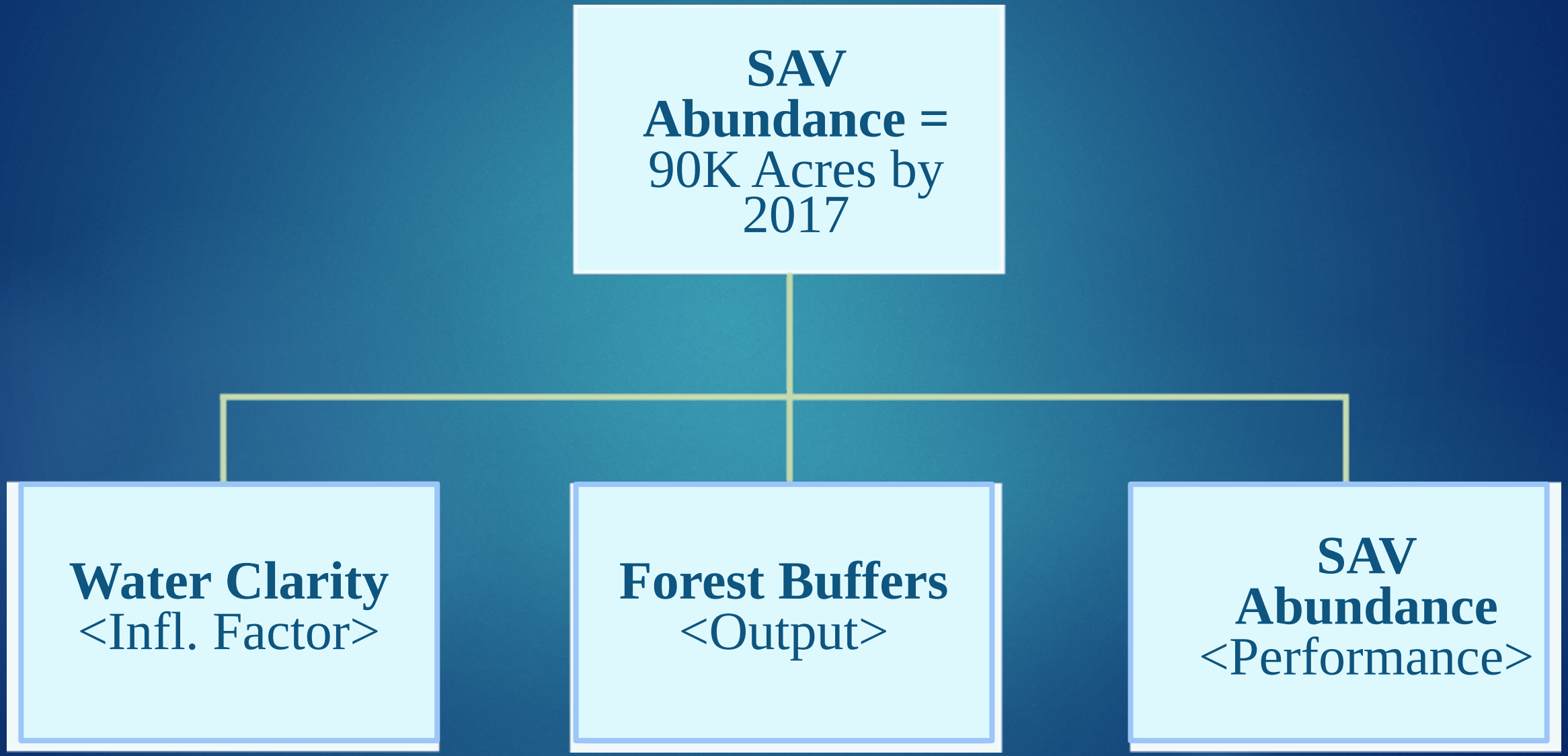
Simplified Decision Framework



How does it work in practice?



Cross-outcome connections are vital!



Cross-outcome collaboration vital to achieving goals

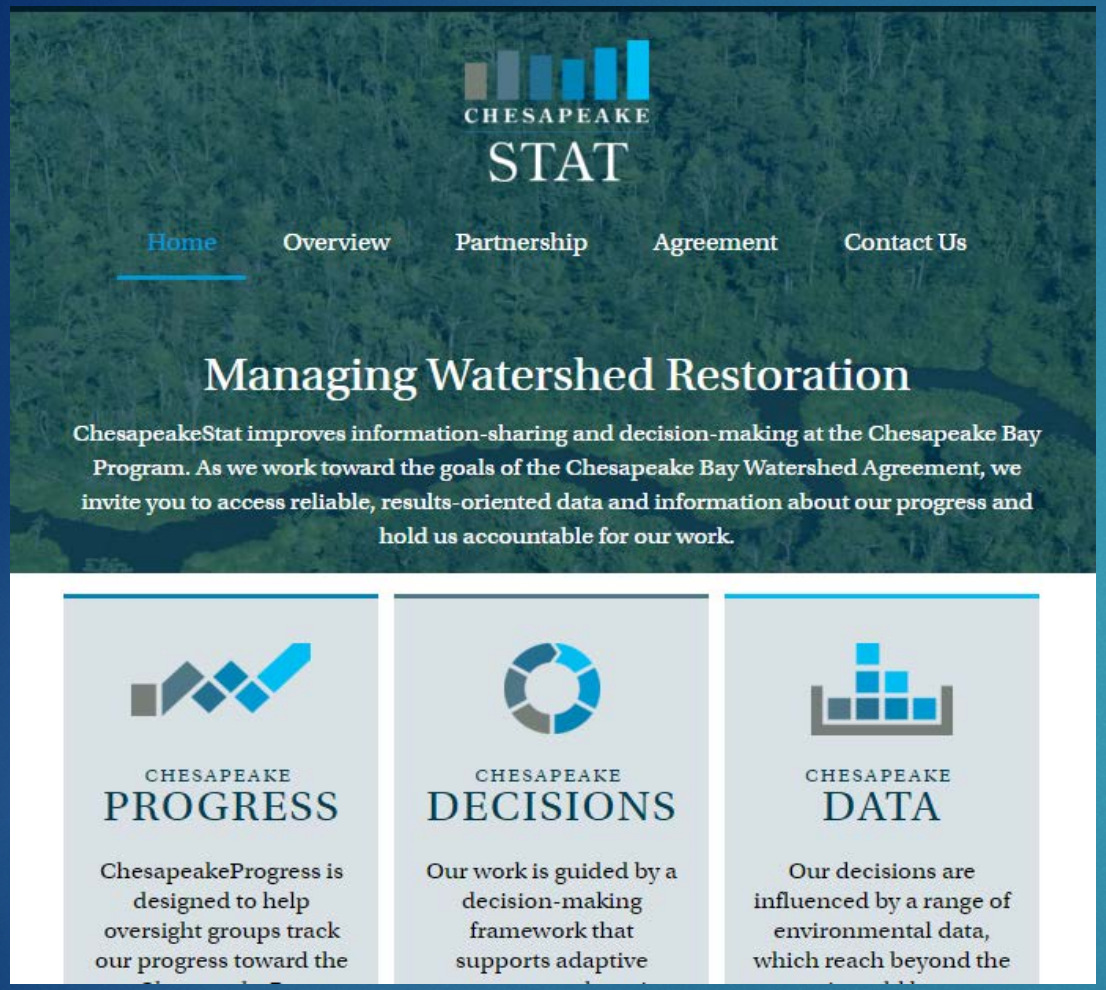
Image by Rido/Shutterstock

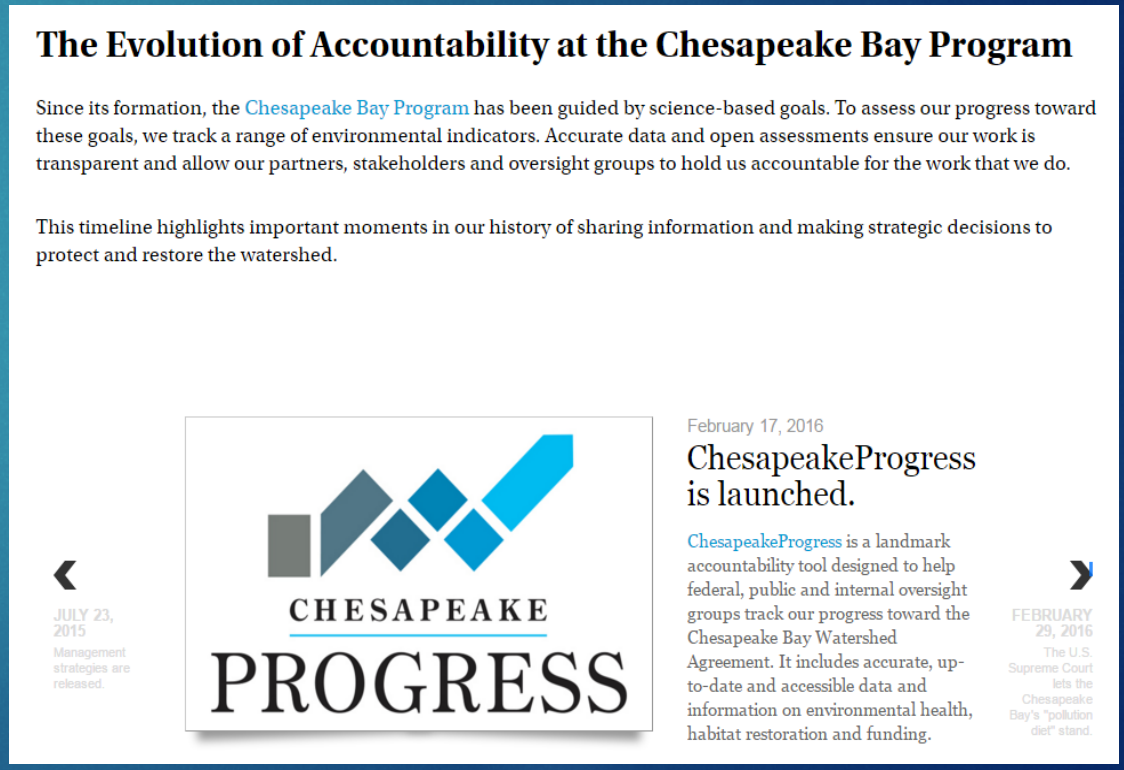
...and necessary with limited resources.

Image by pathdoc/Shutterstock

Communicating Our Work

TRANSPARENT AND ACCOUNTABLE


CHESAPEAKE
STAT
Home
Overview
Partnership
Agreement
Contact Us
Managing Watershed Restoration
ChesapeakeStat improves information-sharing and decision-making at the Chesapeake Bay Program. As we work toward the goals of the Chesapeake Bay Watershed Agreement, we invite you to access reliable, results-oriented data and information about our progress and hold us accountable for our work.
CHESAPEAKE
PROGRESS
ChesapeakeProgress is designed to help oversight groups track our progress toward the
CHESAPEAKE
DECISIONS
Our work is guided by a decision-making framework that supports adaptive
CHESAPEAKE
DATA
Our decisions are influenced by a range of environmental data, which reach beyond the


The Evolution of Accountability at the Chesapeake Bay Program
Since its formation, the Chesapeake Bay Program has been guided by science-based goals. To assess our progress toward these goals, we track a range of environmental indicators. Accurate data and open assessments ensure our work is transparent and allow our partners, stakeholders and oversight groups to hold us accountable for the work that we do.
This timeline highlights important moments in our history of sharing information and making strategic decisions to protect and restore the watershed.
JULY 23, 2015
Management strategies are released.
CHESAPEAKE
PROGRESS
February 17, 2016
ChesapeakeProgress is launched.
ChesapeakeProgress is a landmark accountability tool designed to help federal, public and internal oversight groups track our progress toward the Chesapeake Bay Watershed Agreement. It includes accurate, up-to-date and accessible data and information on environmental health, habitat restoration and funding.
FEBRUARY 29, 2016
The U.S. Supreme Court lets the Chesapeake Bay's "pollution diet" stand.

CHESAPEAKE PROGRESS

Goals

Sustainable Fisheries

Habitat loss, poor water quality and harvest pressure continue to threaten the sustainability of the Chesapeake Bay's recreational and commercial fisheries. Sustaining fish and shellfish populations supports a maritime culture, a strong economy and a healthy ecosystem.

Goal

Protect, restore and enhance finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem in the watershed and Chesapeake Bay.

Progress Increased

Vital Habitats

Outcomes

- Blue Crab Abundance →
- Blue Crab Management →
- Fish Habitat →
- Forage Fish →
- Oysters →
- Black Duck →
- Brook Trout →

Blue Crab Abundance

Maintain a sustainable blue crab population based on a target of 215 million adult females. Use the best available science to refine population targets through 2025.

Progress

Between 2015 and 2016, the abundance of adult (age 1+) female blue crabs in the Chesapeake Bay increased 92 percent from 101 million to 194 million. This number is above the 70 million threshold but below the 215 million target.

Chart: Blue Crab Population

View | Data (xls) | Methods | JPG

This outcome's female-specific reference points were recommended by the 2011 blue crab benchmark stock assessment and

CHESAPEAKE PROGRESS

This outcome's female-specific reference points were recommended by the 2011 blue crab benchmark stock assessment and adopted in 2012. Where adult female blue crab abundance falls in relation to these numbers informs management decisions for the blue crab fishery.

Blue crabs support commercial and recreational fisheries across the region. Because there is natural variability in annual blue crab populations, blue crab abundance is expected to fluctuate from year to year. A number of environmental factors can affect blue crab abundance, including winter temperatures, coastal currents, weather patterns and natural predation. Since data collection began in 1990, the abundance of adult female blue crabs has peaked twice: first in 1991 when abundance reached 227 million, and second in 2010 when abundance reached 246 million.

Learn About Factors Influencing Progress

Management Strategy

To achieve the blue crab abundance outcome, participating partners have committed to:

- Planning and implementing a benchmark stock assessment; and
- Continuing to support the Chesapeake Bay Stock Assessment Committee's annual review of the status of the blue crab population.

These partners will also collaborate with the work being done to achieve the **climate adaptation**, **climate monitoring and assessment**, **fish habitat**, **forage fish**, **submerged aquatic vegetation**, and **water quality standards attainment and monitoring** outcomes.

Monitoring and assessing progress toward the outcome will occur through the **Chesapeake Bay Stock Assessment Committee's** (CBSAC) annual review of blue crab survey data and determination of population status relative to biological reference points. The continuation of the annual **Bay-wide Blue Crab Winter Dredge Survey** will be essential in estimating the blue crab population and monitoring the stock.

Download PDF

Participating Partners

The **Sustainable Fisheries Goal Implementation Team** leads the effort to achieve this outcome.

Participating partners include:

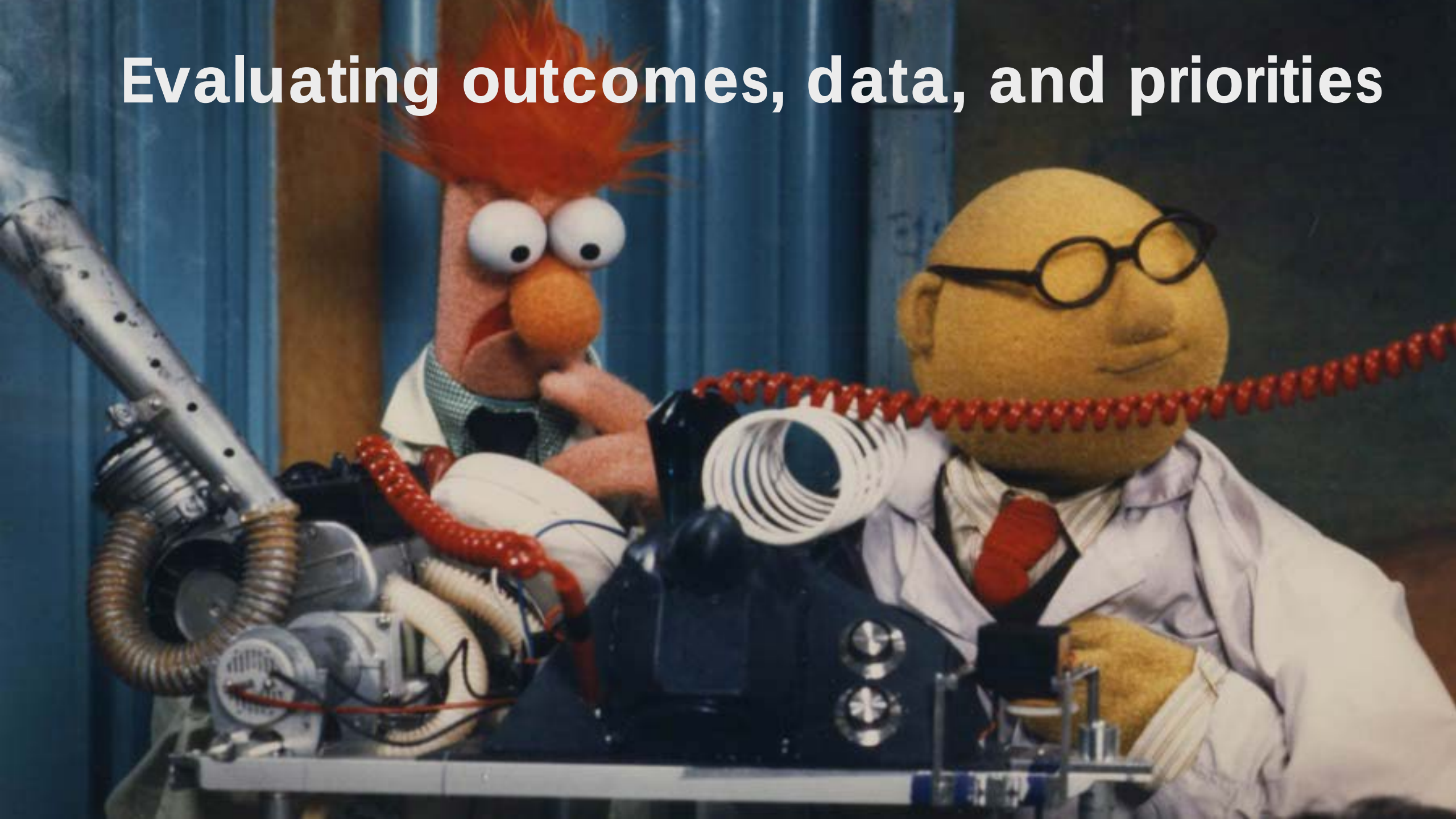
- Maryland Department of Natural Resources *(State of Maryland)*
- Virginia Marine Resources Commission *(Commonwealth of Virginia)*
- Potomac River Fisheries Commission
- Chesapeake Bay Commission
- National Marine Fisheries Service *(National Oceanic and Atmospheric Administration)*

Maryland, Virginia and the District of Columbia also engage commercial and recreational blue crab harvesters through committees and advisory groups, which include the Maryland Blue Crab Industry Advisory Committee, Blue Crab Industry Design Team, Sport Fisheries Advisory Commission and Tidal Fisheries Advisory Commission; the Virginia Blue Crab Industry Panel and Marine Resources Commission Crab Management Advisory Committee; and the Potomac River Crab Advisory Committee.

Indicators Framework: Next Steps

https://www.flickr.com/photos/llansades/

Evaluating outcomes, data, and priorities



Accountability & Performance Indicators

Monitoring for Adaptive Management

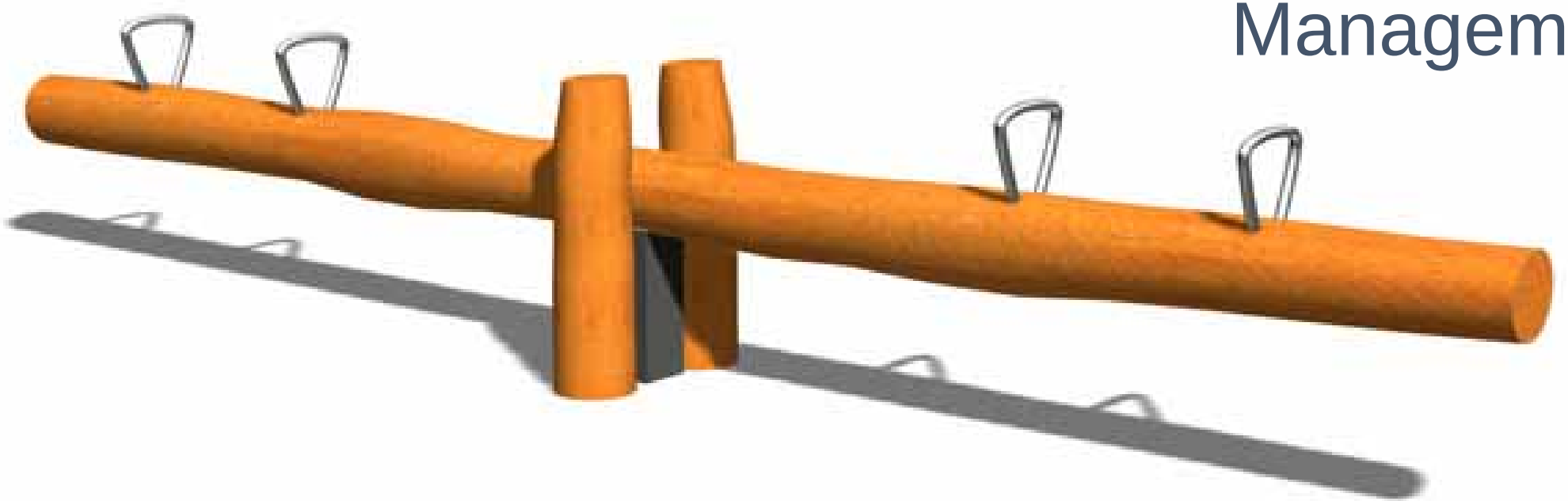


Image by Shai_Halud/Shutterstock

Monitoring to support multiple benefits


Important progress…
…much remains to be done!!

Vetter.Doreen@epa.gov
www.ChesapeakeProgress.com