Open SESAME:
A Social-Ecological Systems framework for collaborative Adaptive Management and Engagement in coastal restoration and climate adaptation

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Overview

- Background
- Case studies
- SESAME Framework & Applied Insights
- Takeaways

Image: Worthpoint.com

Human Dimensions of Marsh Resilience

- Humans enable/inhibit coastal adaptation
- Stakeholder engagement and collaboration has a long history in coastal restoration and climate adaptation
- Not much work capturing lessons learned from a social perspective

Image: Worthpoint.com

Ninigret Pond, Charlestown, Rhode Island

Sengekontacket Pond, Oak Bluffs, Massachusetts

Ninigret Pond, Charlestown, Rhode Island

- **Sediment placement project**

- **Goals:** Restore degraded marsh & build resiliency, dredge for recreational navigation

- **Primary partners:** RI Coastal Resources Management Council, USFWS, Town of Charlestown, Save The Bay, Salt Ponds Coalition
- **Other partners & stakeholders:** EPA, Narragansett Bay NERR, URI, RI Natural History Survey, local marina users, aquaculturists

- **Living shoreline project**
- **Goals:** prevent erosion, living shorelines for nitrogen mitigation, maintain salt marsh wildlife and bird habitat for Audubon visitors and students
- **Primary partners:** EPA, Oak Bluffs & Edgartown Shellfish Depts, Felix Neck Wildlife Sanctuary- Mass Audubon, URI
- **Other partners & stakeholders:** Martha's Vineyard Shellfish Group, Friends of Sengekontacket Pond, Audubon visitors & students, recreational boaters, recreational & commercial shellfishers

Sengekontacket Pond, Oak Bluffs, Massachusetts

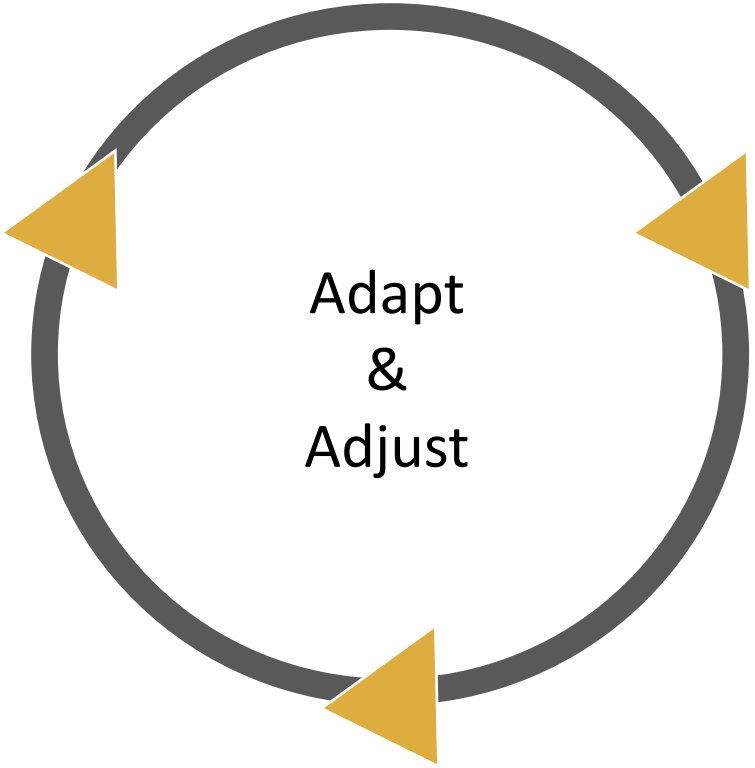
Ninigret Pond, Charlestown, Rhode Island

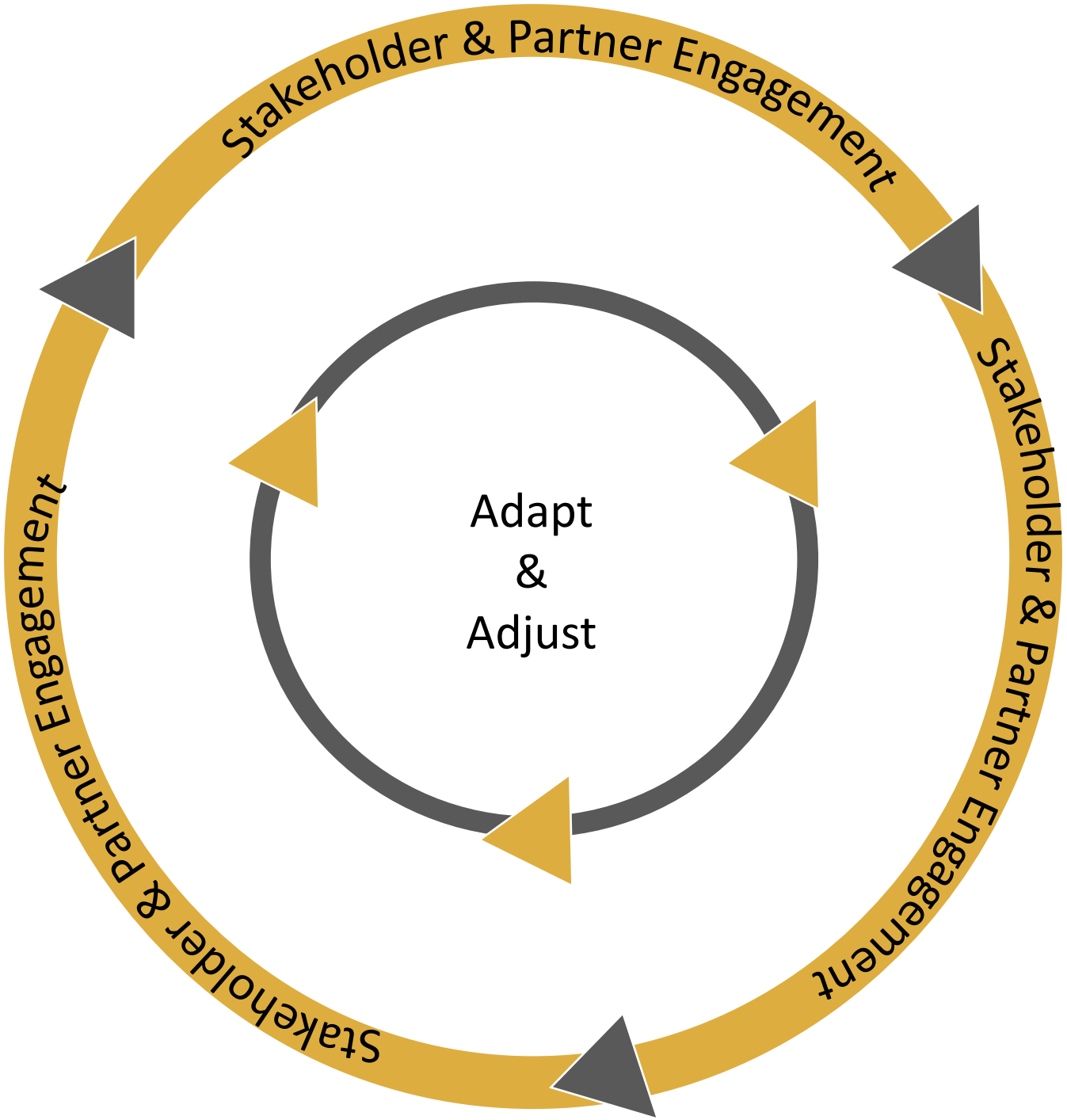
Sengekontacket Pond, Oak Bluffs, Massachusetts

SESAME Framework

Social-
Ecological
Systems framework for collaborative
Adaptive
Management and
Engagement in coastal restoration and climate adaptation

Adaptive Management in Coastal Restoration





Collaborative Adaptive Management in Coastal Restoration

Ninigret Pond, Charlestown, Rhode Island

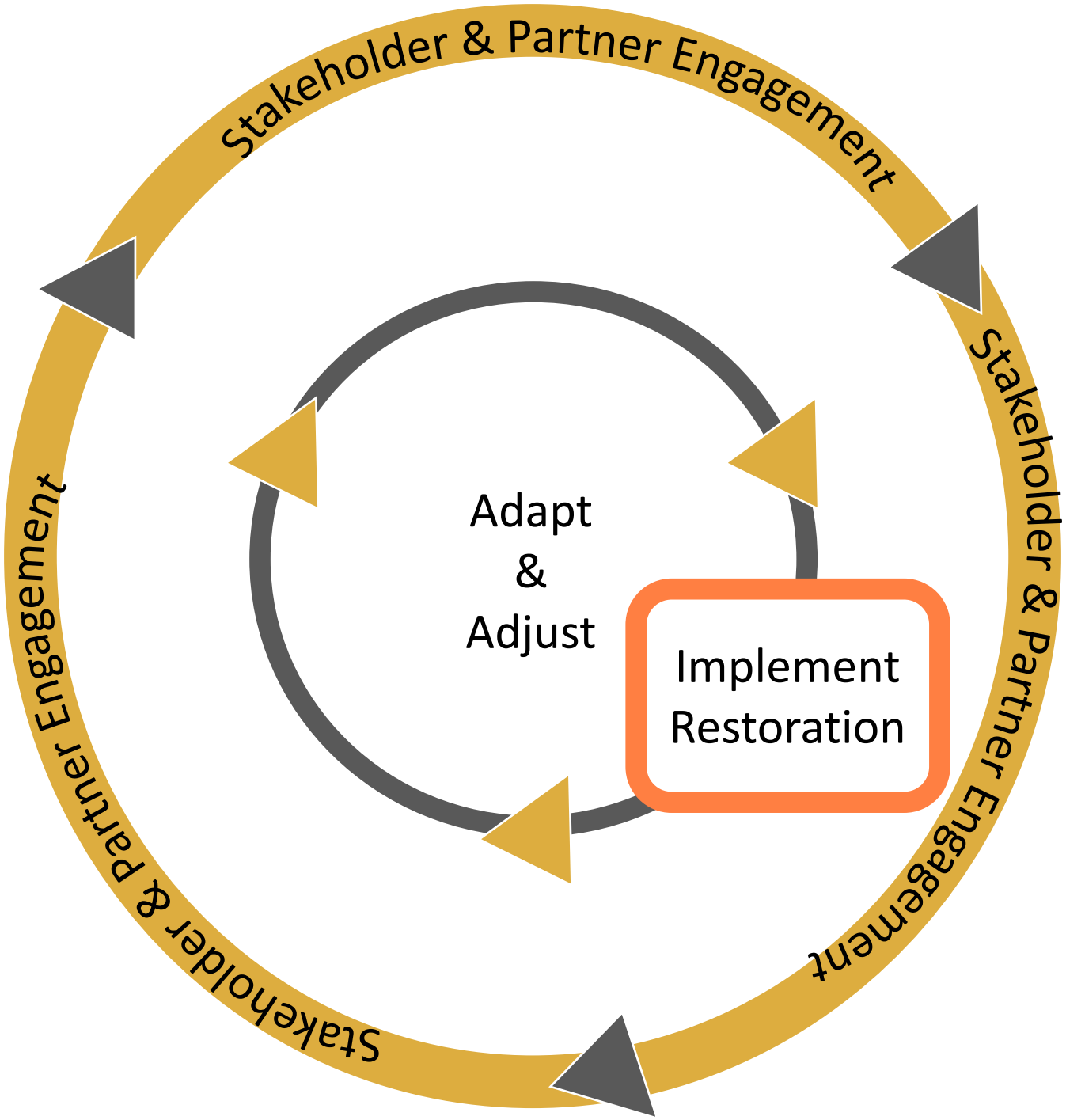
Sengekontacket Pond, Oak Bluffs, Massachusetts

Social-Ecological System Goals & Planning

- Restoration/adaptation goals centered on both the people and the ecosystem
- Goals are collaboratively developed
- Appropriate public and other stakeholders engaged

Ninigret's goals

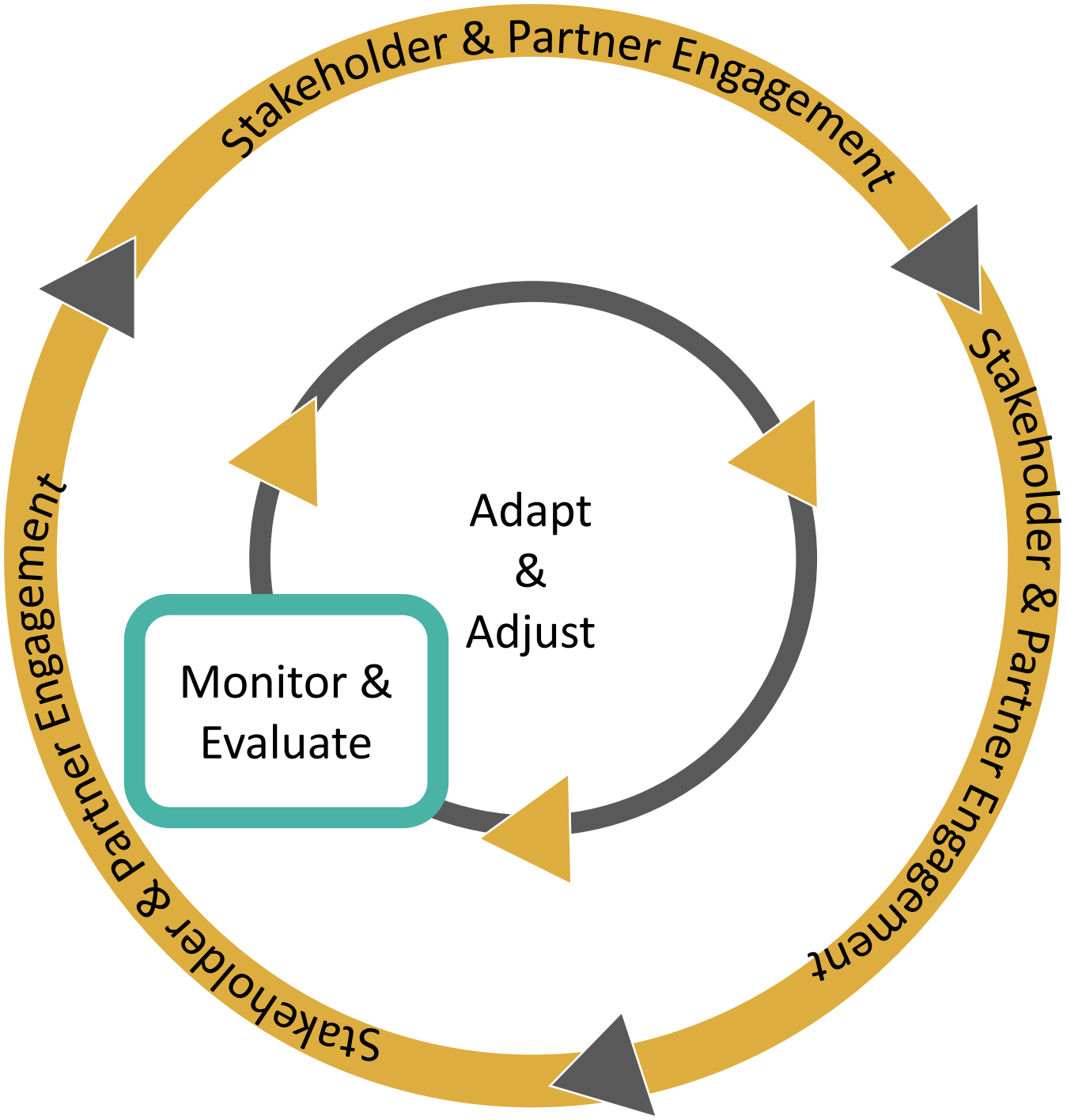
- Ecological goals:
  - Restore degraded marsh
  - Build resiliency
- Social goal:
  - Dredge for recreational navigation



Implementing the restoration

- Opportunities for contributing
- Consensus building
- Revisiting goals/planning

MV coir log installation



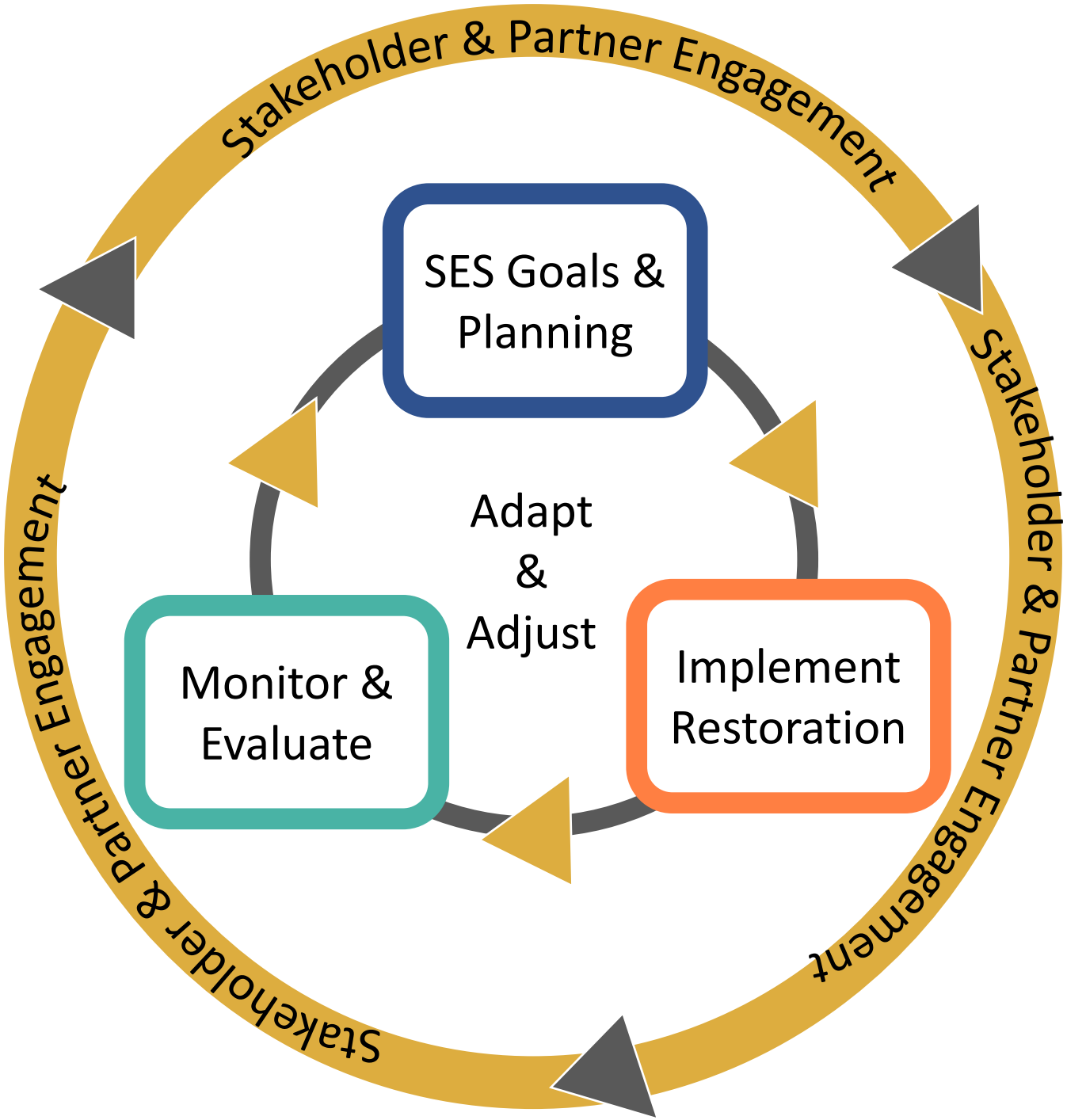
Monitoring & Evaluation

- Often mandated, rarely funded
- Opportunity to improve within a project and for future efforts
- Look at social and ecological metrics

MV social & ecological metrics

- Had both social and ecological metrics and monitoring
- Challenges for duration and responsibility

See Josephs & Humphries, 2018


Stakeholder & Partner Engagement
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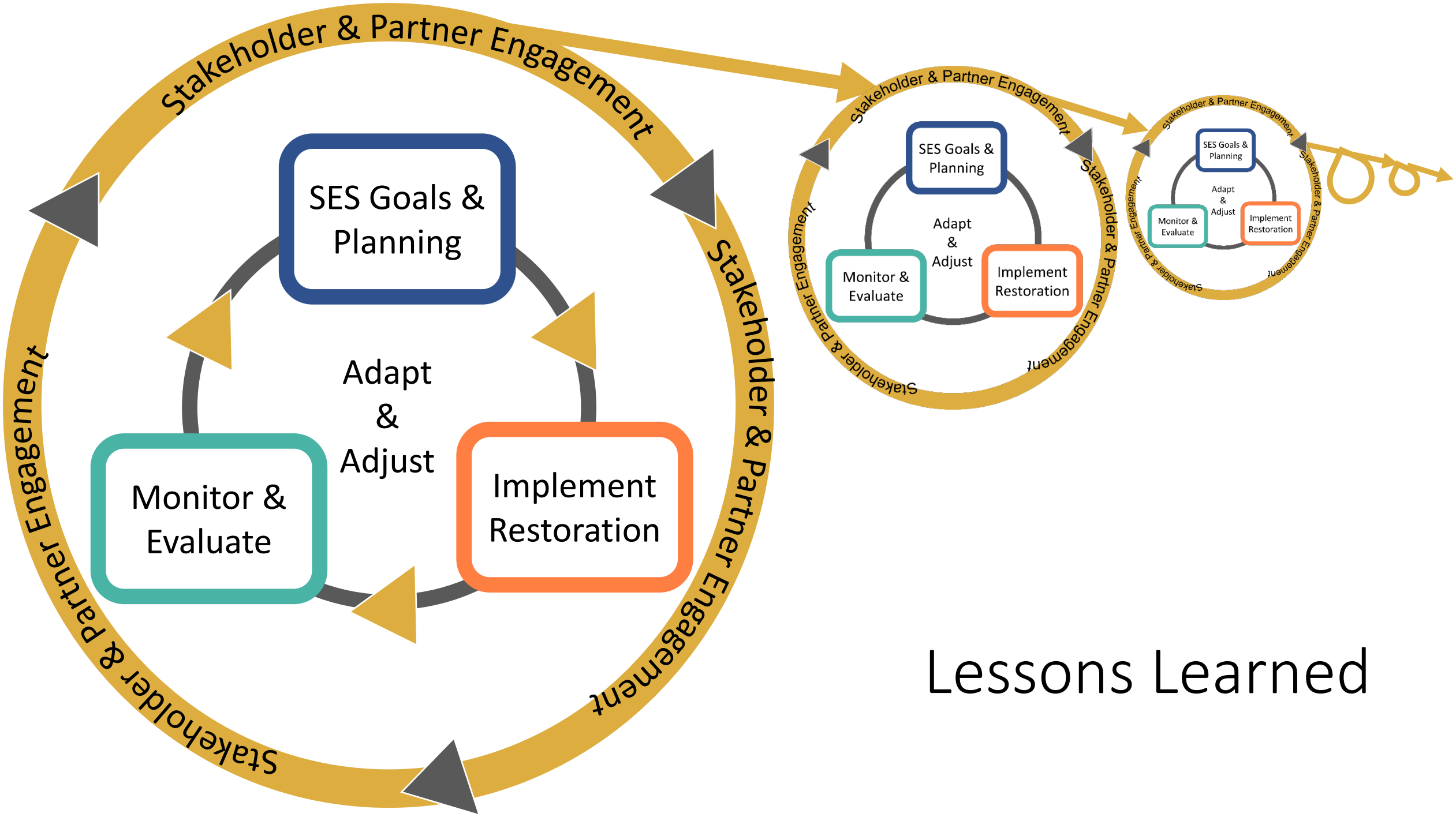
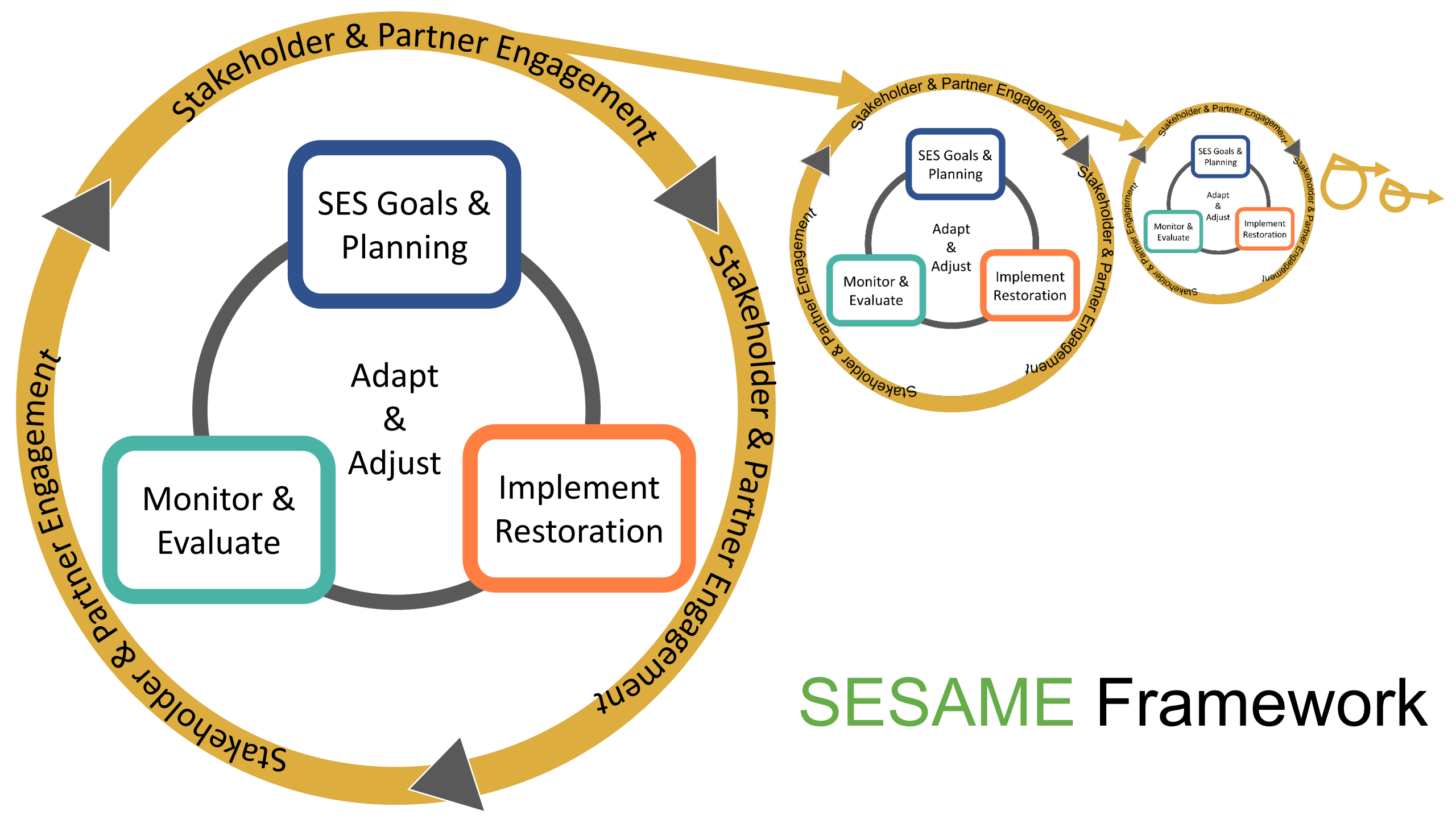
SES Goals & Planning
Implement Restoration
Monitor & Evaluate
Adapt & Adjust



Lessons Learned

Lessons Learned: Ninigret project→Quonochontaug project

See Danielle Perry's work: Perry et al. 2020



SESAME Framework

Summary

- Humans affect every piece of the restoration project
- Stakeholder engagement & collaboration are sometimes difficult
- More carefully considering the social side of restoration can benefit future projects

Thank you!

Please feel free to contact me with any questions:

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