

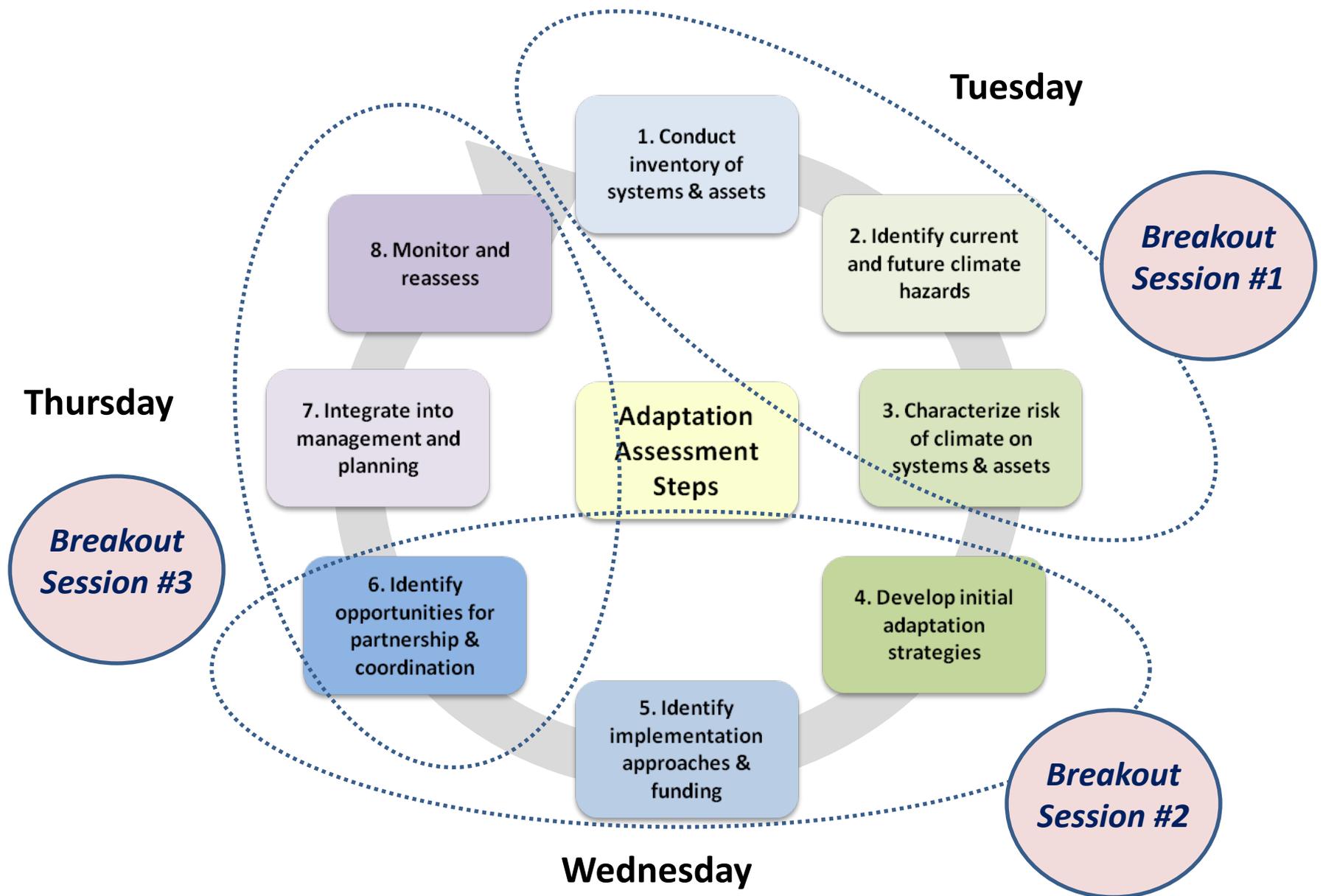
**Resilience and Adaptation
to Climate Risks Workshop:
Stennis Space Center Area**

Breakout Session #2

October 16-18, 2012

Christina Hudson
Deputy Division Manager
Sustainability & Strategic Risk Management
Energy, Environment & Infrastructure Business Unit
SAIC

Resilience and Adaptation to Climate Risks Workshop: Stennis Space Center Area



Activities & Deliverables

*Breakout
Session #2*

Wednesday afternoon

- **Develop potential adaptation strategies based upon:**
 - Breakout Session #1 information
 - Your knowledge and expertise
 - Presentations on what others are doing about climate change
- **Deliverables:** Completed templates for multiple assets, including adaptation implementation steps and considerations, and funding and partnering possibilities.

Breakout Groups:

Built Systems

People / Community Systems

Natural Resource Systems

**Thursday AM
Report Back: Potential
adaptation strategies**

Develop Initial Adaptation Strategies

BREAKOUT SESSION #2 - Develop Potential Adaptation Strategies							
Potential Adaptation Strategies and Implementation Approaches (Steps 4-5)						Potential Funding & Partnerships (Steps 5-6)	
Strategy / Implementation Steps	Type of Strategy	Primary Implementer / Organization	Other Stakeholders to Implement or Impacted	Estimated Cost of Strategy	Funding Available?	Funding Source	Leveraged Partnerships

4. Develop initial adaptation strategies

5. Identify implementation approaches & funding

6. Identify opportunities for partnership & coordination

Document your answers on the Template

Strategy / Implementation Steps

- **Describe strategy in as much detail as possible, including:**
 - What are the steps?
 - Who owns the process?
 - Who makes the Go / No Go decision?
 - Are non-NASA stakeholders involved?
- **What might the strategy look like?**
 - Several projects over multiple years? a single investment?
 - Would it represent an add-on to something already underway?
- **What needs to be done in advance of starting the strategy?**
 - data gathering, research, education, policy changes.....?

TYPES OF ADAPTATION STRATEGY

Adaptation Strategy	Examples
Maintenance & Operations	<ul style="list-style-type: none">• Raising critical infrastructure• Increasing cleaning of drains and gutters to reduce flooding (process change)• Integrating “green” designs such as green roofs on buildings which house key infrastructure to reduce the building’s energy needs (both mitigation and adaptation)• Modifying networks (such as roads and telecommunications) to reflect changes in sea level rise, storm surge, and flooding
Capital Investments	<ul style="list-style-type: none">• New infrastructure• Installation or increase in the height of flood barriers• Relocation of critical elements or the entire infrastructure to higher ground• Changes in construction materials• Retrofits to existing infrastructure or the construction of new infrastructure
Policy	<ul style="list-style-type: none">• Zoning (e.g., land use)• Federal, state, local, agency policy changes• Emergency management• Joint operations for water, energy, transportation and communications with surrounding administrative and political units, such as requiring facilities located within flood zones to elevate electrical equipment above existing or projected flood levels

ESTIMATED COST OF STRATEGY – SWAG is sufficient

Symbol	©	©©	\$	\$\$	\$\$\$	\$\$\$\$
COST	Low or no cost strategy; process change	<\$500K	<\$1M	\$1M - \$5M	\$5M - \$50M	>\$50M

Report Back Guidance

Report Back
THURS AM
8:30 – 9:15

- 15 minute presentation each group
- Deliverables:
 - Present short-term and long-term strategy examples
 - Present a strategy where you know all the pieces can fall into place (feasibility, funding, partnering, etc.)
 - ‘Elevator speech’ about workshop - top 3 issues; top 3 opportunities
- System Owner: how will you continue adaptation strategy development going forward?