

# Subsea Systems Institute: Center of Excellence

Collaboration between  
**University of Houston**  
**Rice University**  
**NASA (JSC)**

**OESI Meeting**  
January 26, 2016

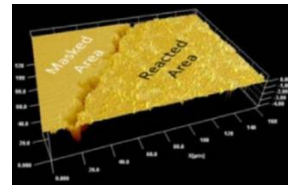
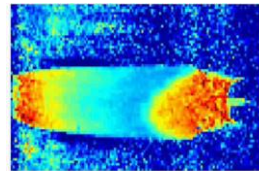
# Subsea Systems Institute: Vision

- Develop engineering, science and policy excellence for the identification and validation of most effective & safe technologies and practices for E&P in the deepwater Gulf of Mexico and extreme environments
- Establish this Institute in Houston with Best in Class Leadership



# Subsea Systems Institute: Collaboration & Leadership

- University of Houston
  - Nation's only Subsea Engineering, Upstream Safety, Well Design & Completions Engineering Programs
  - Offshore Composites, Superconductivity
  - Ocean Energy Safety Institute
- NASA
  - Neutral Buoyancy Labs, ROV, HPHT Materials
  - Risk Assessment
- Rice University
  - Nanotechnology, Materials & Corrosion expertise
  - Computational Science & Visualization & Imaging

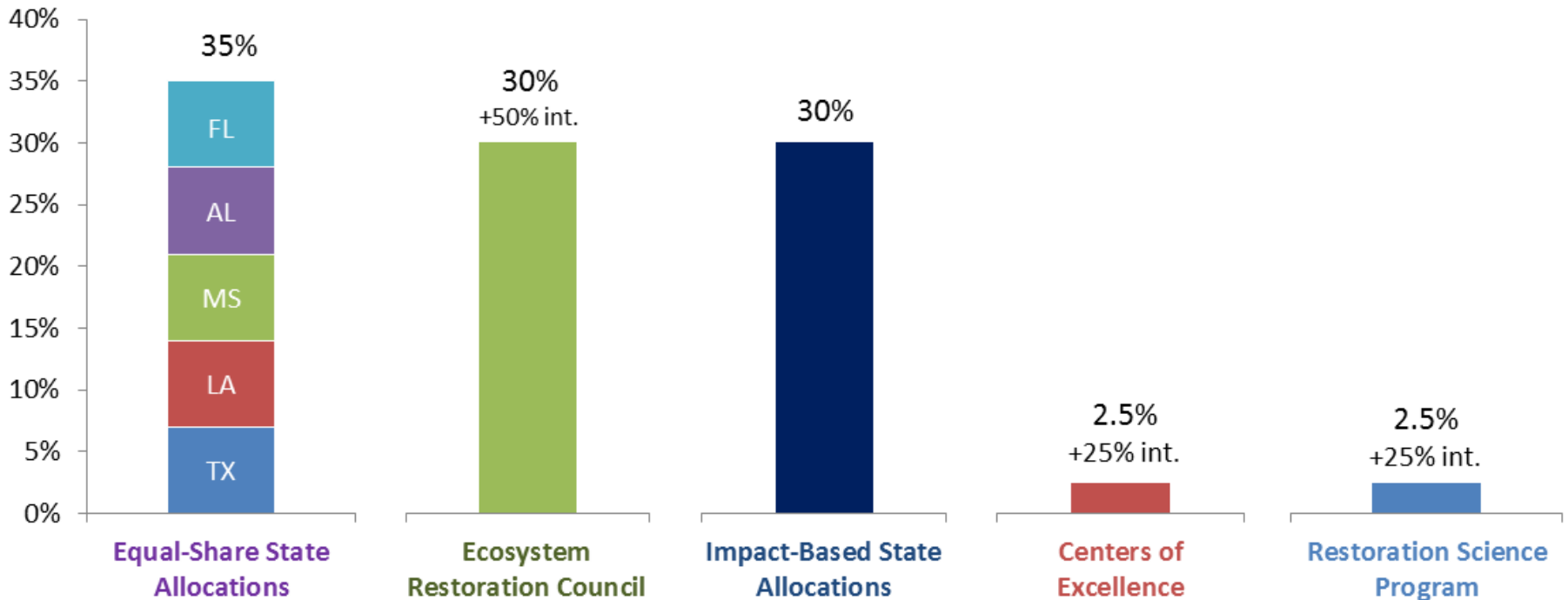


# Subsea Systems Institute: 3 Key Outcomes

1. Provide unbiased third party validation to build public trust in the safe operation of offshore drilling and production
2. Be the repository for best practices and policies for deployment; economically develop advantaged best available & safest technologies for offshore energy development; elevate and ensure the energy industry's safety and operational excellence in offshore applications
3. Attract talent for jobs and investment in the local, state and national economy and reinforce Houston and the state of Texas's reputation as the Energy Capital of the World

# RESTORE Act Becomes the Catalyst and Sustained Funding Mechanism

The Restoration Trust Fund (RTF) established by RESTORE will support five processes to help the Gulf recover environmentally and economically from both *Deepwater Horizon* and decades of development:



# Funding and Program Eligibility

## 2015 – 2016: Awarded Funding

Source	Total Funding	Committed	Programs
Restore Act: COE	\$2.018M	\$1.216M	Phase 1 Awards + Admin
Governors Office	\$2.0M	-	Testing Equip + Special Programs

### Program Eligibility:

- Nonprofit organizations within the five Gulf states

# SSI Activities: Sept – Dec 2015

- SSI Director mobilized
- Issued early Request for Grant Applications (RFGA)
  - 16 Applications Representing Six Institutions
  - Tentatively Selected 4
- Engagement with Government & Industry
- SME input into evolving Strategic Plan
- Review & recommendations for early Research Programs
- Identification of Advisory Board & Technical Advisory Committee
- Business plans for 2016 forward

# Key Findings: SME Engagement

1. Need for close engagement between academic and industry experts
2. Recommend international cooperation and the inclusion of best global practice
3. Include investment in test/research facilities (based on experience with successful global centers)
4. Focus areas should include:
  - a) BOP and downhole monitoring
  - b) Materials and corrosion
  - c) ROVs and AUVs
  - d) Sensors and sensor reliability



# Strategic Plans

- Identify industry gaps and technology requirements through SSI Technical Advisory Committee
- Establish SSI capabilities with clear outcomes and deliverables
- Develop funding base to support research and technology development capable of deployment
- Identify testing / simulation facilities as core engagement with the offshore E&P engineering community
- Maximize SSI effectiveness through engagement with international organizations

