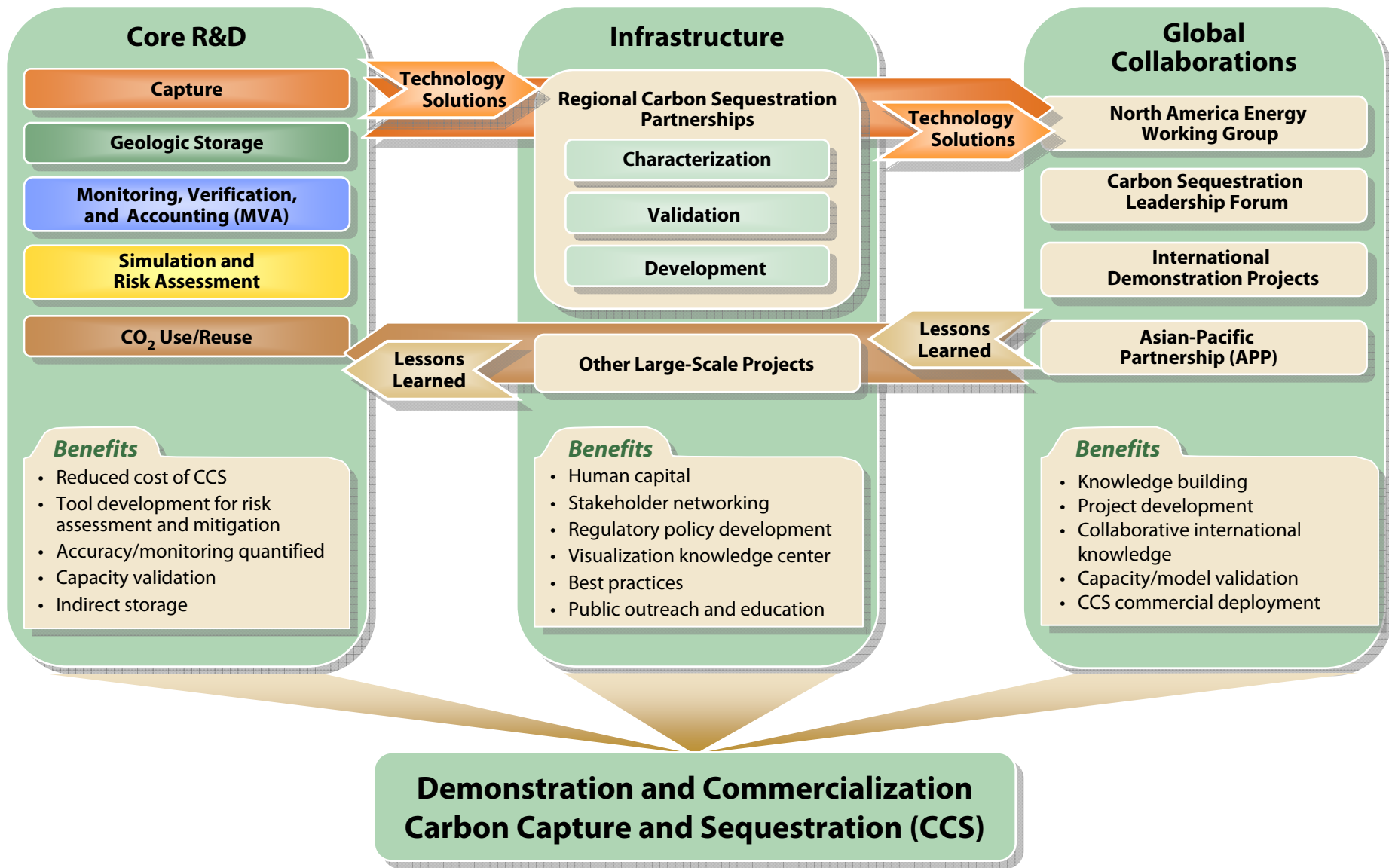


**U.S. DEPARTMENT OF ENERGY • OFFICE OF FOSSIL ENERGY  
NATIONAL ENERGY TECHNOLOGY LABORATORY  
CARBON SEQUESTRATION PROGRAM**



# Geologic Storage Core R&D

Uncertainty/  
Challenges

Lateral Plume  
Migration

Injectivity

Storage  
Capacity

Containment System  
Effectiveness

Research  
Pathways

Reservoir Types and Rock Properties

Dynamic Fluid Flow

Pressure Migration

Trapping Mechanism

Geochemical Reaction

Geomechanical Characterization

Seal Integrity

Well Integrity

Research  
Benefits

Identify &  
Mitigate Risks

Validate  
Capacity & Injection

Calibrate Models

Safe & Effective Long-term Storage