



Thomas W. Smith, F.ASCE, CAE,
Deputy Executive Director
& General Counsel

The Engineer's Role in Managing Risk and Uncertainty

November 19, 2014

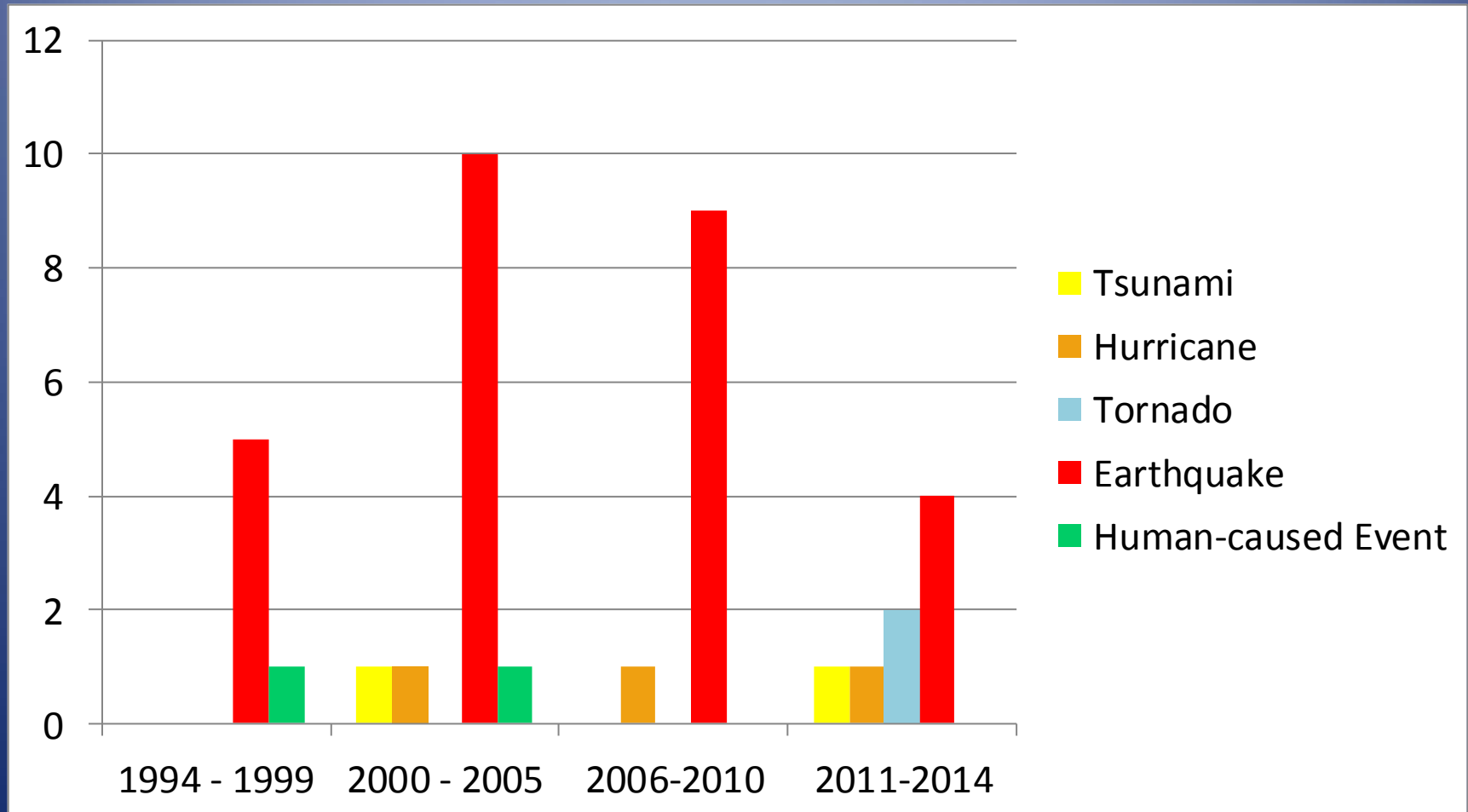
Lessons Learned

Johnstown Flood of 1889



Debris above Pennsylvania Railroad bridge

ASCE Disaster Involvement



Global Response



EARTHQUAKE

HUMAN-CAUSED
EVENT

HURRICANE

TSUNAMI

STORM

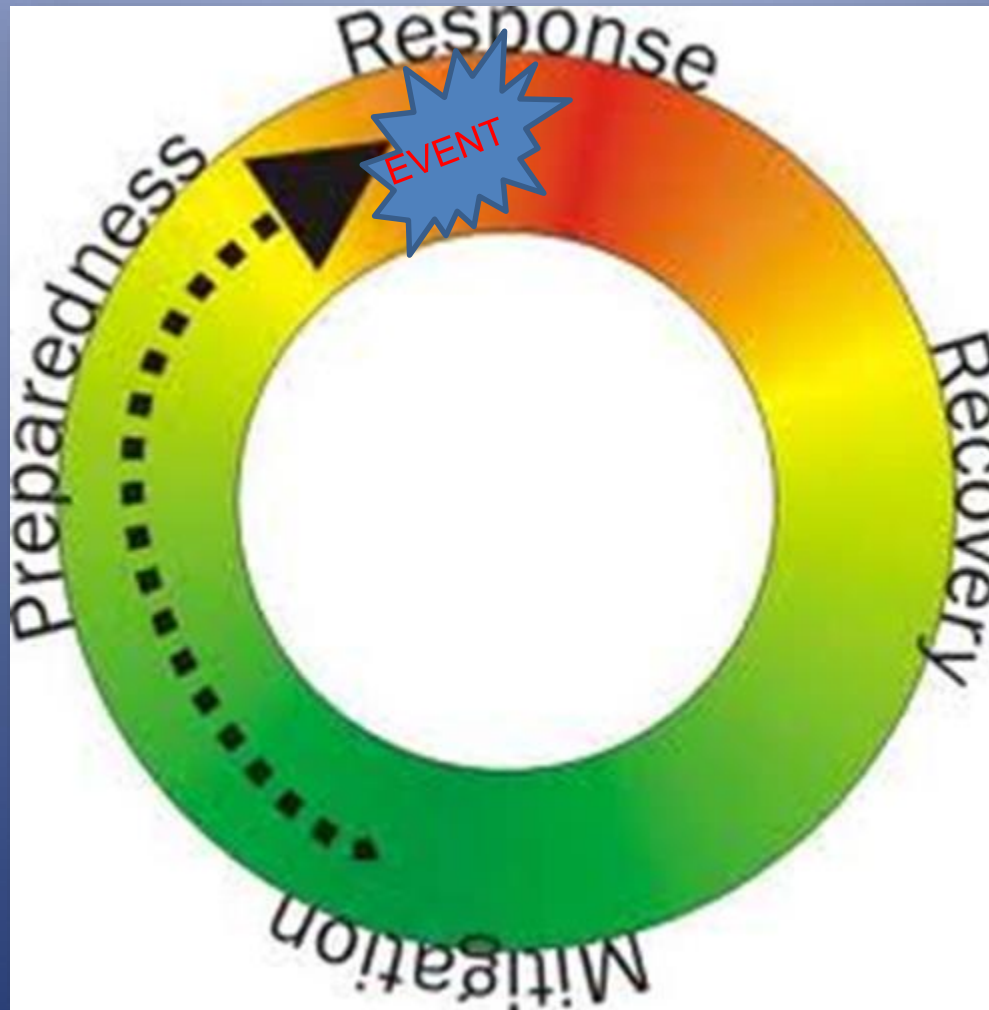
TORNADO

TYPHOON

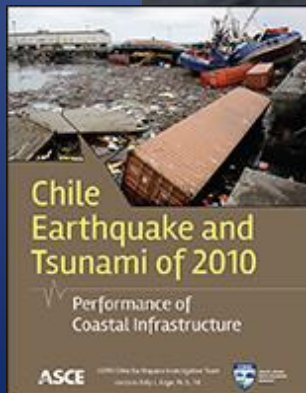
Disaster Response Assessment Teams



Emergency Management Phases



Lessons Learned from Chile



Lessons Learned from Katrina



Lessons Learned from Katrina



Outcomes in New Orleans



Lessons Learned from the Philippines

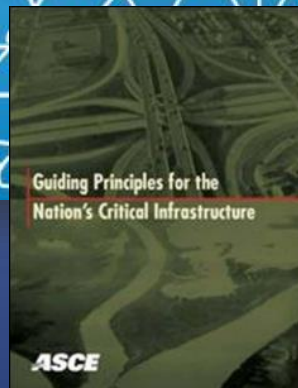


A sample of the devastation wrought by Typhoon Haiyan in Tacloban, Philippines.

Lessons Learned from Japan



Goal: Resilience



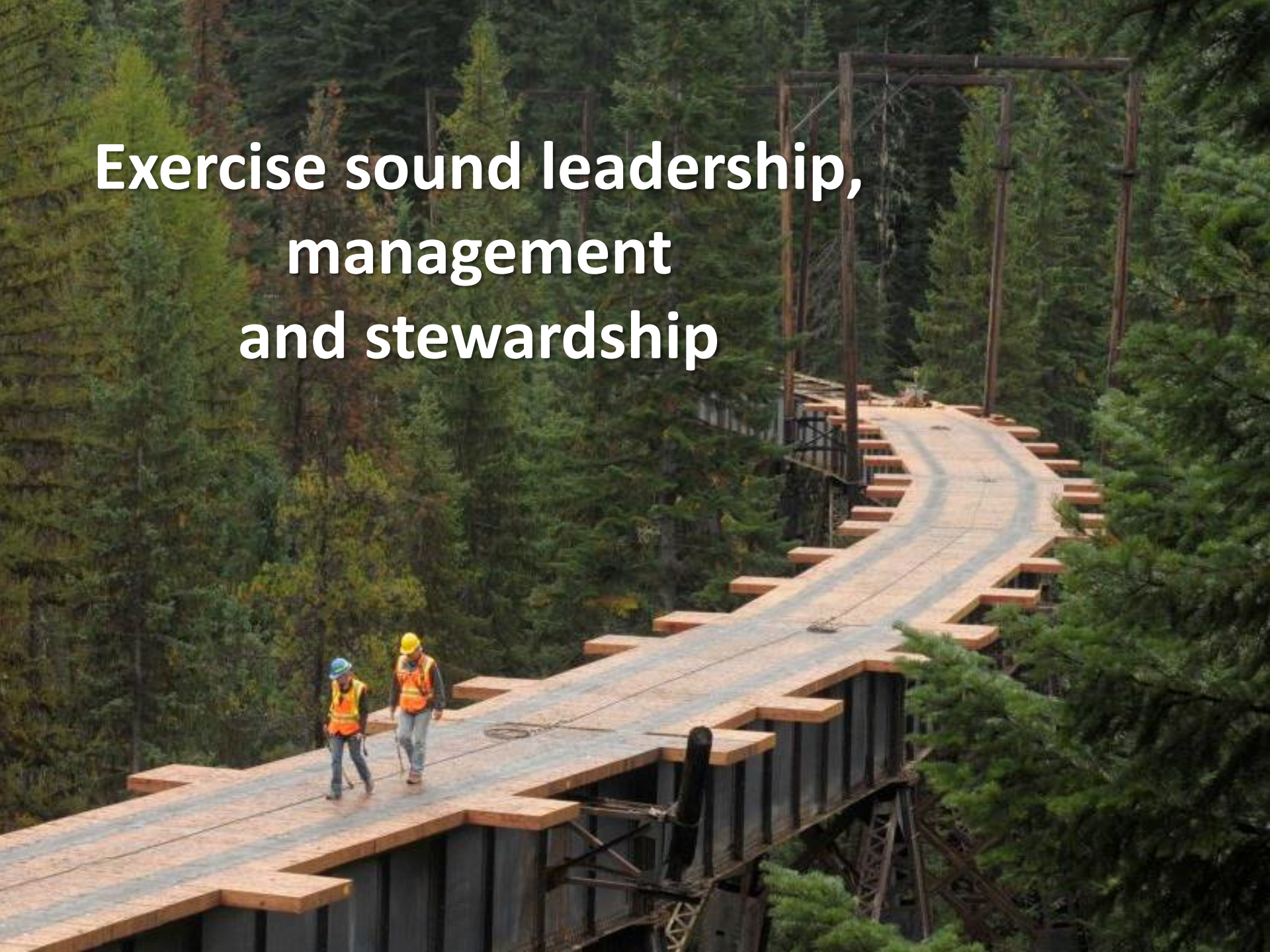
**Quantify, communicate and
manage risk**



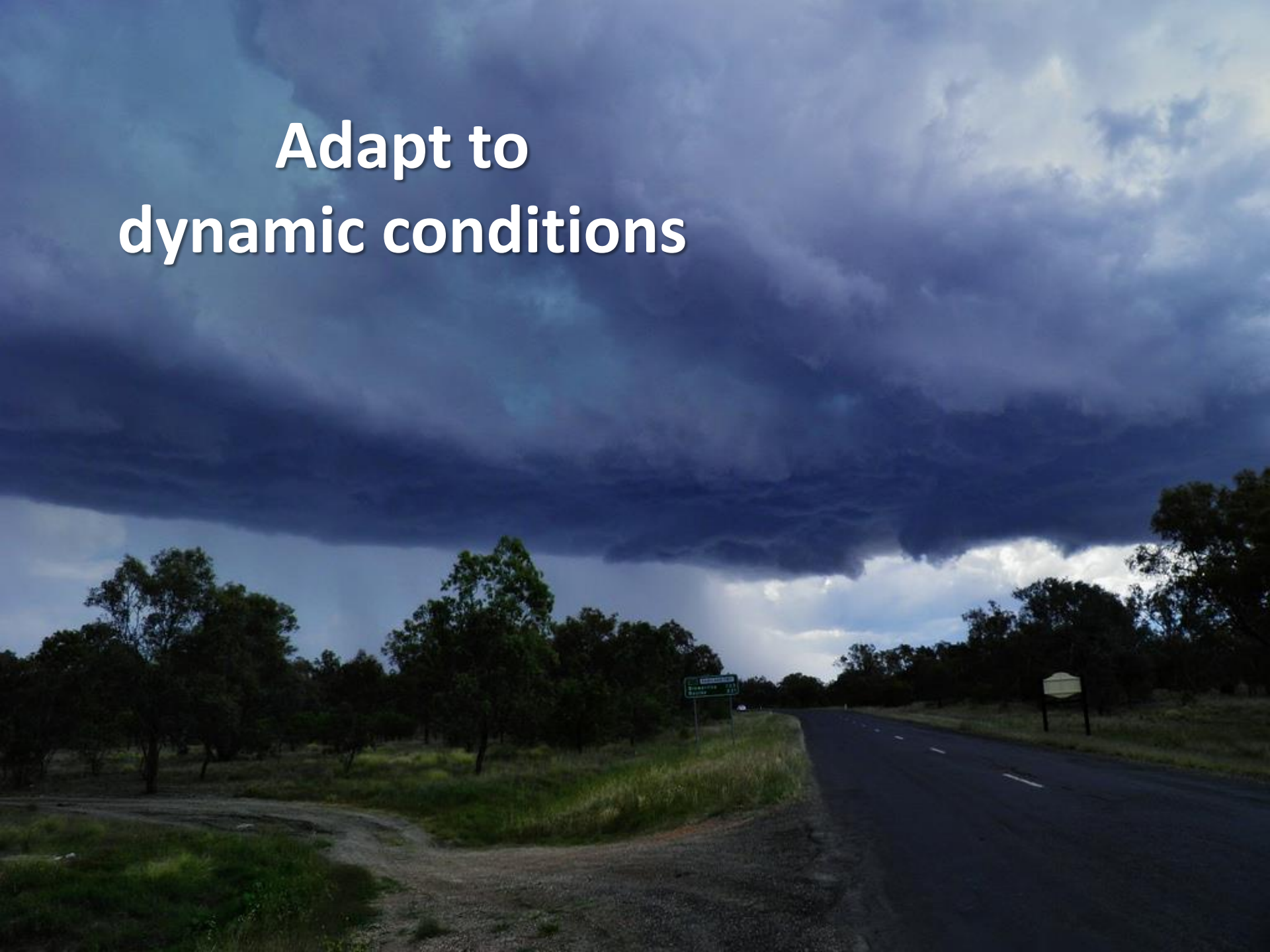


Employ an integrated
systems approach

**Exercise sound leadership,
management
and stewardship**



**Adapt to
dynamic conditions**



Implementation



Global Connection





Domo arigatou gozaimasu