

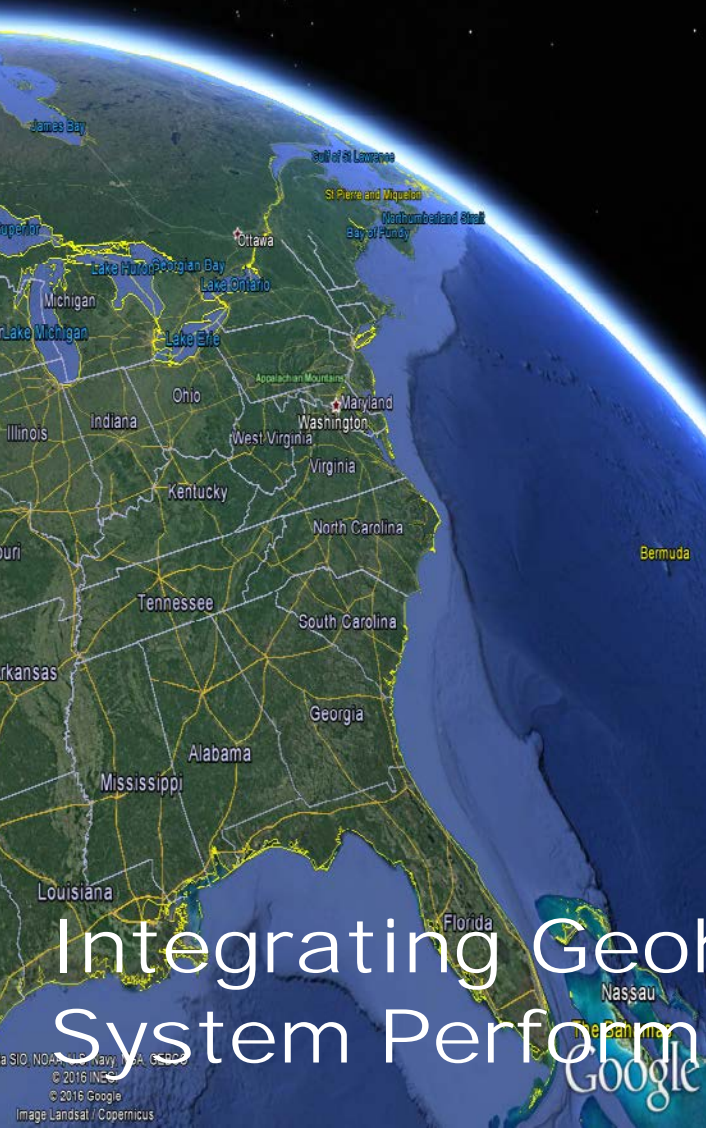
Panel Discussion: Integrating Geohazard, Geotechnical Asset and Highway System Performance Management

**Moderator: Benjamin S. Rivers, P.E.
Geotechnical Engineer
Federal Highway Administration
Resource Center - Atlanta**



Panelists

- **Scott Anderson, BGC Engineering**
- **Khalid Mohamed, FHWA**
- **Ann Beaver, Tennessee DOT**
- **Bob Bachus, Geosyntec**
- **Erik Loehr, University of Missouri**



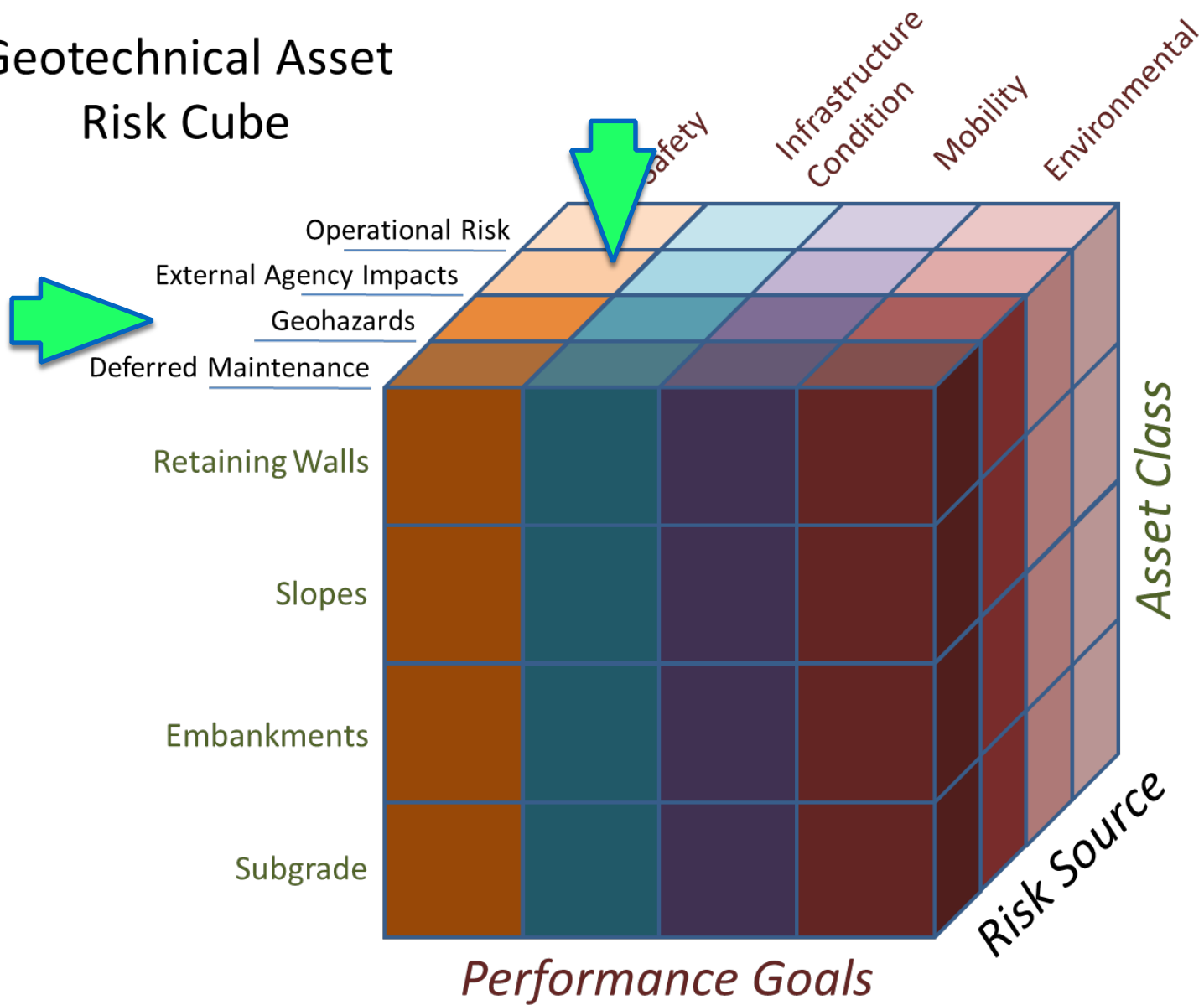
Integrating Geohazards, Asset and Highway System Performance Management

Scott Anderson

bgcengineering.com



Geotechnical Asset Risk Cube



Integrating Geohazards, Asset and Highway System Performance Management

- voila!

In each cell there is a prediction of deterioration

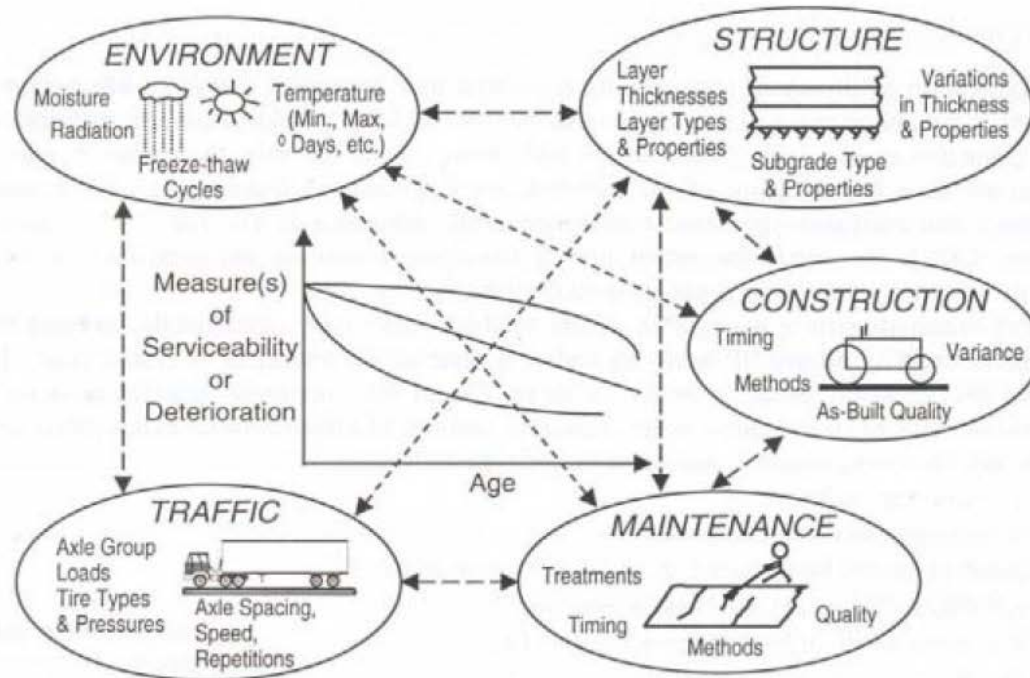
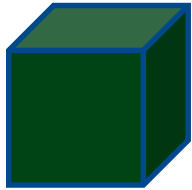
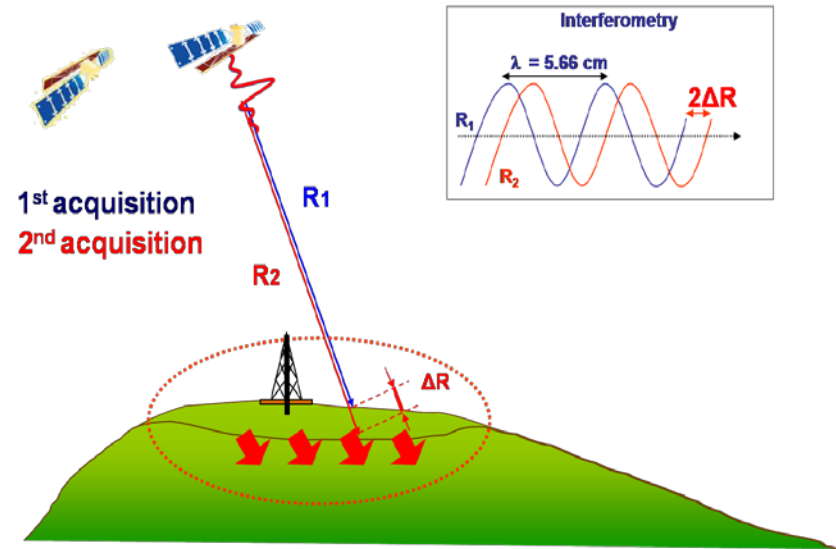
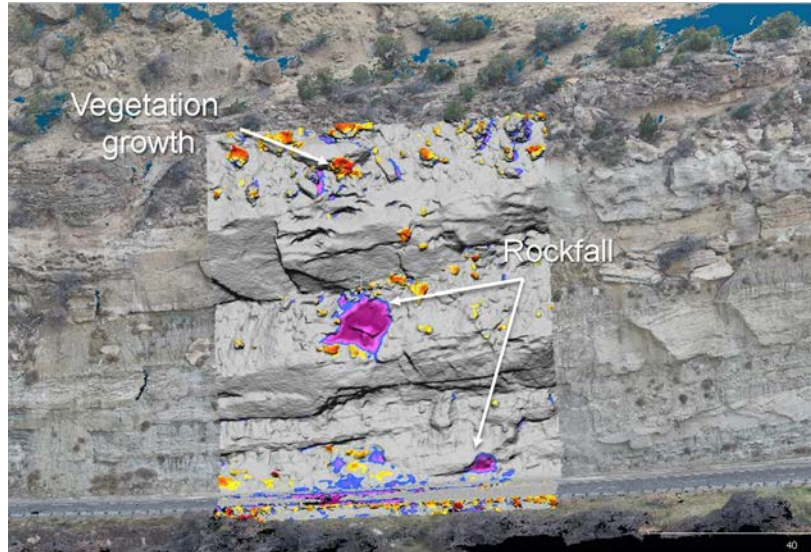


Figure 1: Factors affecting pavement performance (Haas 2003)

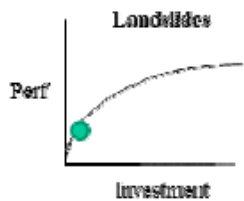
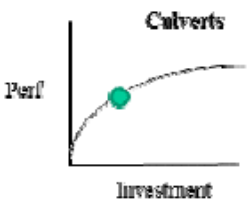
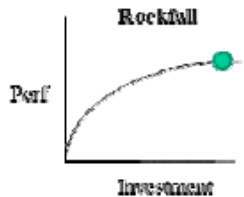
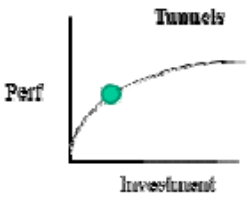
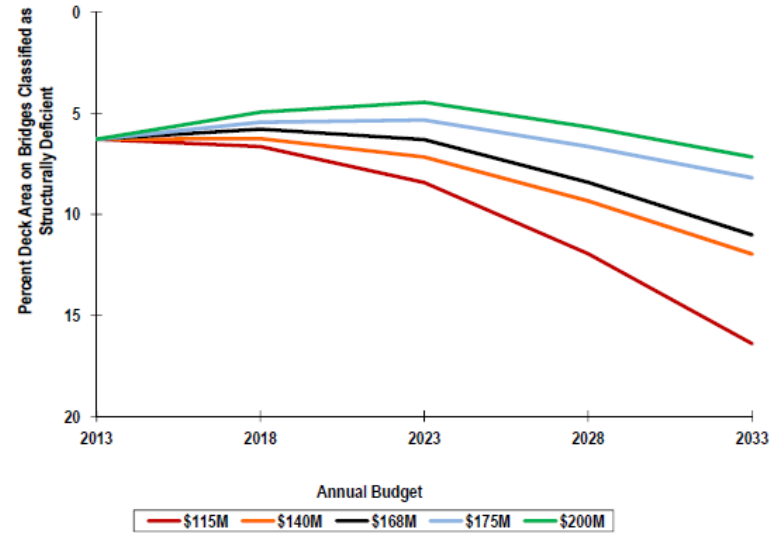
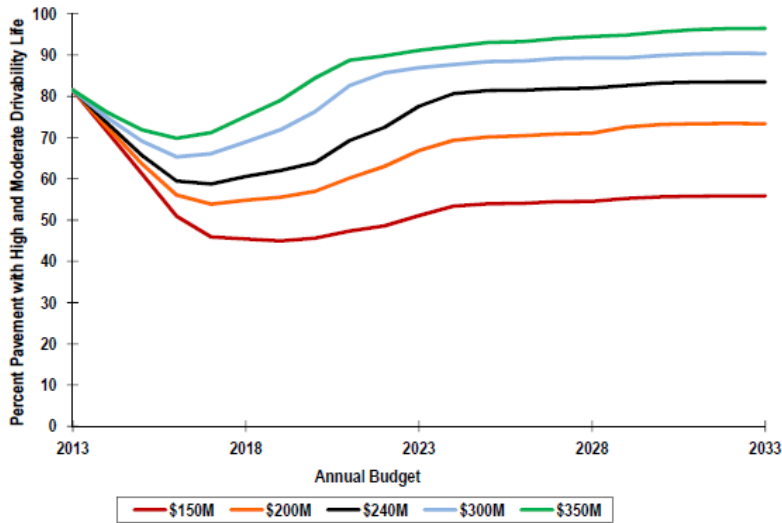
Sometimes the risk from deferred maintenance rivals or exceeds that of geohazards - depending on location

New Technology Provides the Efficiency...



Change detection by remote sensing

Projections based on deterioration and investment models



Figures from:
CDOT's Risk-Based Asset Management Plan (2013)

