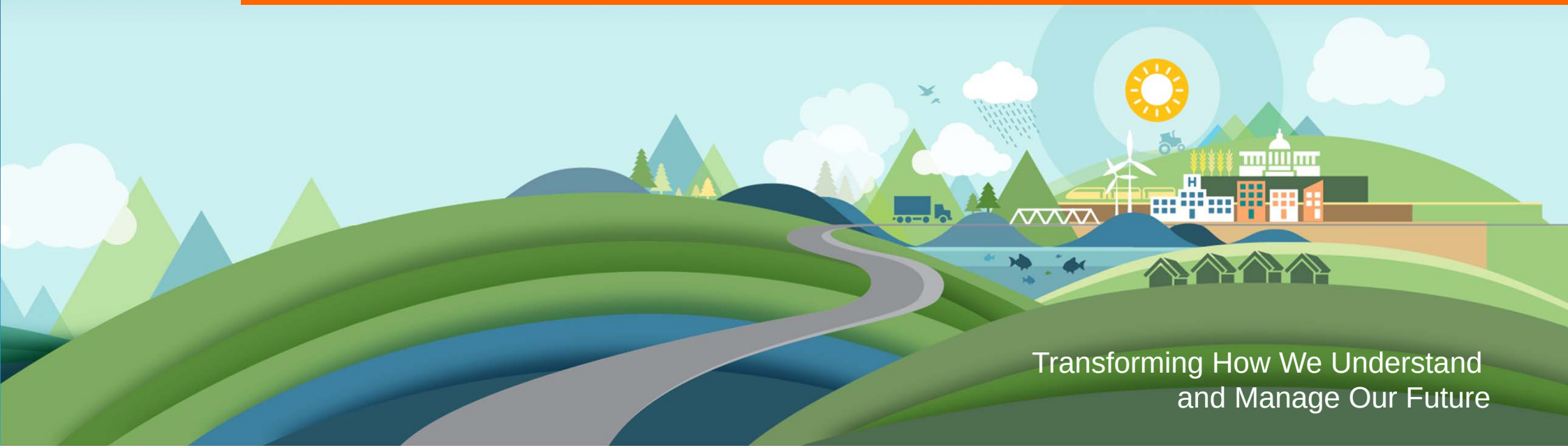
Sustainable | Resilient | Smart Cities

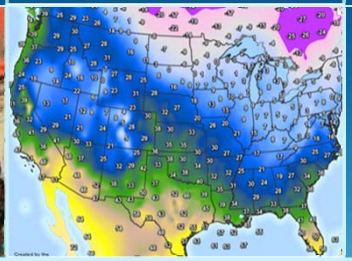
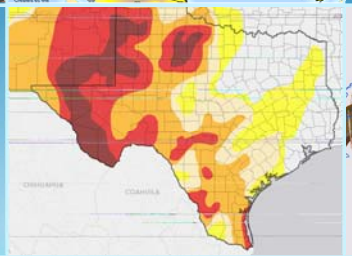
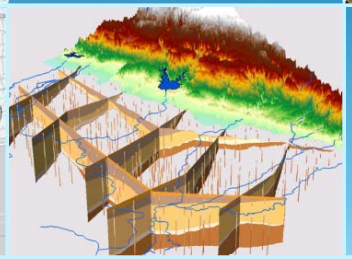
Mark Cygan | Esri



Transforming How We Understand
and Manage Our Future

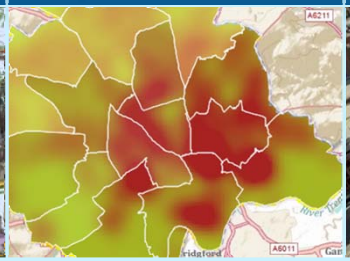
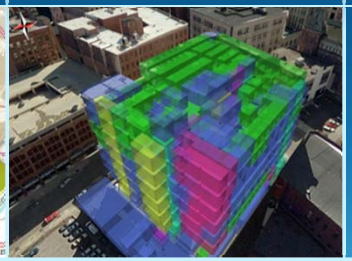
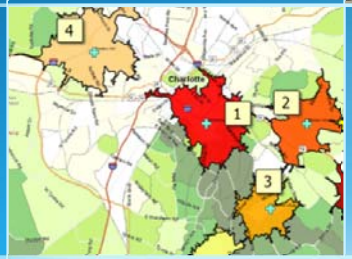
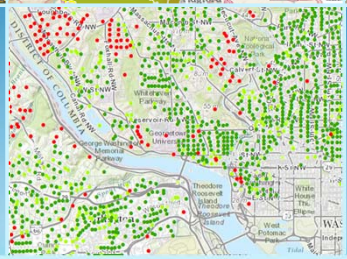
Sustainable | Resilient | Smart Cities - Require:

Monitoring and Predicting

Climate Change			Flooding	
	Sea-level Rise			Groundwater
Soil Moisture			Economic Impacts	

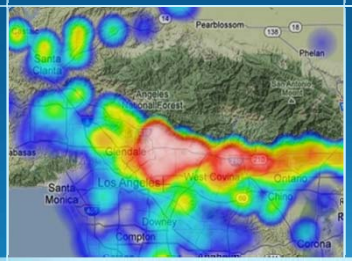
Sustainable | Resilient | Smart Cities - Require:

Planning and Designing

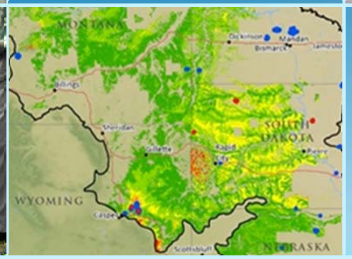
Urban Design				Green Building
	Healthy Food Accessibility		Mitigating Risk	
Solar Potential				

Sustainable | Resilient | Smart Cities - Require:

Managing and Taking Action



Transportation



Disaster Response

Natural Resources

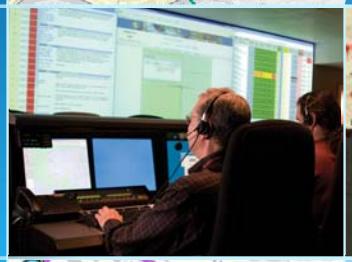
Renewable Energy

Sustainable | Resilient | Smart Cities - Require:

Collaborating and Communicating

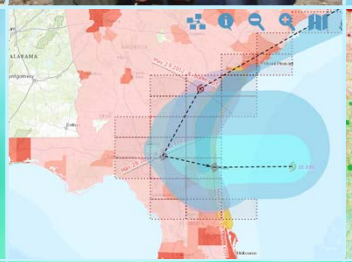
Ridesharing

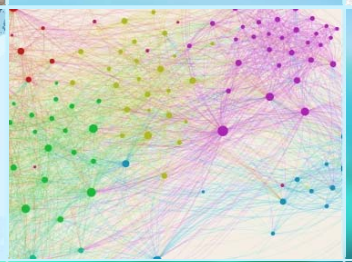
Heat Impact



Volunteerism

Reporting Status





Social Networks

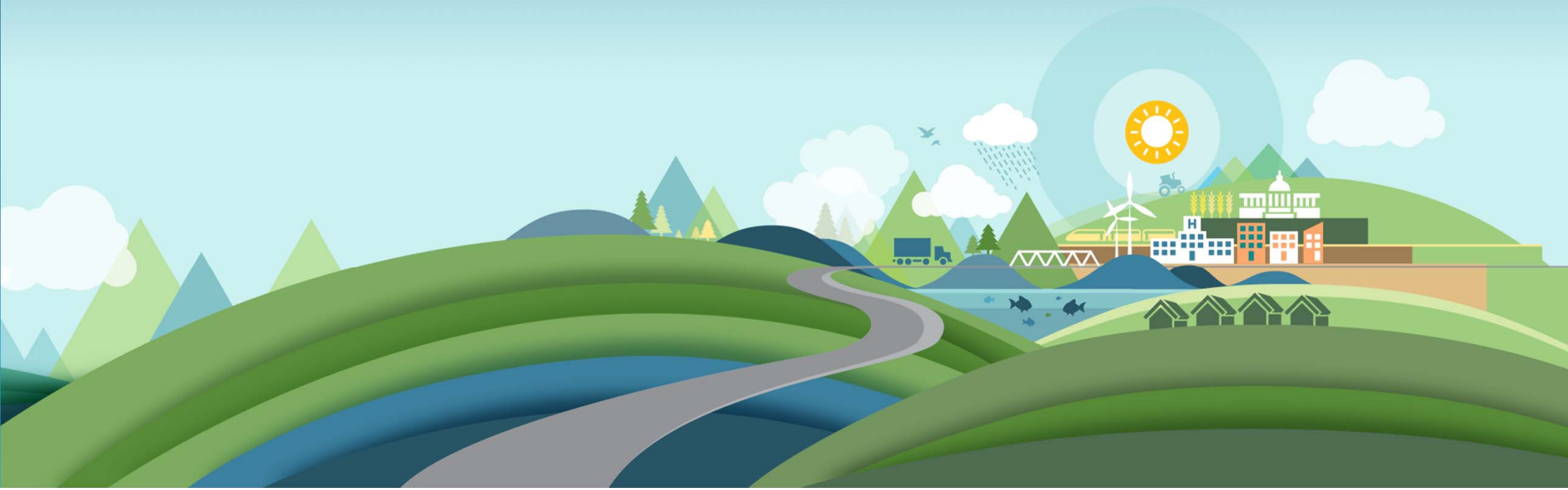
GIS
Measuring & Monitoring

Sustainable Development Goals for UN Post-2015 Agenda

Improving Analysis and Decision Making

Sustainable | Resilient | Smart Cities - Require:

- Geodesign
- Mobile GIS
- 3D GIS



Geodesign is the process

for informed design & wise decision making

GIS → Design → Act

The science of geography + Purposeful design + Evaluation + Decision + Implementation

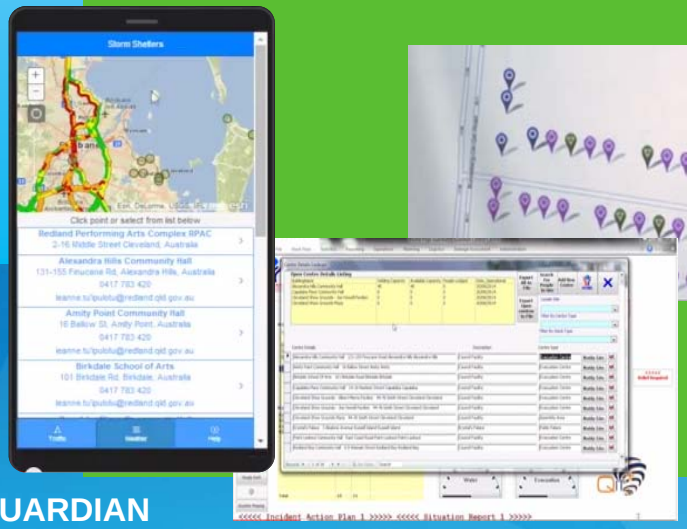
Understanding *Precedes* *Action*

Geodesign is Mobile

Easy access to tools for designing with anyone, anywhere, anytime

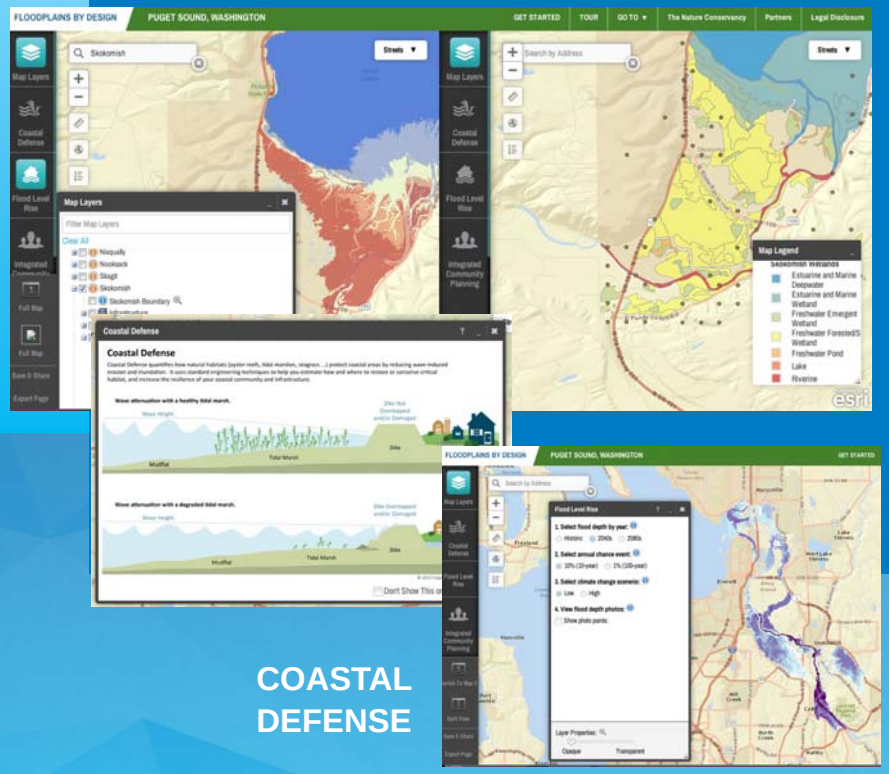
UN Global Disaster Resilience App Challenge

Citizen / Public-Facing



GUARDIAN EVACUTATION

Scientific / Professional



COASTAL DEFENSE

The Future of Geodesign…

Solving 3D problems in… 3D

Urban & Landscape Design

Rochester, NY

Visualization

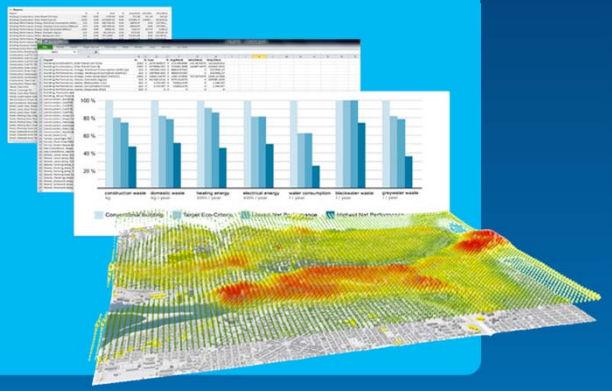
City of Portland

Rotterdam

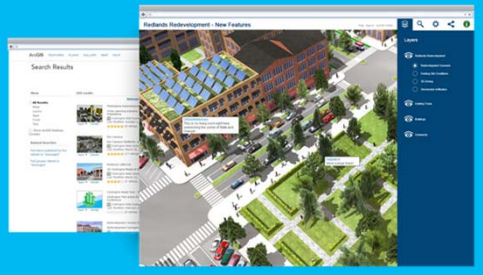
Sydney

Vegetation Models

Analytics



3D on the Web



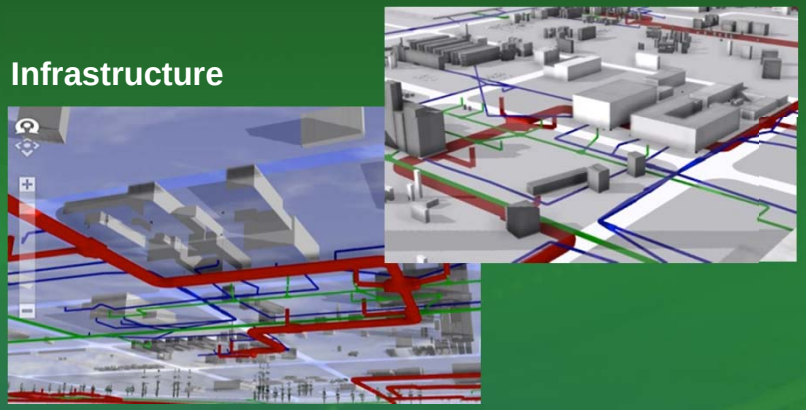
. . . Empowering how we design In 3D

3D GIS

Better Decision Making

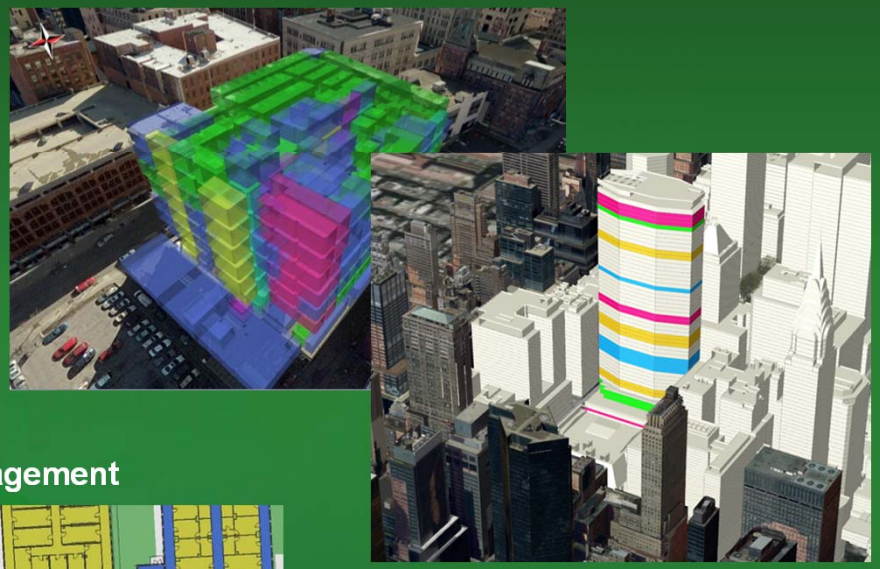
Geodesign

Infrastructure



Switzerland

Buildings



Urban Visualization

Campus Management

National Institutes of Health

Recent Geodesign Examples

Reconstruction

Tohoku City, Japan. SmarterBetterCities.

Urban Network Analysis Toolbox
For ArcGIS

City Form Lab, MIT, Massachusetts

Healthy Communities

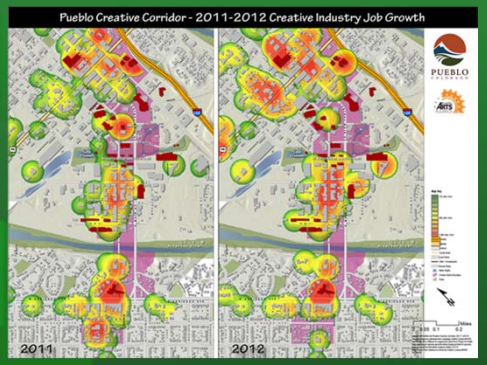
The Planning Center DC&E, California

Master Planning

Forest Lawn Creek, Canada.
O2 Planning + Design

King Abdullah Economic City, Saudi Arabia
Skidmore, Owings, and Merrill

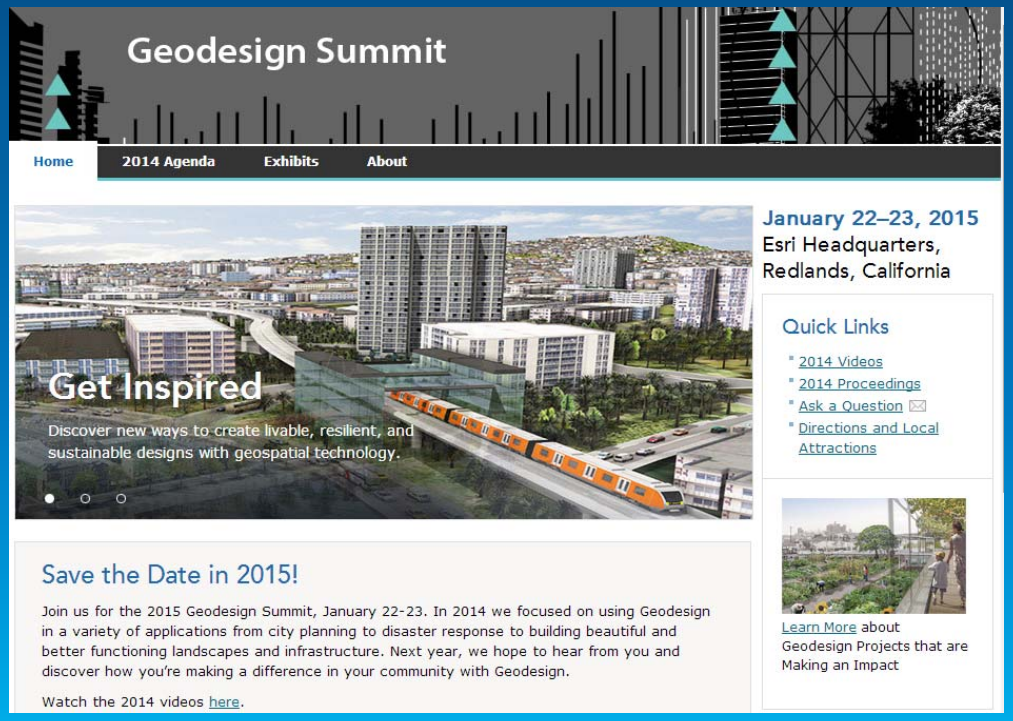
Economic Development



Pueblo County, Colorado

Geodesign Summits

Geodesign Summit, Redlands, CA
January 22-23, 2015



Geodesign Summit Europe, Delft, Netherlands September 11-12, 2014

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1.909.793.2853

Resilient Communities
http://www.esri.com/industries/government/resilient-communities