

4.3.1 **A Web-Based GIS Approach to Environmental Review, Associated Business Decisions, and Distributed Information/Data Sources**

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This session describes an automated approach to increase the predictability of the environmental review process for transportation projects and reduce delays while improving the quality of the decisions. This approach, which is based on the application of web-based GIS, digital aerial photography, and distributed local/regional geo-services, leverages lessons learned and specific technologies used by the Environmental Protection Agency to tailor support to other agencies (whether federal, state or local) in the coordination of Environmental Impact Statements (EISs) and Environmental Assessments (EAs) under the National Environmental Policy Act (NEPA).

Agencies charged with considering environmental impacts within their decision-making processes face a number of contemporary and future challenges. Among them:

- a. A need to access multiple, distributed data sources, which are both publicly and privately owned
- b. A need to share information among federal, state and local governments or between agencies
- d. Time spent looking for information and updates rather than acting on information
- e. Constrained resources that must be justified by a return on investment.

Underlying these challenges is the increasingly dynamic nature of the data required for consideration. As social, economic, health, historical resource, and environmental indicators evolve within geographic areas of concern, so does the need to examine cumulative effects and model for future effects.

This session is designed to help transportation planning organizations face these challenges squarely and discuss ways to improve their ability to dynamically manage information relating to EISs and EAs. In particular, the session will demonstrate use of geo-services for dynamic geospatial analysis that allow agencies to consolidate, analyze, correlate, and automate EIS and EA filing to support the combined goals of transportation planning and environmental review.