

Developing, Managing, and Implementing Strategic Research at Georgia DOT

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What You'll Learn Over Lunch

- What is strategic research?
- How it's developed
- How it's managed
- How it's implemented



“Applied Research” - CFR Title 23 Definition

- study of phenomena to gain knowledge or understanding necessary for determining the means by which a recognized need may be met;
- the primary purpose of this kind of research is to **answer a question** or **solve a problem**

What is not Research

- Operational changes
 - (e.g. computerizing existing processes)
- Routine testing or product evaluations
- Anything we already know the answer to

What is Strategic Research?

- Research aligned with GDOT strategic goals
 - Making GDOT a better place to work will make GDOT a place that works better
 - Taking care of what we have in the most efficient way possible
 - Planning and constructing the best mobility-focused projects we can, on schedule
 - Making safety investment and improvements where the traveling public is most at risk

Vision and Mission

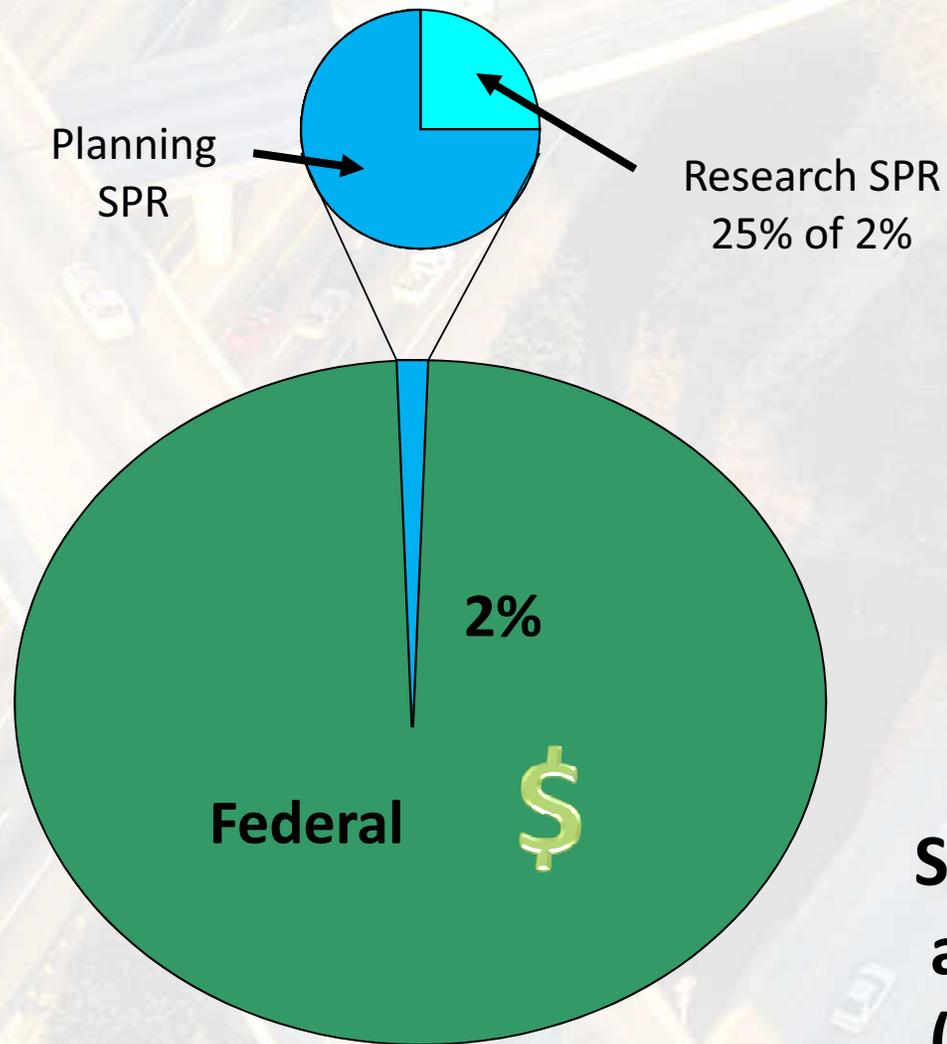
- Vision: improving GDOT operations through research
- Mission: Develop, manage, and implement strategic research



DEVELOPING STRATEGIC RESEARCH



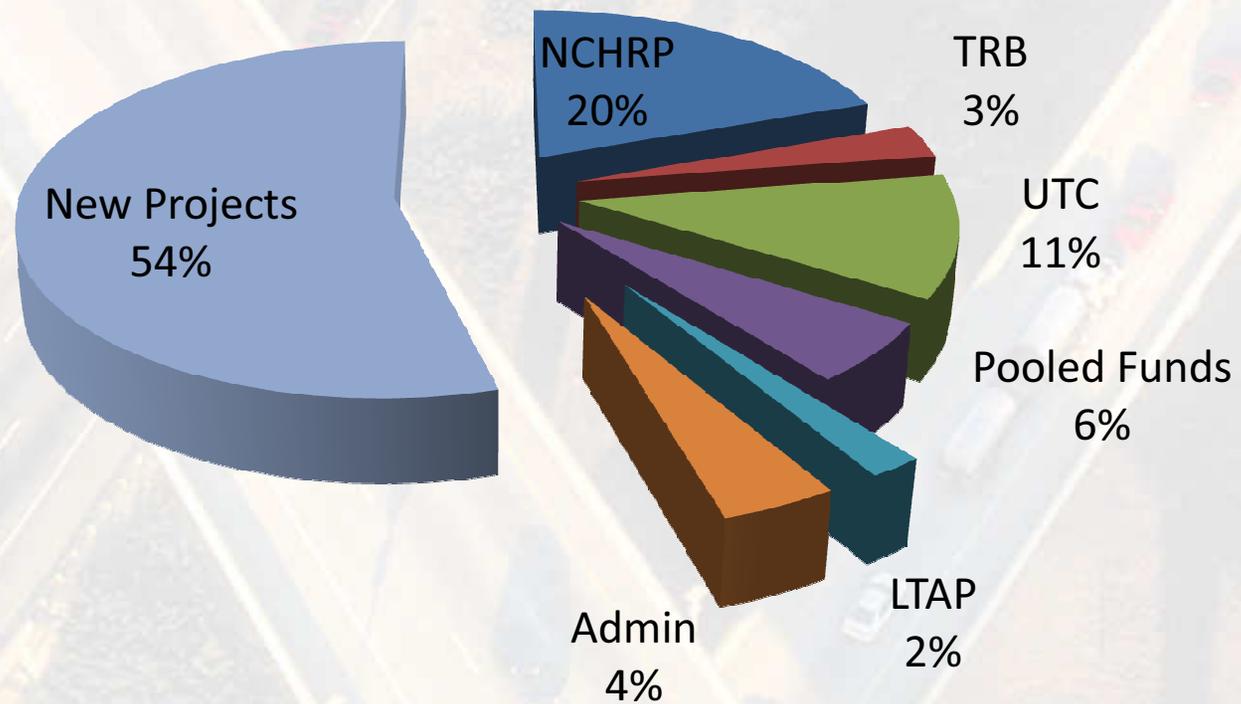
How We Are Funded



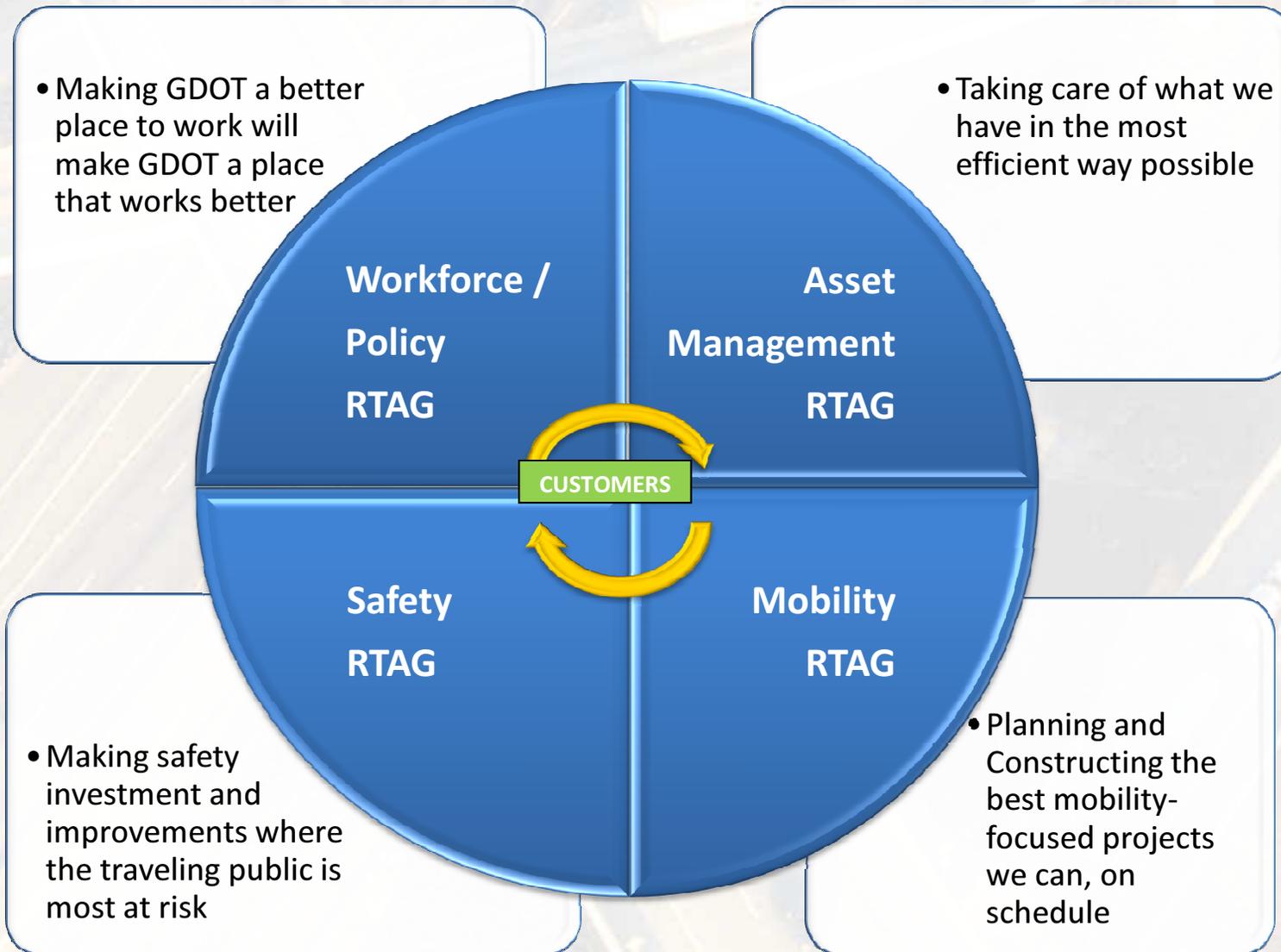
**State Planning
and Research
(SP&R) Funds**

Federal Research Funding

Typical Funding Percentages (Federal \$ only)



Research Technical Advisory Groups (RTAG's)



VISION
Keep Georgia Moving With Quality Transportation

MISSION
The Georgia Department of Transportation provides a safe, seamless and sustainable transportation system that supports Georgia's economy and is sensitive to its citizens and environment.

CORE VALUES
*Committed
Accountable
Responsible
Ethical*

RTAG Responsibilities

- Develop research need statements
- Technical oversight of active research projects
- Direct assistance with implementation of active and completed research projects
- Meet at least twice a year

RTAG Sharepoint Site

myGDOT > RTAG Welcome Georgene Geary My Site My Links RTAG

HOME TRANSPORTATION SYSTEM CUSTOMER SERVICE FINANCIAL RESOURCES WORKFORCE Site Actions

This Site: RTAG

DOCUMENTS

RTAGs - Research is the Future

Shared Documents
Good Morning, Georgene Geary

Slides
WELCOME to the RTAG (Research Technical Advisory Groups) Main Section. This area will include items of general interest to all RTAG members and to the RTAG Chairs/Vice-Chairs. Each of the RTAGs have their own tabbed sites to share information and monitor the status of their respective research projects.

LISTS

Calendar

8/11/2010 10:30 AM Research Road Show
RESEARCH PROGRESS "ROAD SHOW"
The Office of Materials and Research, which manages the Department's Research & Development program, will provide a "Road Show" on the status of GDOT's active research projects. The update...

9/8/2010 4:30 PM RE: [AASHTO_RAC] Problem-Submittals for FY 2012 National Cooperative Highway Research Program - deadline for submittals is September 15, 2010 @ MEMORANDUM

TO: Chief Executive Officers of AASHTO Member Departments, Chairs of AASHTO Committees, Federal Highway Administrator

FROM: —

Workforce
Add new event

PEOPLE AND GROUPS

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Announcements

FHWA Solicits Lines of Research for STEP 7/15/2010 4:25 PM
by Binh H. Bui
The Federal Highway Administration (FHWA) is requesting suggested lines of research for the proposed FY2 Surface Transportation Environment and Planning Cooperative Research Program (STEP) through September 2010. The Federal Register Notice...

Panel Nominations for FY 2011 Projects in the NCHRP: due June 4, 2010 4/30/2010 11:19 AM
by Binh H. Bui
On March 23 and 24, the AASHTO Standing Committee on Research (SCOR) formulated the NCHRP's FY 2011 program. Now, looking ahead to the task of establishing project panels for new projects, we are forwarding statements of scope (see attached) and asking...

Compendium of Papers from TRB 2010 Annual Meeting 4/20/2010 1:55 PM
by Binh H. Bui
http://www.seams.odot.ga.gov/offices/omr/TRB_AnnualMeeting/start.htm

NCHRP FY 2011 Approved Projects from SCOR Meeting in March 2010 3/31/2010 1:38 PM
by Binh H. Bui

Research in Progress



Links

- AASHTO SCOR/RAC Website
- TRIS Online
- GDOT Library

Methods of Performing Research

National Cooperative Highway Research Program (NCHRP)

National issue

Long Term/ selected yearly



Transportation Pooled Fund (TPF) Program

Regional issue

Long Term/other States needed



Georgia Transportation Institute

Based on researchers expertise

Availability of researcher



Outside solicitation

In accordance with FAR 35.007

Research Idea Mailbox

- Open to all GDOT staff (ResearchIdea@mygdot.dot.ga.gov)
- Brief (1-2 para.) ideas that could potentially benefit GDOT
- Contact information should be included
- Ideas reviewed initially by R&D staff
- RTAG's review ideas and determine which ones would be pursued



MANAGING STRATEGIC RESEARCH



Who We Are



David Jared, P.E.
Acting
Branch Chief

(Vacant)
Administrative
Assistant



Stardina Wyche
Librarian



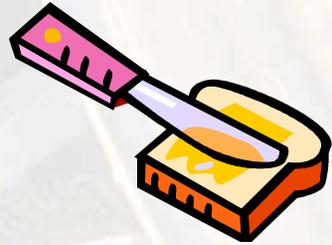
Gretel Sims
Research Eng.



Supriya Kamatkar
Research Eng.



Binh Bui
Research Eng.



Our “Bread & Butter”



- Administer GDOT’s R&D program and library
- Manage contract research
- Direct in-house research and special studies requested by GDOT management
- Manage GDOT’s national research activities

Technical/Implementation Manager

- Appointed by RTAG for each project
- Help finalize scope of work
- Provide overall technical direction
- Lead development of implementation plan
- Report on implementation after project ends



IMPLEMENTING STRATEGIC RESEARCH



Implementation

- Technical/Implementation Manager
- Kickoff meeting
- Midpoint meeting
- 90-day “Wrap-Up” meeting
- Annual Implementation Report

“Hard” Implementation Example: Micromilling



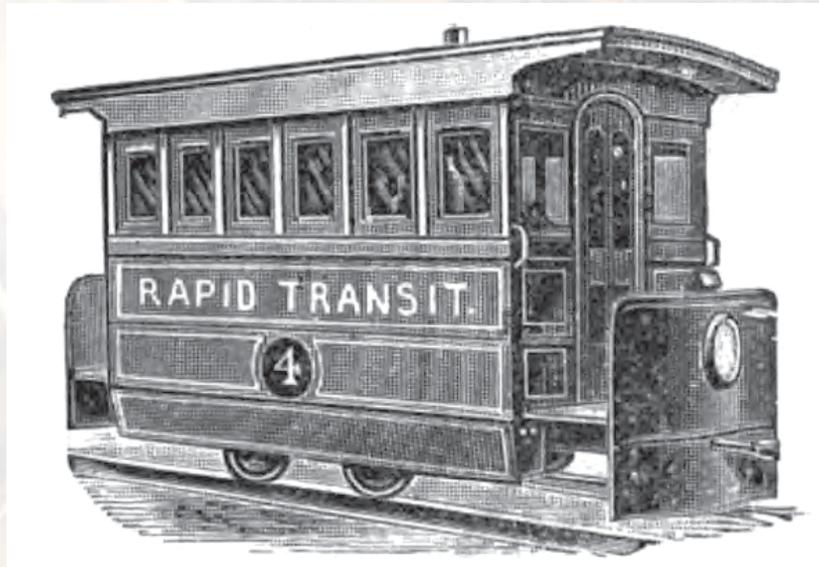
“Hard” Implementation Example: Micromilling

- GDOT began using in May 2007 on I-75 near Perry, with research support to confirm its feasibility for pavement preservation
- Micromilling removed existing, distressed pervious friction course (PFC) and replaced it with new PFC to prolong pavement life and save money
- Target surface texture levels for the milled surface needed verification for the technique to be feasible, due to concerns about water accumulation and moisture damage

“Hard” Implementation Example: Micromilling (Cont.)

- Georgia Tech and Auburn researchers verified the texture levels specified in the milled section and bonding between the micromilled surface and the new PFC
- Estimated cost savings for 15.6-mi. project using micromilling topped \$5 million and encouraged GDOT to use it on I-95 near Savannah, with similar estimated cost savings

“Soft” Implementation Example: Historic Streetcar Systems of Georgia Context



“Soft” Implementation Example: Historic Streetcar Systems of Georgia Context

- Useful tool in identifying, interpreting, and assessing significance of resources associated with 19th-20th century Atlanta streetcar system
- Context available as a free download on dot.ga.gov
- IT to publish geodatabase so that planners, designers, and preservationists can identify potential effects of projects on streetcar resources
- OES working with consultant to develop (1) training for implementation; and (2) collection of case studies

Questions?

