

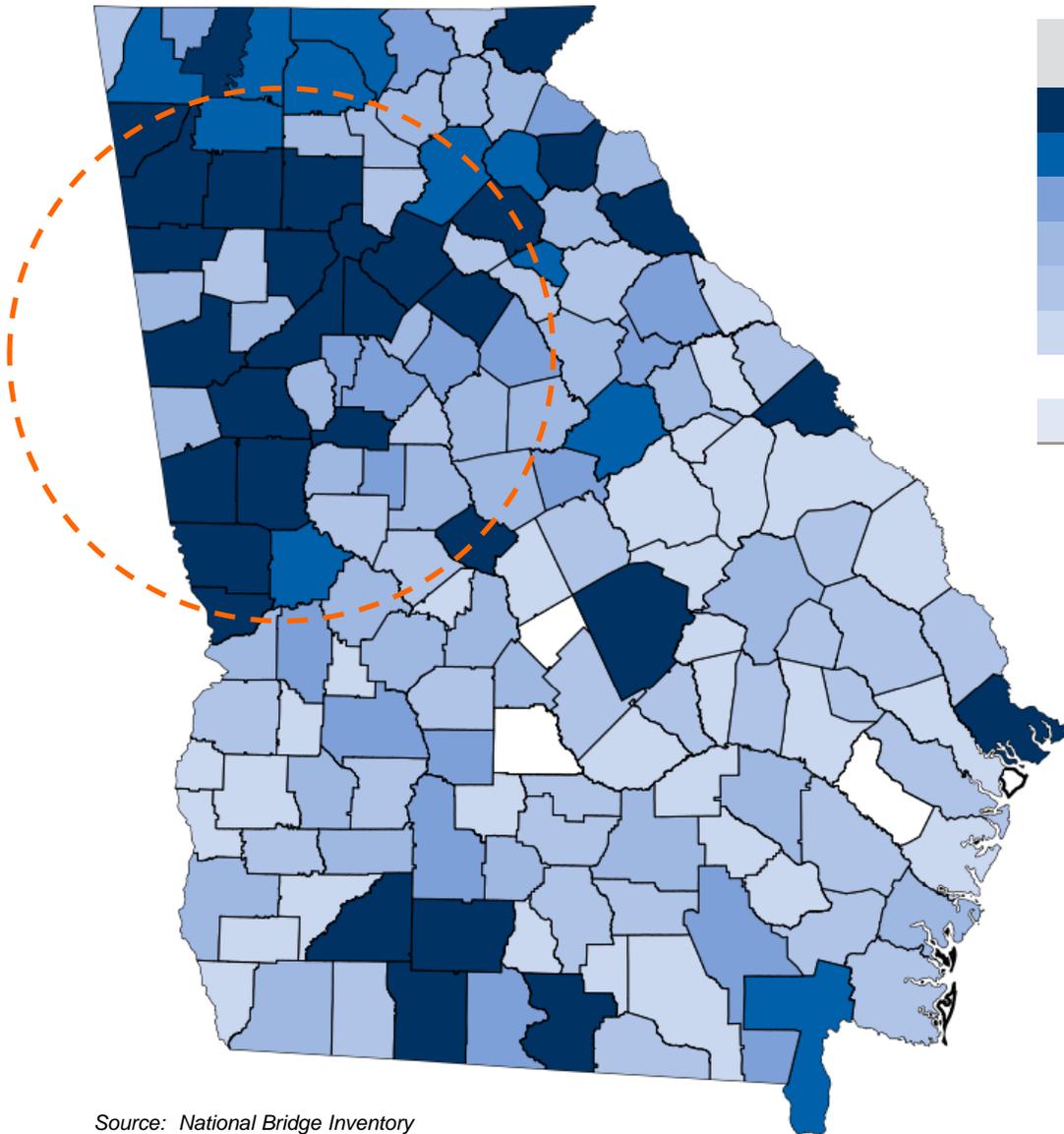
# **Bridges Program**

**A P3 delivery approach**

**October 20, 2010**

# Georgia's Deficient Bridges

Where are they concentrated?



## Legend

# of Deficient Bridges	Total in Group
26+	1,399
21 – 25	253
16 – 20	301
11 – 15	428
6 – 10	276
1 – 5	120
0	0
<b>Total</b>	<b>2,777</b>

## County Rankings

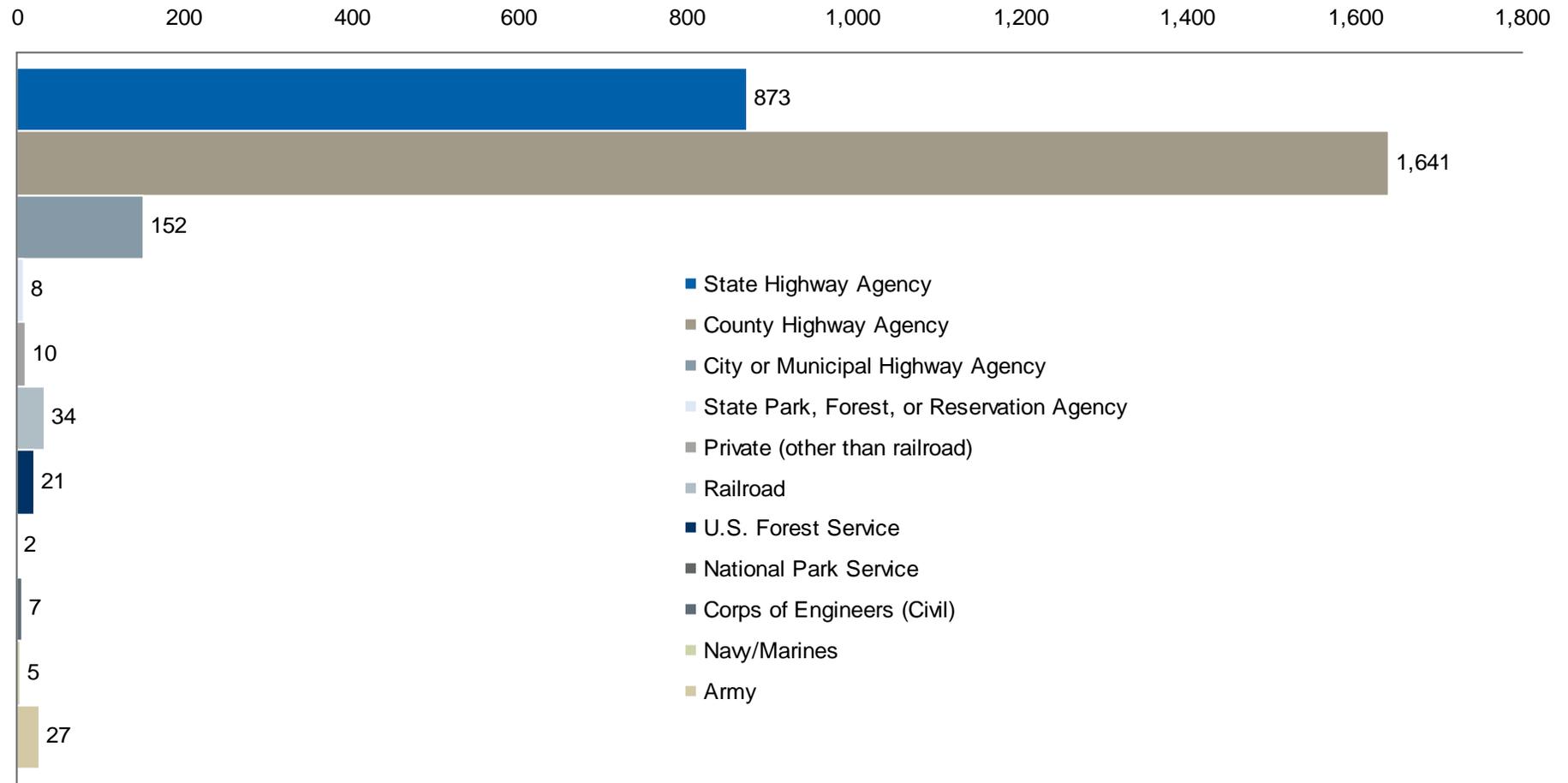
County	# of Deficient Bridges
Fulton	235
De Kalb	82
Cobb	64
Spaulding	55
Bibb	55
Bartow	53
Meriwether	52
Rabun	51

- The counties with the greatest number of deficient bridges are generally concentrated in the north-west part of the state
- Fulton county has almost three times the number of deficient bridges as De Kalb, the next county with the greatest number of deficient bridges
- Targeted investment can help shape considerations as to how best develop a bridge program

Source: National Bridge Inventory

# Owners of Deficient Bridges

## Deficient bridges by owner

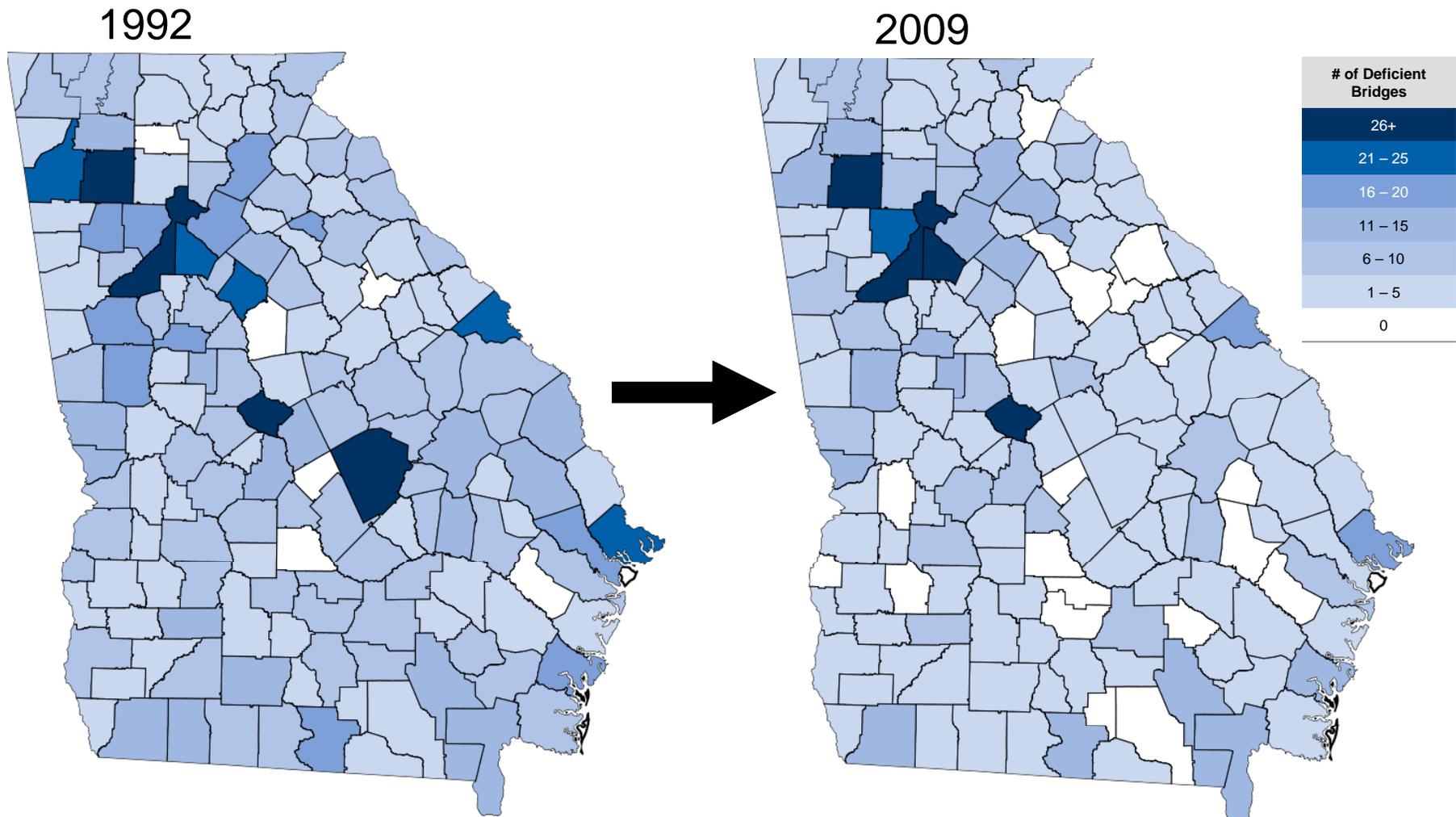


Source: National Bridge Inventory

**GDOT and Counties manage over 90% of the State's deficient bridges**

# GDOT's Deficient Bridges

## Geographic concentration of deficient bridges



Source: National Bridge Inventory

The geographic concentration of deficient bridges appears to have narrowed over time

# Defining a Program

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## Why consider a P3 delivery model

- Some of the benefits of a P3 approach, as summarized in a FHWA report, include:
  - **Significant cost savings.** A P3 approach can save from 6 to 40 percent of the cost of construction and significantly limit the potential for cost overruns through innovative contracting. Consolidating responsibility for multiple project elements, including design, construction, and operation, in one entity can result in cost saving efficiencies that are not possible with traditional approaches. Because cost savings benefit the private partner, and because the private partner is responsible for cost overruns through fixed-price contracts, the private partner has direct incentives to manage near and long term costs appropriately.
  - **Accelerate project delivery.** By providing access to immediately available private sources of capital, a P3 model can accelerate the projects that might otherwise be delayed for years or not be built at all. In addition, the same efficiencies that produce cost savings often enable P3 projects to be constructed faster than traditional projects.
  - **Allocate risk to the party best able to manage it.** Traditionally, virtually all of the risk associated with the design, construction, financing, operation and maintenance of a transportation project has been borne by the public sector. Proper allocation of project risks to the parties (public or private) best able to manage the risks can result in lower overall risk for the project, reduced project costs and accelerated project delivery.
  - **P3 can encourage innovations and the incorporation of life-cycle costs.** A P3 approach can encourage the incorporation of life-cycle costs in the design and construction of a facility which often leads to delivery of a higher quality transportation project. P3 can also encourage the private sector to come forward with creative ideas for improving the quality of public transportation infrastructure.

# Defining a Program

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## Why consider a P3 delivery model (continued)

- The benefits previously listed can all be directly relevant to a bridges program:
  - **Significant cost savings.** The economies of scale and consolidation of responsibility for multiple project elements in one private entity inherent in a P3 approach can facilitate significant cost savings. Current market conditions also provide GDOT an opportunity to leverage favorable pricing.
  - **Accelerate project delivery.** Assuming a similar run rate as that observed over the last two decades, it would take over 30 years for the Department to reduce its current number of deficient (SD and FO) bridges to zero. This also assumes that funding levels are on average similar to those of the last two decades and no additional bridges become deficient. The current resource-constrained environment and limited maintenance spend suggest that both assumptions are less-than-realistic and 30 years may be an overly-optimistic estimate.
  - **Allocate risk to the party best able to manage it.** The risk allocations being developed for current GDOT P3 projects provide a sound starting point for defining an optimal program-specific allocation. The P3 model can leverage both GDOT and its private sector partner's strengths in a manner that best delivers on the project's near, medium and long term objectives.
  - **P3 can encourage innovations and the incorporation of life-cycle costs.** A P3 approach ties the developer's return to its long term ability to manage the assets to standards and specifications its contractually obligated to satisfy. By doing so, not only are deficient bridges reconstructed or rehabilitated but they're also appropriately maintained such that they aren't again categorized as deficient in the near or medium term.

# Defining a Program

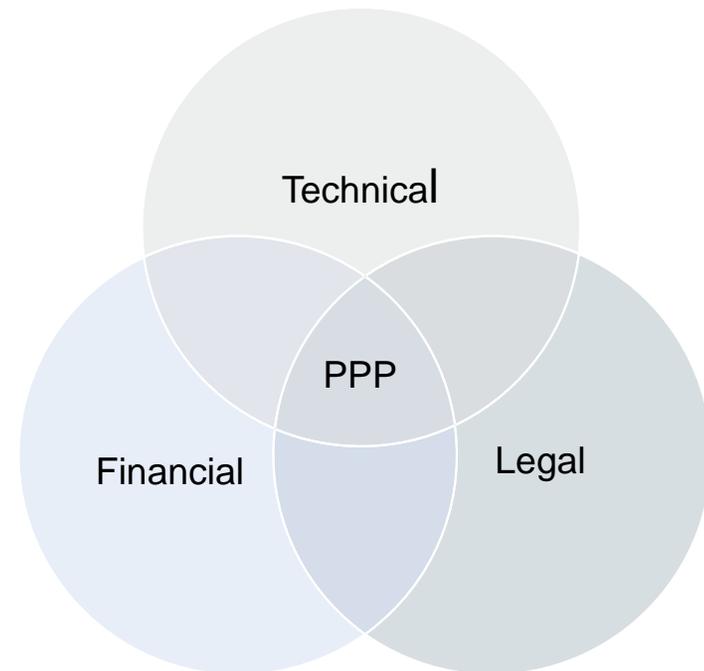
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## Ensuring an equilibrium of interests

- For any project to be successful, its technical, financial and legal underpinnings need to be individually sound and complementary
  - The technical scope has to be developed such that the project most efficiently addresses the problem
  - An important measure of efficiency is the degree to which the project can leverage constrained funding to deliver on its goals
  - To facilitate leverage the legal framework must be commercially viable
- Any one of these pillars on its own can undermine a project
  - Too expansive a technical scope can push costs beyond affordability constraints
  - Lack of commercial legal terms can inflate costs and deter investment
  - Inadequate due diligence regarding a project's financial feasibility can subsequently serve to undermine a procurement

## Work streams

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**All three work streams need to be considered to ensure success**

# Defining a Program

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## Funding

- The type of delivery model chosen for a P3 bridge program will inform the timing and amount of funding required.
  - A conventional P3 model where the Proposer is responsible for designing, building, financing, maintaining and operating (DBFOM) the bridges would likely be structured as an availability-payment deal where the payments to be Developer are made over a period of time following substantial completion and are contingent on performance metrics (e.g. maintaining key NBI ratings).
  - A design, build approach would require GDOT either having all the funds on hand on day zero or raising the funds through debt issuance.
- To developing an affordable program, it is important to first define the structure and level of funding the Department is both willing and able to commit to.
- A brief summary of GDOT bridge expenditures over the past three years is provided in the table to the right.

### **GDOT bridge expenditures**

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	<b>2008</b>	<b>2009</b>	<b>2010</b>
Construction	4,275,879	1,581,000	19,935,105
Maintenance	10,949,570	1,504,925	2,744,131
Rehabilitation	136,146,100	39,557,335	58,190,593
<b>Total</b>	<b>151,371,551</b>	<b>42,643,261</b>	<b>80,869,830</b>

*Source: Division of Finance*

# Summary

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## Moving forward

- Despite a significant reduction in deficient bridges in recent decades, GDOT continues to own and operate a large number of deficient bridges.
- GDOT has the organizational framework and expertise available to develop and implement an innovative approach to materially reducing its deficient bridges with constrained funding.
- An availability payment structure, if used, would lend itself well to broadening the GDOT P3 program to a wider segment of the P3 market.
- The timeline for developing a program could be relatively expedited given the nature of the assets.
- Project scope has adequate flexibility to allow for revisions to accommodate financial constraints.