

# Measuring Airport Capacity & Aviation System Performance

The Role of System Performance Measures in State Aviation System Plans

# Program Overview

## Airport System Planning

Establishing '**Context**'



# System Planning

- Statewide Transportation Plan
- Louisiana Airport System Plan
- Louisiana Airport Economic Impact Study
- Louisiana Freight Mobility Plan

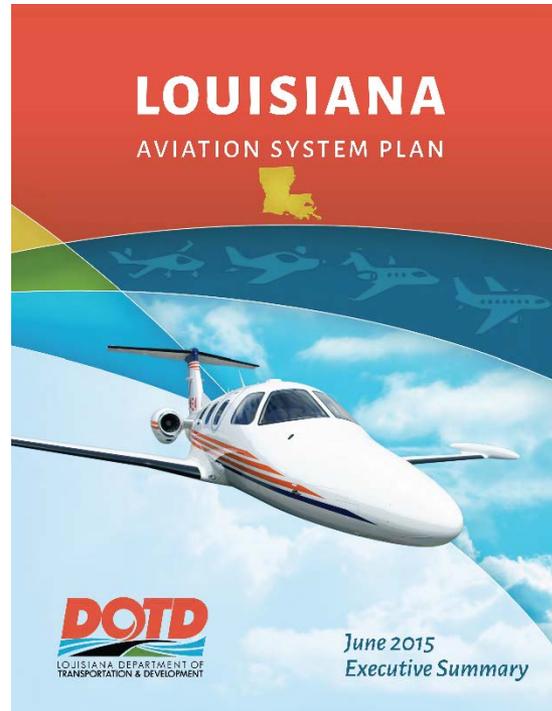
# Airport System

- Louisiana Airport System Plan
- National Plan of Integrated Airport Systems
- ASSET Classifications



# Airport System Plan

- Assessment of Needs
- Blueprint for Future
- Estimated Cost of Improvements
- Determine Airport Roles
- Economic Impact



# System Role Analysis

17 Factors

Access

Economic

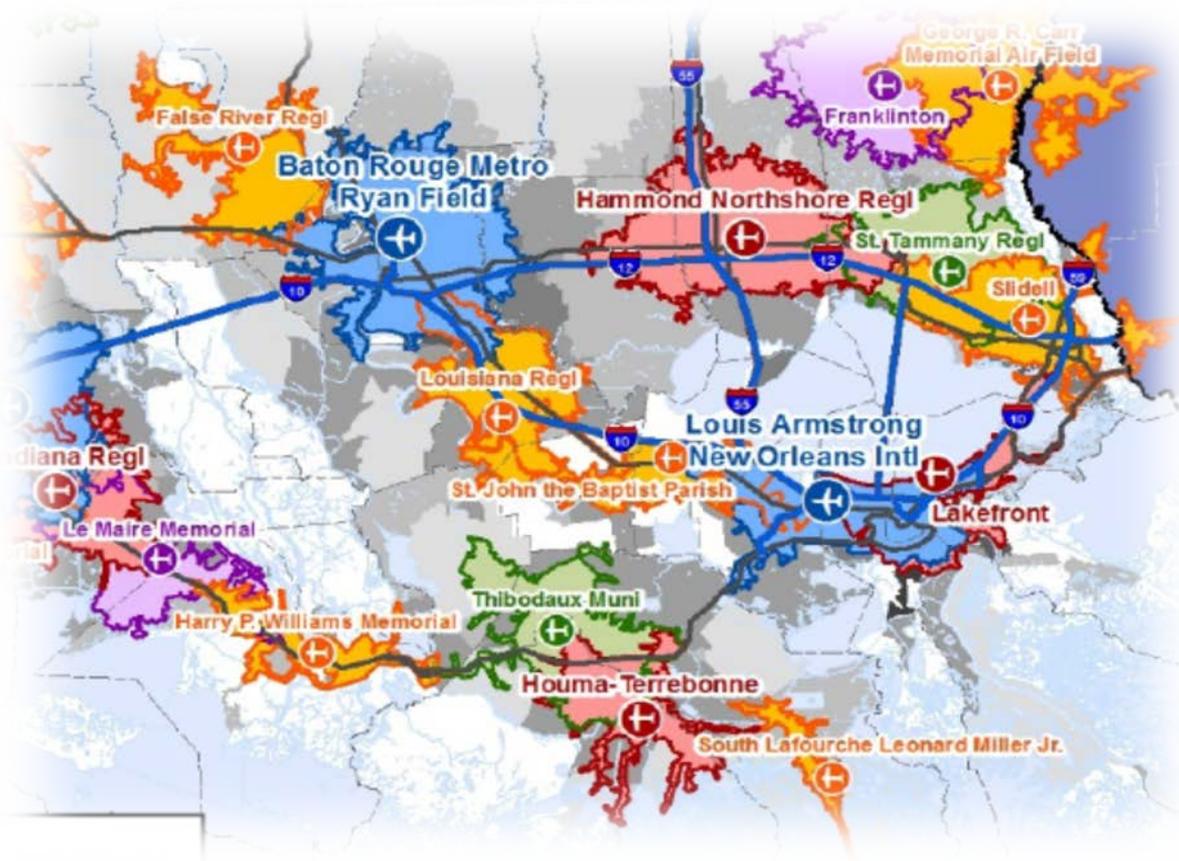
Physical



# System Role Analysis

- Factors in Airport Role Analysis
  - Group Airports by ‘Functional Level’
  - Does NOT Intend to Imply Level of Importance
  - Establish Facility and Service Standards

# Airport Roles



GA Level 1

GA Level 2

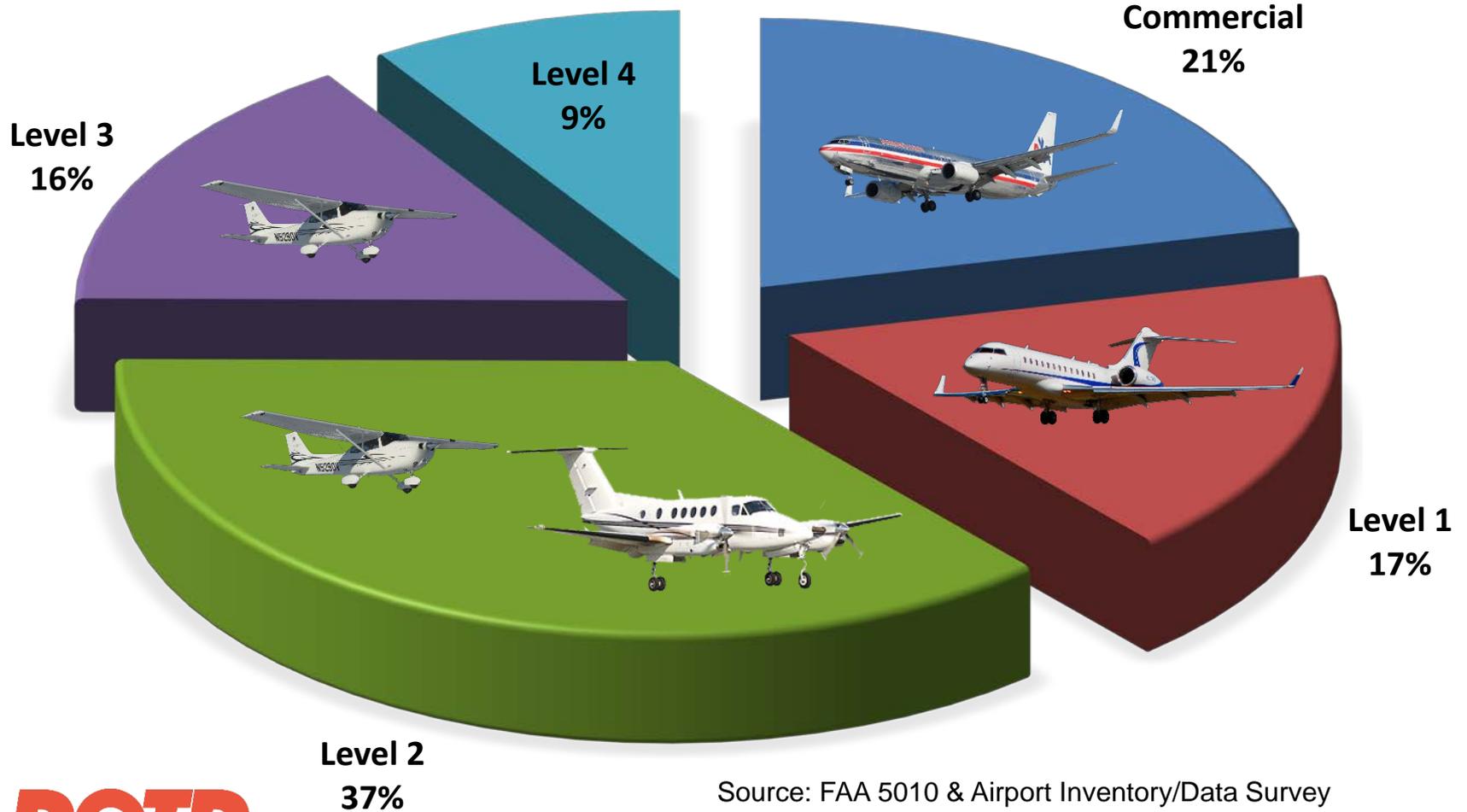
GA Level 3

GA Level 4

Commercial  
Service

# Airport Activity

## AIRPORT OPERATIONS



Source: FAA 5010 & Airport Inventory/Data Survey

# Airport System

## NPIAS

**56 Louisiana Airports in NPIAS**  
**7 Primary – Commercial**  
**49 Non-Primary – General Aviation**  
**\$380 Million Federal Investment**  
**\$140 Million State Investment**  
**Entitlement Impacts**  
***5 Airports with 'Minimal' CIP Investment***

Source: 2017-2021 FAA NPIAS Report to Congress

# Airport System NPIAS

Entitlement Impacts  
*5 Airports with 'Minimal' CIP Investment*  
**\$750,000 CIP Needed**



Source: 2017-2021 FAA NPIAS Report to Congress

# System Comparison

State	Airports in State System	NPIAS Airports in State	% of Population Coverage	System Airports per 100,000 Residents	NPIAS Airports per 100,000 Residents
Ohio	104	97	97%	0.9	0.8
Louisiana	68	55	93%	1.5	1.2
Montana	121	70	80%	12.2	7.1
Kansas	142	79	98%	5.0	2.8
Arkansas	91	77	82%	3.1	2.6
New Mexico	62	52	66%	3.0	2.5
Oklahoma	114	101	98%	3.0	2.7

Source: 2015 Louisiana Aviation System Plan

# NPIAS - ASSET

## Classification Comparison

Classification	LA	MS	VA	AR
National	3	2	1	1
Regional	8	14	13	11
Local	22	17	16	29
Basic	7	28	8	20
<i>Unclassified</i>	9	9	2	13
<b>Total GA NPIAS</b>	<b>49</b>	<b>70</b>	<b>40</b>	<b>74</b>
<b>NPIAS CIP \$ (M)</b>	<b>\$129</b>	<b>\$209</b>	<b>\$203</b>	<b>\$108</b>

# Airport System NPIAS

**Louisiana**

**GA**

**\$71,000 per Based  
Aircraft Invested**

**Mississippi**

**GA**

**\$137,000 per Based  
Aircraft Invested**

**Commercial**

**\$20.30 Per Passenger  
Invested**

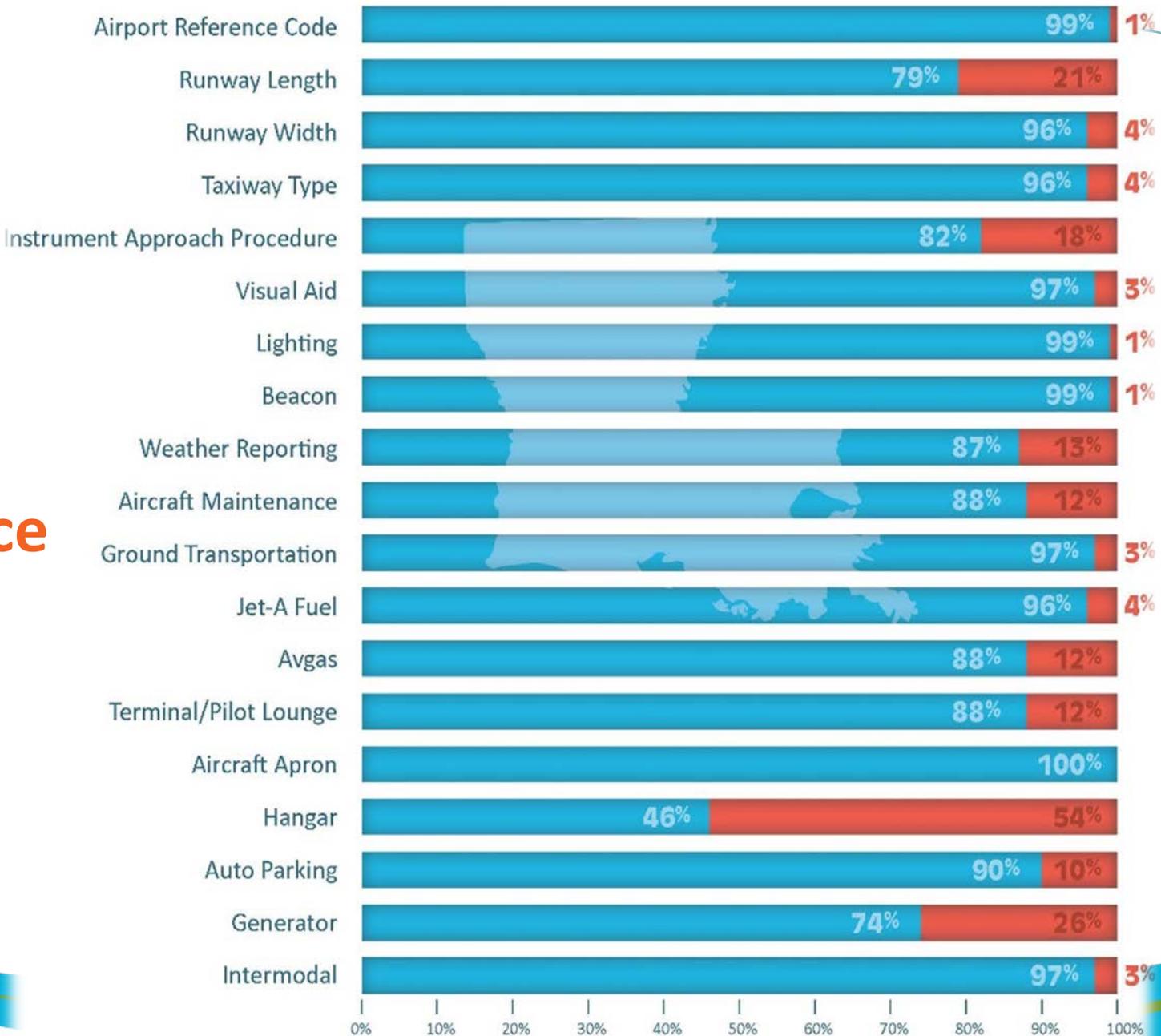
**Commercial**

**\$43.98 Per Passenger  
Invested**

Source: Information calculated using data from *2017-2021 FAA NPIAS Report to Congress*

# LOUISIANA AIRPORT SYSTEM PERFORMANCE MEASURES

## System Performance



Source: CDM Smith

# Performance Measures

- 19 Performance Measures
- Key Elements (Short Term)
  - Weather Reporting
    - 83% Coverage
  - Instrument Approaches
    - 88% Coverage
  - Return on State Investment
  - Emergency Support
    - 74% of Airports

# Key System Benchmarks



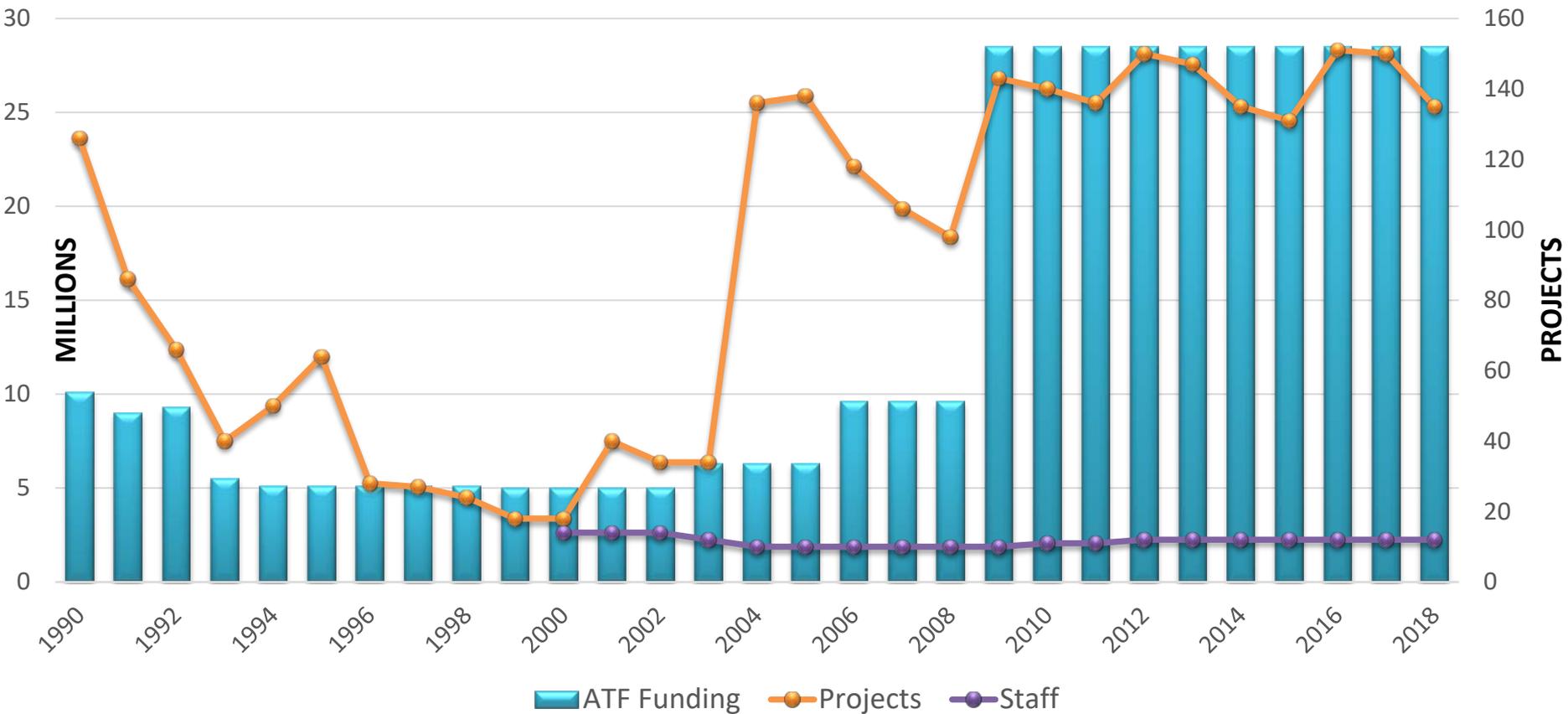
- Runway Length
- Parallel Taxiway
- Weather
- Approaches
- Power Backup

# Performance Measures

- Key Elements (Long Term)
  - Framework for Future Planning
    - Airport Layout Plans
    - Preservation
    - Standardization
    - Planning/Notification Systems
    - Policy Development
      - Funding Allocation (GA and Commercial)

# Program Funding

## ATF Funding v. Projects & Staffing



# Performance Measures

## ➤ Asset Management

- Continuous Airport/Aviation Planning
  - *Pavement Condition Index Studies*
  - Economic Impact Studies
  - Innovate 5010 Airport Safety Inspections
  - GIS Program
  - Sustainability Programs
  - Operational Activity Reporting
  - *Staff Training/Education*
  - *Airport Maintenance*

# Pavement Management

- System Pavement Condition
  - Hard Surface Runways
    - 78% Good or Better Condition
- GA Pavement Condition
  - Runways
    - 75% Good or Better Condition
- AC Pavement Condition
  - Runways
    - 88% Good or Better Condition



# Performance Measures

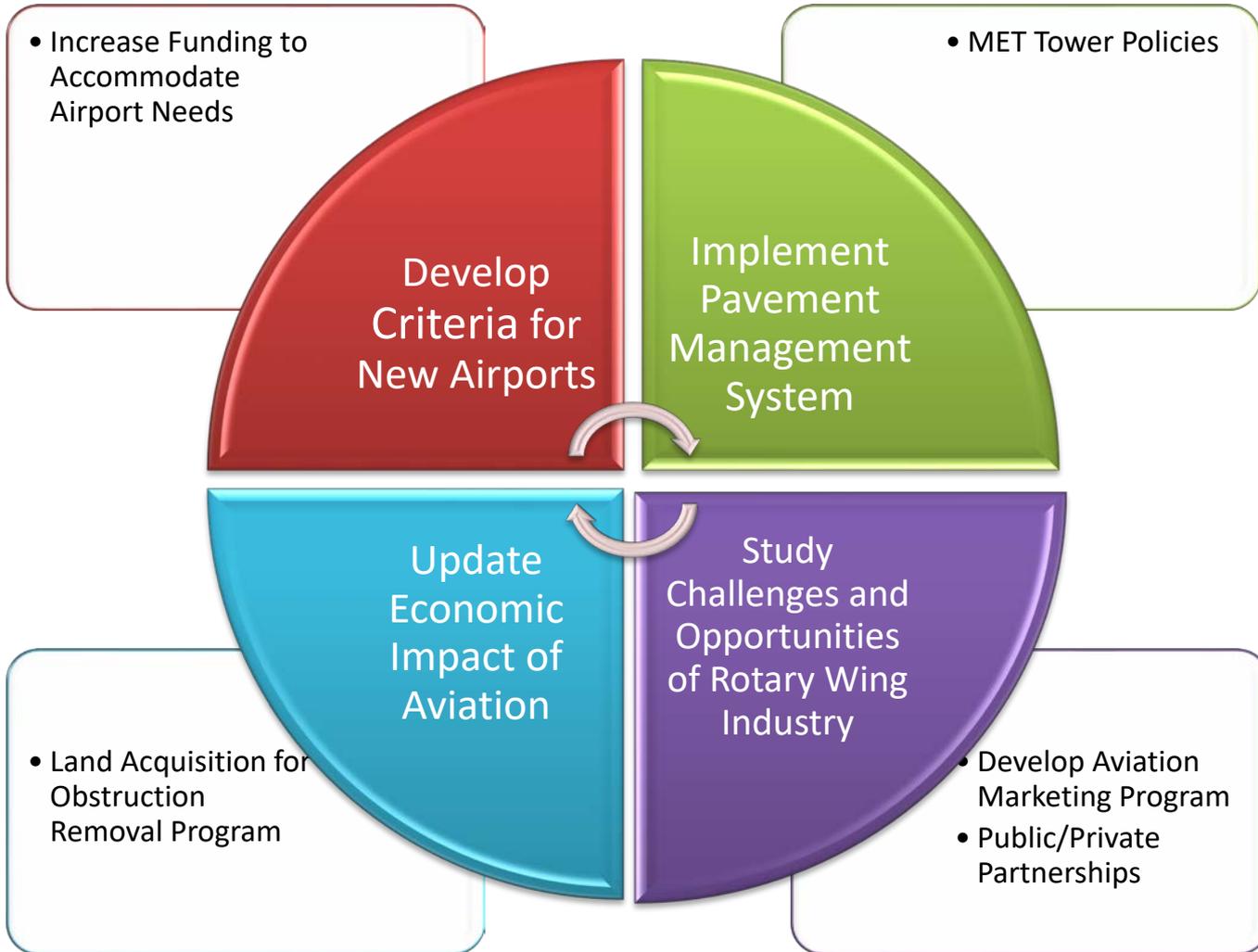
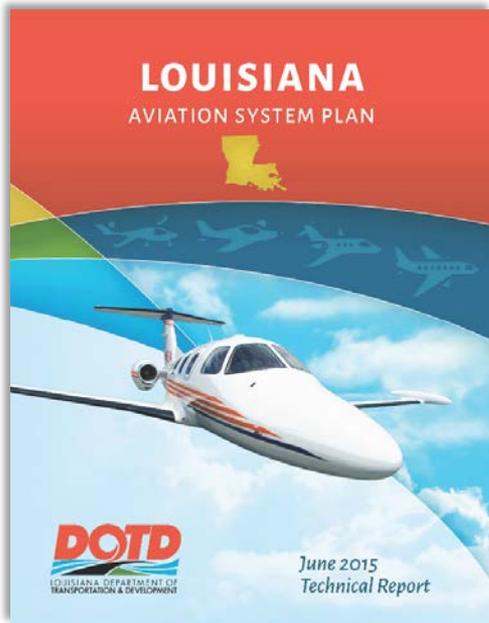
- Positive Performance Measurement
  - Some Measures are ‘Intangible’
    - *Airport Maintenance*
      - *Instilling a Philosophy*
    - Customer Service
    - Programmatic Situational Awareness
    - Relations/Building Trust

# Performance Measures

- Performance Measurement Challenges
  - Funding/Revenue
  - Priorities
  - Politics



# Plan Recommendations



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