

The logo for the Nevada Airport and Heliport System Plan (NAHSP). It features a large, stylized white letter 'N' on the left, with a white arrow pointing right from its top. To the right of the 'N' are five white icons representing different types of aircraft: a helicopter, a propeller plane, a jet, a biplane, and a small propeller plane. Below these elements, the letters 'NAHSP' are written in a large, bold, white sans-serif font. Underneath 'NAHSP', the text 'Nevada Airport and Heliport System Plan' is written in a smaller, white sans-serif font.

# NAHSP

Nevada Airport and Heliport  
System Plan

## AND AIRPORT ECONOMIC IMPACT STUDY

PREPARED FOR:



PREPARED BY:

**Kimley»Horn**  
Expect More. Experience Better.

Date: **Month XX, 20XX**

# Topics

- Project Purpose and Process
- Nevada's Aviation System
- Trends and Issues
- System Goals and Performance Measures
- Airport Regional Value Analysis
- Forecasts of Aviation Activity and Demand
- Recommendations and Investment Needs
- Airport Economic Impact Study
- Q & A



# Project Purpose and Process

# Two Distinct Studies Supporting Aviation



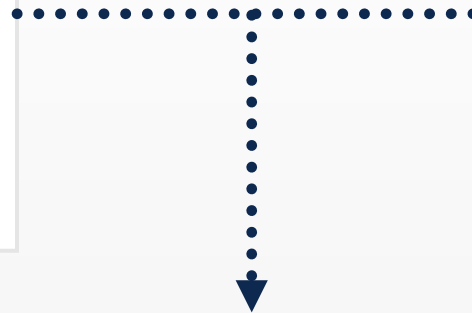
# Project Purpose

## NAHSP

- Analyze system needs
- Identify policy/other recommendations

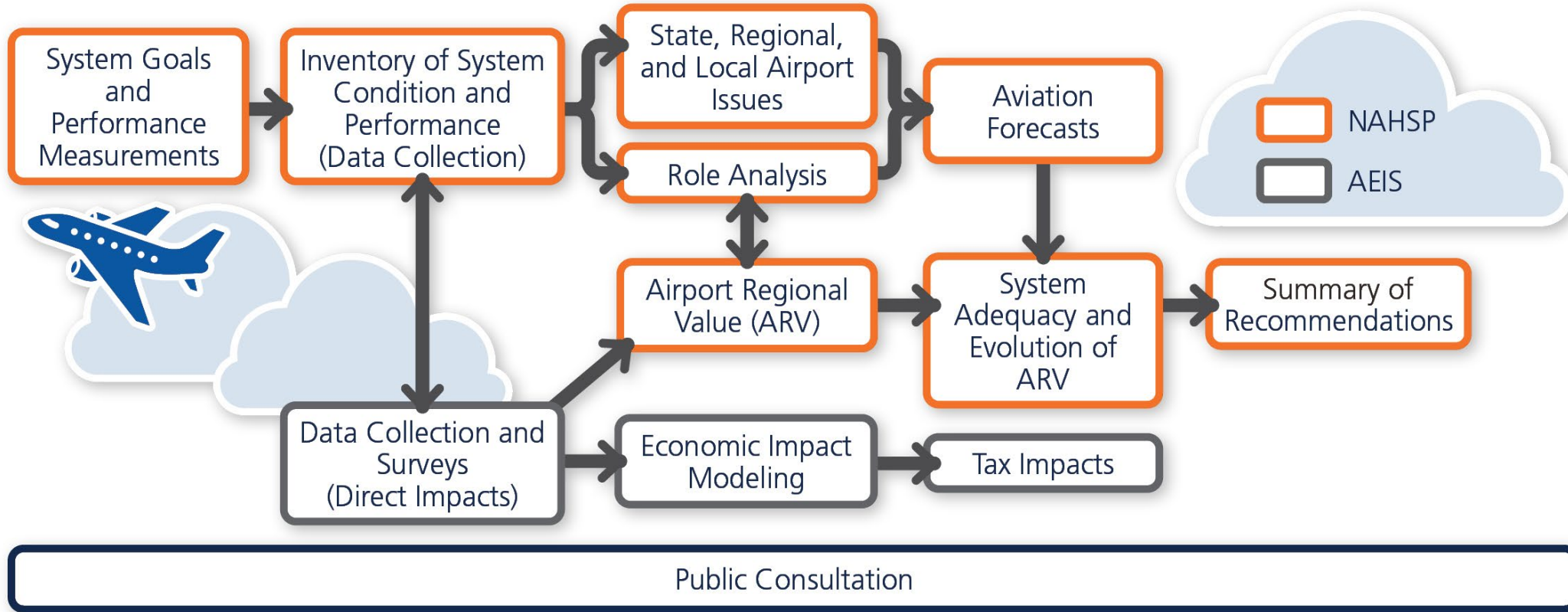
## AEIS

- Determine airport contributions – quantitative and qualitative



Provides NDOT and Nevada airports with complete portrayal of benefits derived and importance of airport investment to meet identified needs

# NAHSP & AEIS Project Process



# Public Consultation





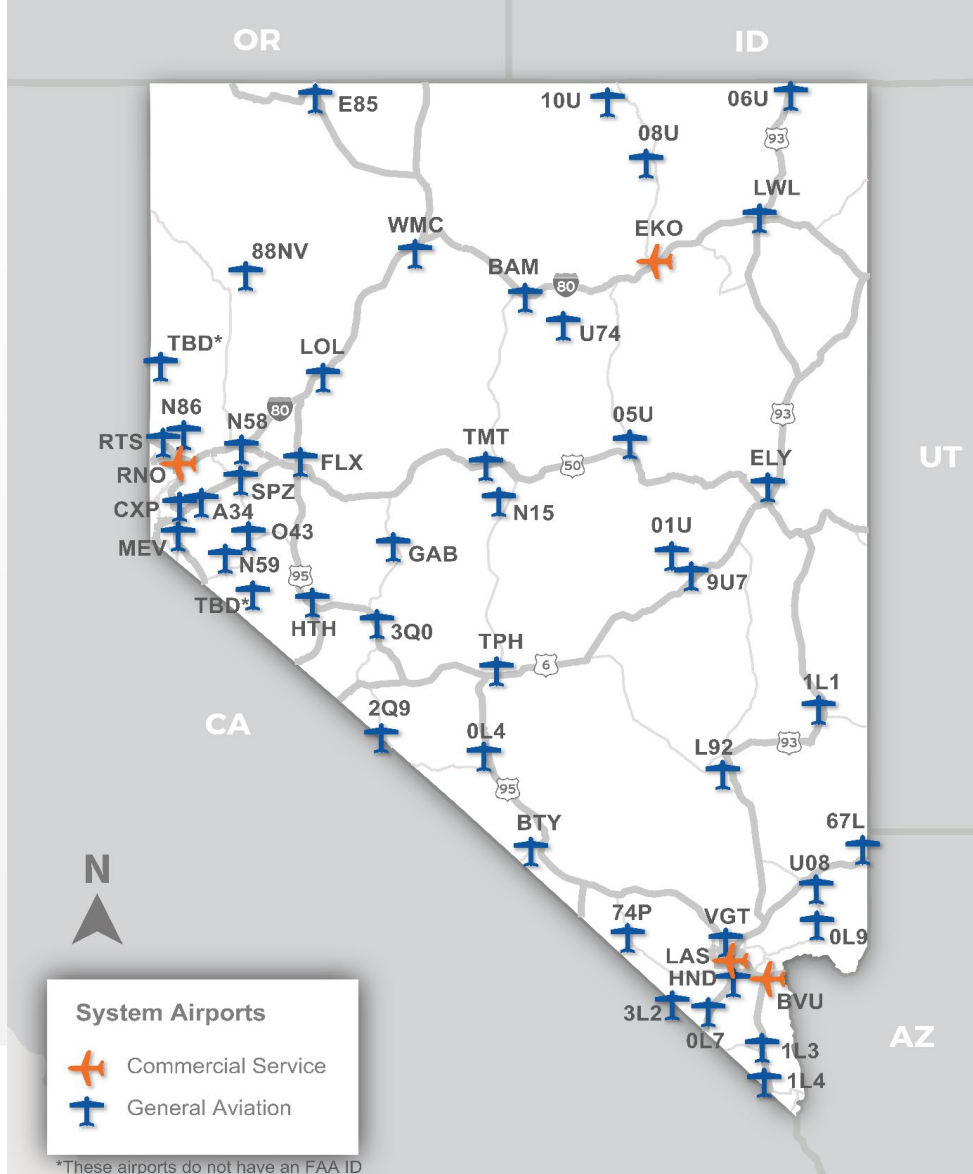
# Nevada's Aviation System



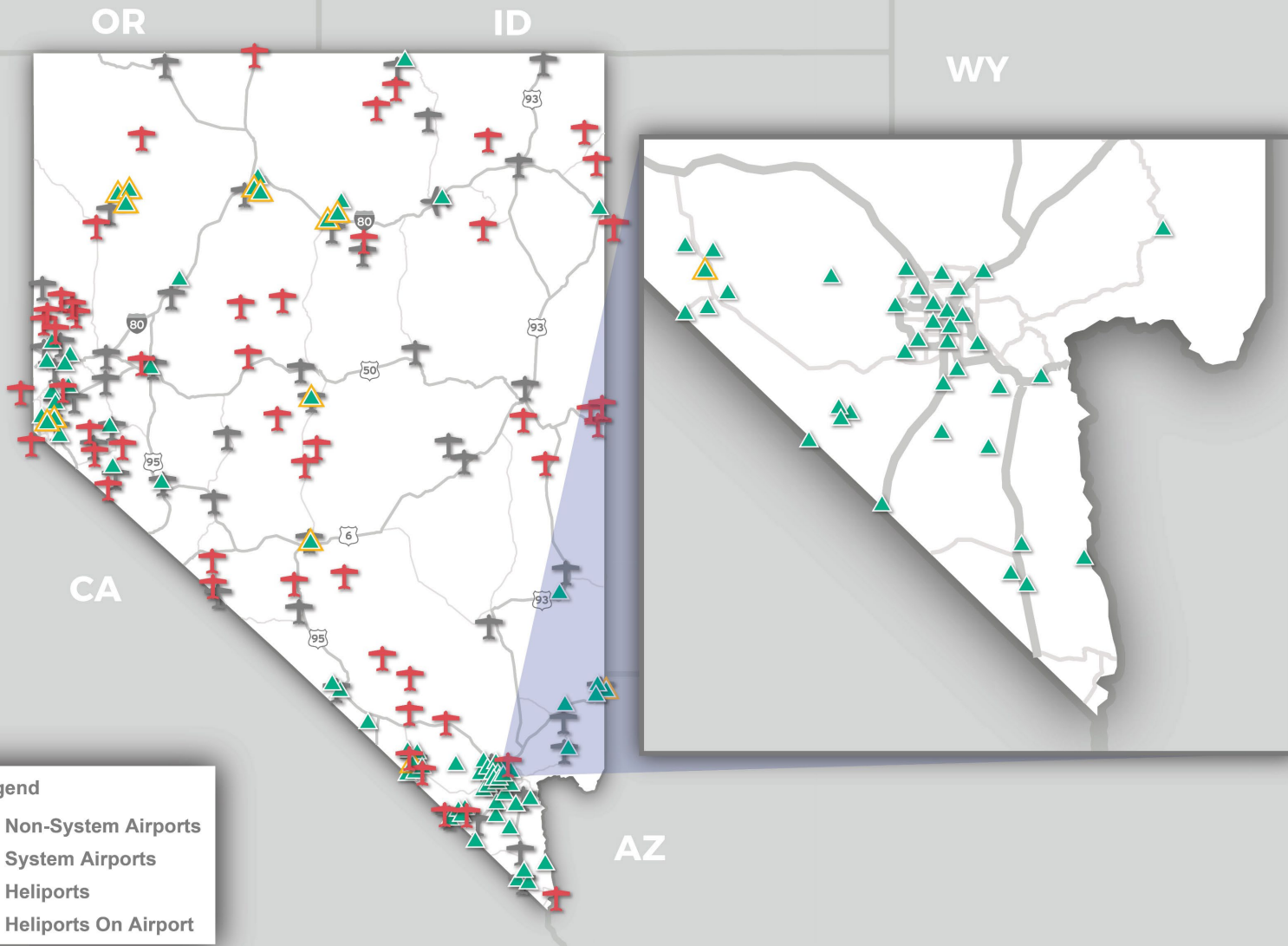
# Nevada's Aviation System

*Key Aviation System Facts*

- 51** System Airports
- 30** Federally Eligible Airports
- 79** Runways
- NEARLY 1,300** Statewide Based Aircraft
- OVER 1.35** Million Annual Operations
- ALMOST 50** Million Annual Commercial Passengers

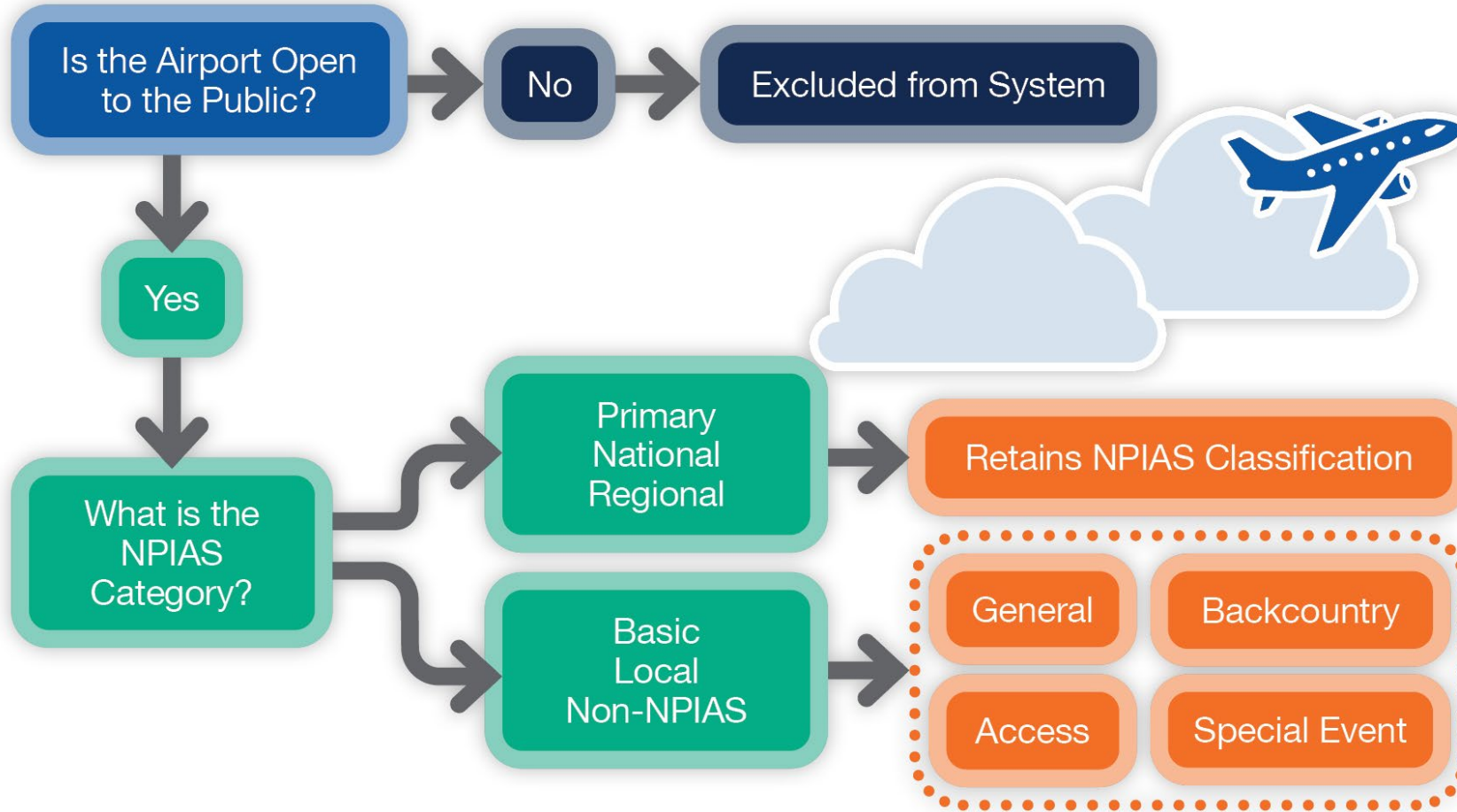


# Supporting the State Aviation System



- Other Nevada Aviation Facilities
  - 63 Heliports
  - 14 On-airport Heliports
  - Numerous other private, military, and supporting facilities

# NAHSP Airport Classifications



## Why is this important?

- Understand interaction between NAHSP facilities
- Making informed decisions about facility needs and resource allocation
- Establish a network of facilities that support system goals



# NAHSP Airport Classifications

NAHSP Classification	Public Use	Primary Use	# of Airports
Primary	Yes	Publicly owned commercial service airports that have more than 10,000 passenger boardings or enplanements each calendar year and receive scheduled passenger service	4
National	Yes	Supports national and state system by providing communities with access to national and international markets in multiple states and throughout the U.S	2
Regional	Yes	Supports regional economies connecting communities to statewide and interstate markets	3
General	Yes	Multi-purpose public use facilities	18
Access	Yes	Regularly utilized for a specific reason related to accessing the location such as emergency, medical, or business	13
Backcountry	Yes	Recreational use airports not utilized on a regular basis for another specific access purpose	9
Special Event	Yes, with Permission	Privately owned airports utilized for special events	2



# Trends and Issues

# Trends and Issues Addressed in the NAHSP



- Stakeholder input was critical to identify trends and issues
- Outreach included:
  - Project Advisory Committee (PAC)
  - All System Airports
  - Clark County Department of Aviation (CCDOA)
  - Bureau of Land Management
  - Aeromedical Providers
  - Aviation-related Businesses

# Summary of Trends and Issues



BLM-Controlled Facilities



State Aviation Funding



FAA-Funding on  
Non-Primary Runways



Wildfire and EMS  
Support



Special Use Airspace



Broadband and  
Weather Reporting



# System Goals and Performance Measures



# System Plan Framework



# NAHSP Goals



## Safety and Security

Continuously improve and promote aviation safety

**Includes 5 PMs**



## Preserve Infrastructure

Maintain the state's aviation assets to preserve investments

**Includes 4 PMs**



## Transform Economies

Improve the contribution of the aviation system to Nevada's economic competitiveness through a supportive and innovative transportation network

**Includes 4 PMs**

# NAHSP Goals (continued)



## Foster Sustainability

Develop an aviation network that reduces emissions while being environmentally, historically, culturally, and financially sustainable

**Includes 5 PMs**



## Connect Communities

Enhance opportunity, livability, and quality of life through better connections between aviation system and other modes.

**Includes 4 PMs**







## Optimize Mobility



Make strategic aviation investments that enhance mobility opportunities, better connections, and reliability expectations

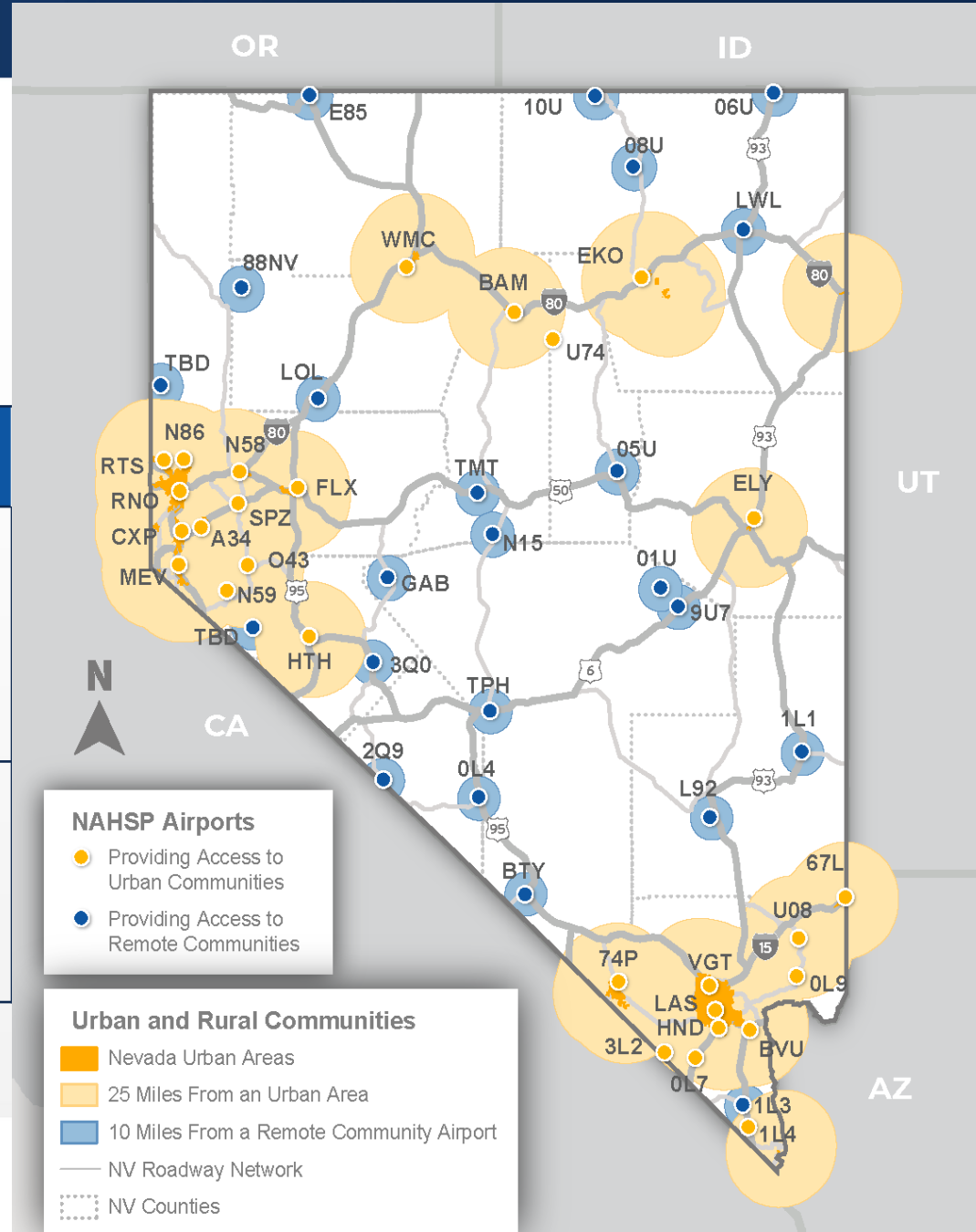
**Includes 3 PMs**

# Sample Performance Measures

System Goal	Performance Measure
 <p>Safety and Security</p>	<p>Percent of airports that have a designated helicopter landing location</p>
 <p>Preserve Infrastructure</p>	<p>Percent of airports with primary runway meeting Pavement Condition Index (PCI) of acceptable or above</p>
 <p>Transform Economies</p>	<p>Percent of airports that can support regular business activity</p>
 <p>Optimize Mobility</p>	<p>Percent of airports that provide off-airport transportation</p>

# Sample System Performance Results

System Goal	Performance Measure
 <p>Foster Sustainability</p>	<p>Percent of Airports that have Established Public Outreach Activities</p>
 <p>Connect Communities</p>	<p>Percent of Airports Providing Access to Remote Communities</p>





# Airport Regional Value (ARV) Analysis

# Airport Regional Value (ARV)

- Only for NPIAS airports
- Quantifies the complete value an airport brings to its community and broader region
- Establishes a series of common attributes to facilities, based on role, and assigns a value for each, based on needs of similar facilities
- Helps facilities more effectively perform their role at the federal, state, regional, and local level







# VRV Categories and Points



Variable Category	Sector Description	No. of Variables	Points	%
Regional Significance ( $V_{RS}$ )	Recognizes airports serve regions well beyond their immediate area	9	45	22.5%
Airport Facilities ( $V_{AF}$ )	Assesses resources that accommodate aircraft relevant to airport's service role	11	55	27.5%
Airport Protection ( $V_{AP}$ )	Assesses actions and ability to prevent encroachment and incompatible land uses	5	25	12.5%
Airport Access ( $V_{AA}$ )	Assesses characteristics & quality of facilities/services for ground transportation and highway connectivity	4	20	10.0%
Airport Expandability ( $V_{AE}$ )	Assesses adequacy of airport property needed for aeronautical and nonaeronautical development	4	20	10.0%
Community Commitment ( $V_{CC}$ )	Assesses support and resources committed to operate & maintain an airport	7	35	17.5%
<b>Totals</b>		<b>40</b>	<b>200</b>	<b>100%</b>



# Example of an Airport Development Report

## Winnemucca Municipal Airport, WMC

Category	Value Rating Variable (VRV)	NAHSP Objective (Minimum)	Current Performance	Score
 Airport Protection $V_{AP}$	Height Hazard Zoning	Present	Yes	5
	Obstruction Mitigation	15:1 - 18:1	26:1	5
	Airspace Restrictions	N/A	42 Miles	3
	Runway Protection Zone	Full Desired	Full	5
	Land Use Compatibility	N/A	Less than 1 Mile	1
	<b>Airport Protection <math>V_{AP}</math> Subtotal</b>			
 Airport Access $V_{AA}$	Community Access	N/A	5 Miles	3
	Local Access	Collector (Minor)	Collector (Minor)	5
	Regional Access	N/A	3.2 Miles	5
	Ground Transportation Services	Rental or Courtesy Car and Taxi or Ride Share	Courtesy Car and Taxi	3
<b>Airport Access <math>V_{AA}</math> Subtotal</b>				<b>16</b>
 Airport Expandability $V_{AE}$	Total Acreage Ratio	N/A	97	5
	Airfield and Aeronautical Property	N/A	4%	5
	Surplus Property	N/A	928 Acres	5
	Airfield Expandability	N/A	1,116 Feet	5
<b>Airport Expandability <math>V_{AE}</math> Subtotal</b>				<b>20</b>
 Community Commitment $V_{CC}$	Last ALP Update	< 10 Years and After 2013	2020	5
	Airport Management	Part Time or FBO	Full Time	5
	Historical Capital Improvements	≥ \$1.0 Million	\$5.95 Million	5
	Airport Capital Improvement Program (ACIP)	≥ \$1.0 Million	\$7.15 Million	5
	Economic Development Partnership	Established Partnership	Yes	5
	Financial Subsidies	Capital Improvement Subsidy	Capital Improvement Subsidy	3
	Goodwill	N/A	Education Program and Positive News	4
<b>Community Commitment <math>V_{CC}</math> Subtotal</b>				<b>32</b>






Category	Value Rating Variable (VRV)	NAHSP Objective (Minimum)	Current Performance	Score	
 Regional Significance $V_{RS}$	Airport Ownership	N/A	Public	5	
	Airport Uses	N/A	FireFighting	1	
	Nearest Airport	N/A	53 Miles	5	
	Longest Runway	Accommodate 95% of Small Aircraft Fleet = 5,510 Feet	7,000 Feet	5	
	Based Aircraft	N/A	0.4%	1	
	T-Hangar Ratio (THR)	0.50 - 0.60	1.5	5	
	Fuel Availability	Jet A or 100LL, Self Service (SS) with Credit Card Reader	Jet A and 100 LL Full Service (FS) and SS	5	
	Aircraft Maintenance	Minor	Minor	5	
	Instrument Approach	Non-Precision	Non-Precision with Vertical Guidance	5	
	<b>Regional Significance <math>V_{RS}</math> Subtotal</b>				<b>37</b>
	 Airport Facilities $V_{AF}$	Runway ARC Category	B-II	B-II	5
		FAA Design Standards	Meet FAA Design Standards	Yes	5
Runway Surface Type/Condition		Paved and Good, PCI >71	Asphalt and Good, PCI = 76	5	
Runway Lighting		Low-Intensity	Medium-Intensity	5	
Taxiways		Partial Parallel to Primary Runway	Full Parallel to All Runways	5	
Visual Aids		Rotating Beacon and Wind Cone	Rotating Beacon, Lighted Wind Cone, and PAPIs	5	
Weather Reporting		AWOS or ASOS	ASOS	5	
GA Terminal		Public Restrooms	Public Restrooms, Conference Room, and Pilot Lounge	5	
Utilities		Electricity and Water Available	Electricity, Water, and Septic	5	
Security/Wildlife Fencing		Partial	Full	5	
Communications Connectivity		Public Phone and Cellular (Data/4G)	Public Phone and Cellular (Data/4G)	5	
<b>Airport Facilities <math>V_{AF}</math> Subtotal</b>				<b>55</b>	

# Facility and Service Objectives (FSOs)

- Developed to analyze non-NPIAS airports in a similar manner
- Doesn't include variables (or objectives) that relate to qualitative factors
- Includes the following categories:
  - Regional Significance
  - Airport Facilities
  - Airport Access
  - Community Commitment
- Results in an Airport Development Report for non-NPIAS airports

# Example of Airport Development Report

## Kidwell Airport, 1L4

Category	Facility & Service Objective	NAHSP Objective (Minimum)	Current Performance	Meets Objective?	Category	Facility & Service Objective	NAHSP Objective (Minimum)	Current Performance	Meets Objective?
 Regional Significance	Longest Runway	Maintain Existing at a Minimum of 3,000 Feet	4,140 Feet	Meets	 Airport Facilities	GA Terminal	Public Restrooms Desired	Public Restrooms	Meets
	T-Hangar Ratio	> 0.25	0.88	Meets		Utilities	Electricity and Water Available	Electricity and Water	Meets
	Fuel Availability	Jet A or 100 LL, Self Service with Credit Card Reader	None	Doesn't Meet		Security/Wildlife Fencing	None	Partial	Meets
	Instrument Approach	Visual	Visual	Meets		Communications Connectivity	Public Phone or Cellular (Data/4G)	Cellular (Data/4G)	Meets
 Airport Facilities	FAA Design Standards	Meet FAA Design Standards	No	Doesn't Meet	 Airport Access	Ground Transportation Services	Rental or Courtesy Car and Taxi/Ride Share	Courtesy Car and Ride Share	Meets
	Runway Surface Type/Condition	Non-Paved and Fair	Sand and Fair	Meets					
	Runway Lighting	Reflectors, Low-Intensity is Desired	Non-Standard	Doesn't Meet	 Community Commitment	Last ALP Update	< 10 yrs and after 2013 or Airport Diagram	1995 ALP	Doesn't Meet
	Taxiways	Turn Arounds	Partial Parallel to Primary Runway	Meets					
	Visual Aids	Wind Cone	Wind Cone	Meets					
	Weather Reporting	Automated Unicom	None	Doesn't Meet					



# Forecasts of Aviation Demand and Activity

# Why Conduct Forecasts?

- Estimates change in aviation activity over the 20-year planning horizon
- Indicates where changes in demand may occur
- Informs project prioritization
- Provides context of how socioeconomic or other national/local trends impact aviation activity



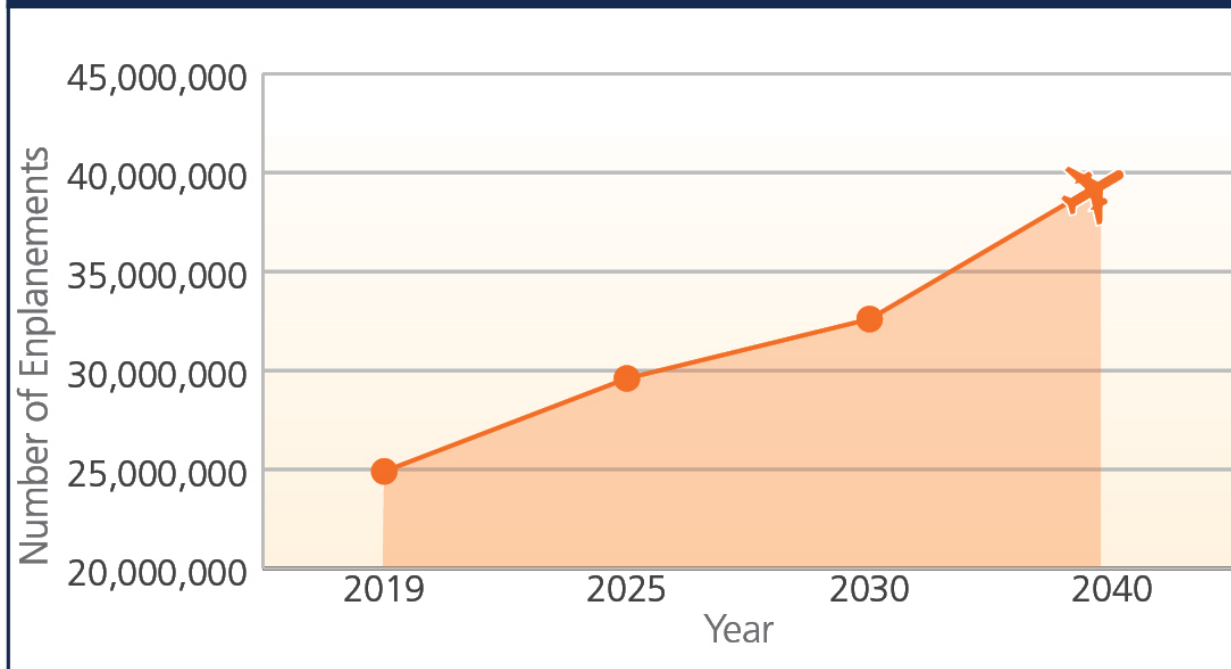
Base Years:  
2019/2020

## Activities Forecasted

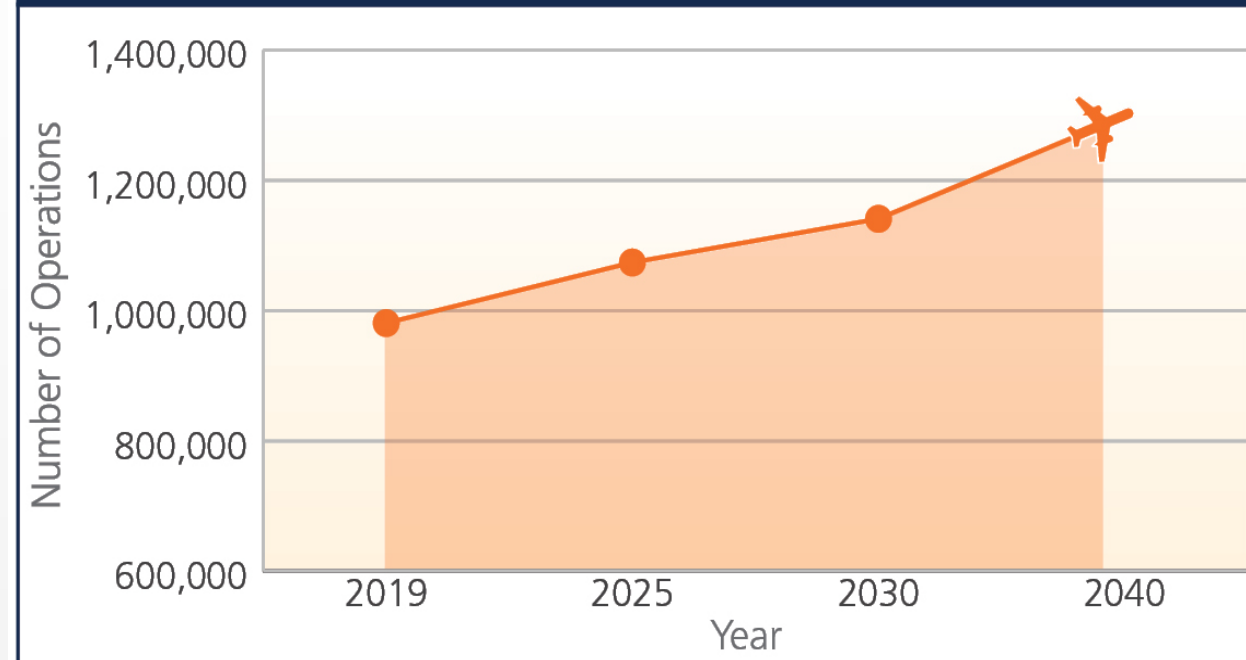
- Commercial Service Operations
- Commercial Service Enplanements
- GA Airport Based Aircraft
- GA Operations

# Commercial Service Airport Forecasts

## COMMERCIAL SERVICE ENPLANEMENTS FORECAST

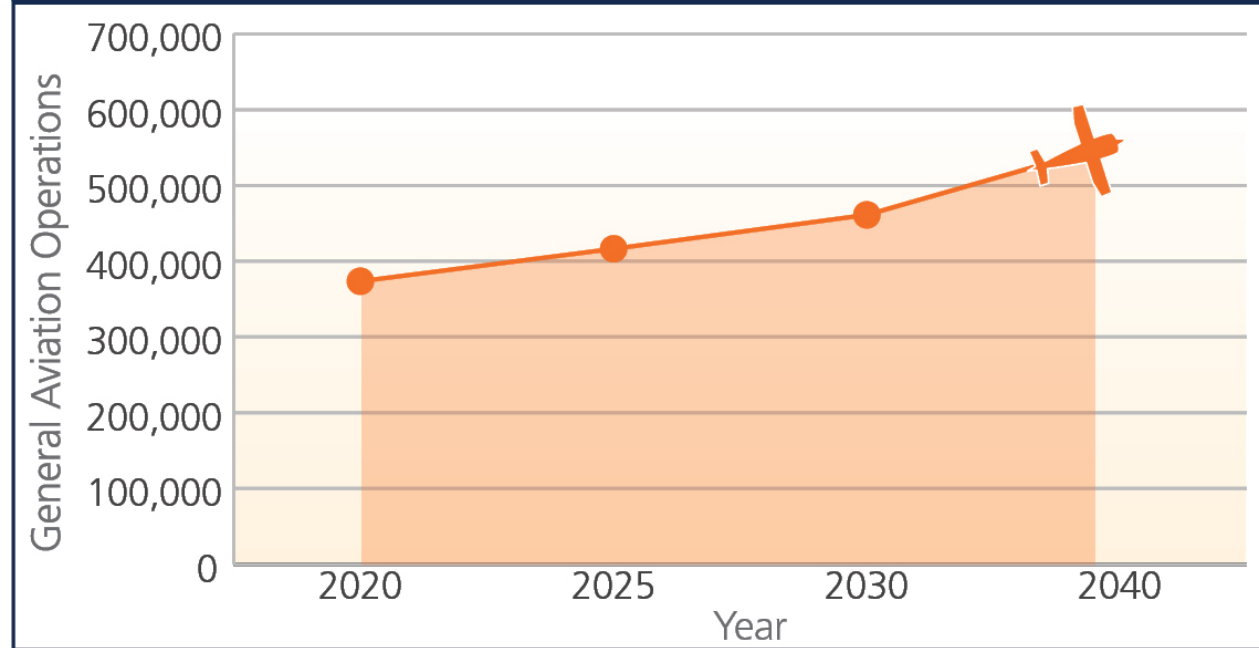


## COMMERCIAL SERVICE TOTAL OPERATIONS FORECAST

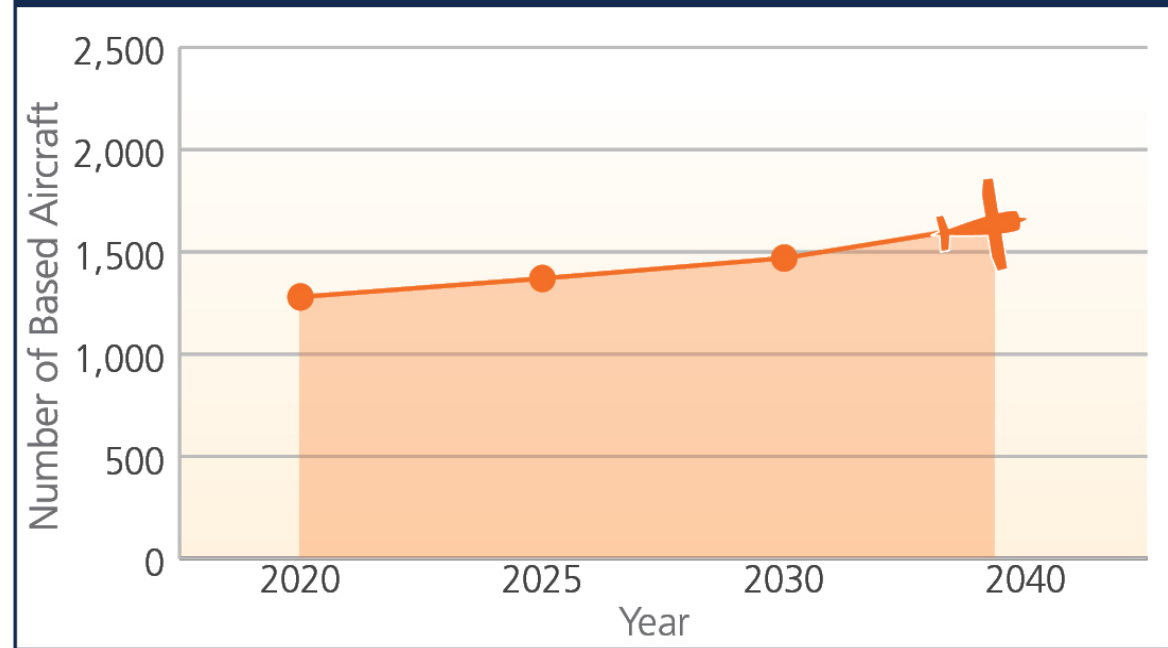


# General Aviation Airport Forecasts

## GENERAL AVIATION OPERATIONS FORECAST



## GENERAL AVIATION AIRPORT BASED AIRCRAFT FORECAST





# Recommendations and Investment Needs



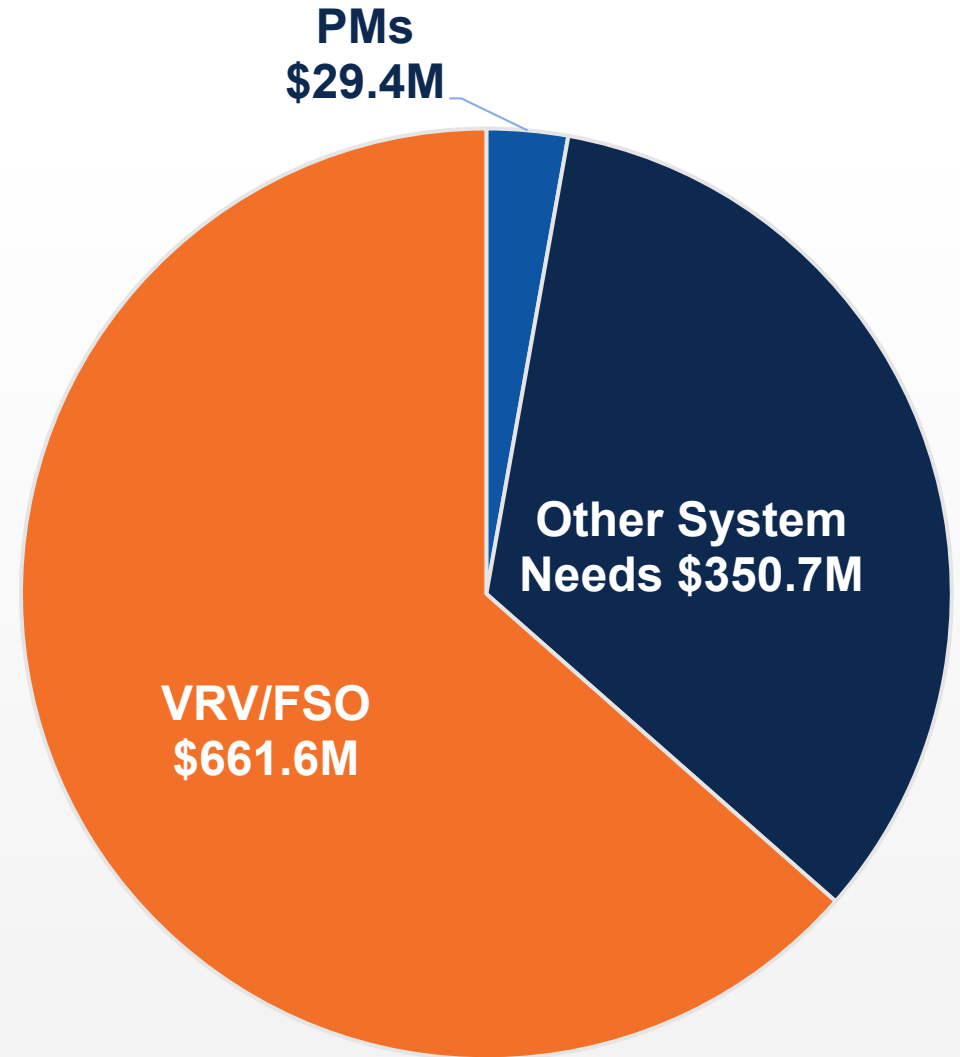
# Recommendations Development Process

- Coordinate with PAC to identify Future Performance Targets for PMs that directly relate to a capital improvement project
  - Identify delta between existing performance and future target to develop project recommendations
- Coordinate with PAC to identify project recommendations and policy considerations
- A project recommendation or policy consideration was developed for each PM and VRV/FSO

# NAHSP Investment Needs

- Three Sources of NAHSP Needs:
  - Performance Measures Analyses
  - ARV/VRV Analyses
  - Other System Needs

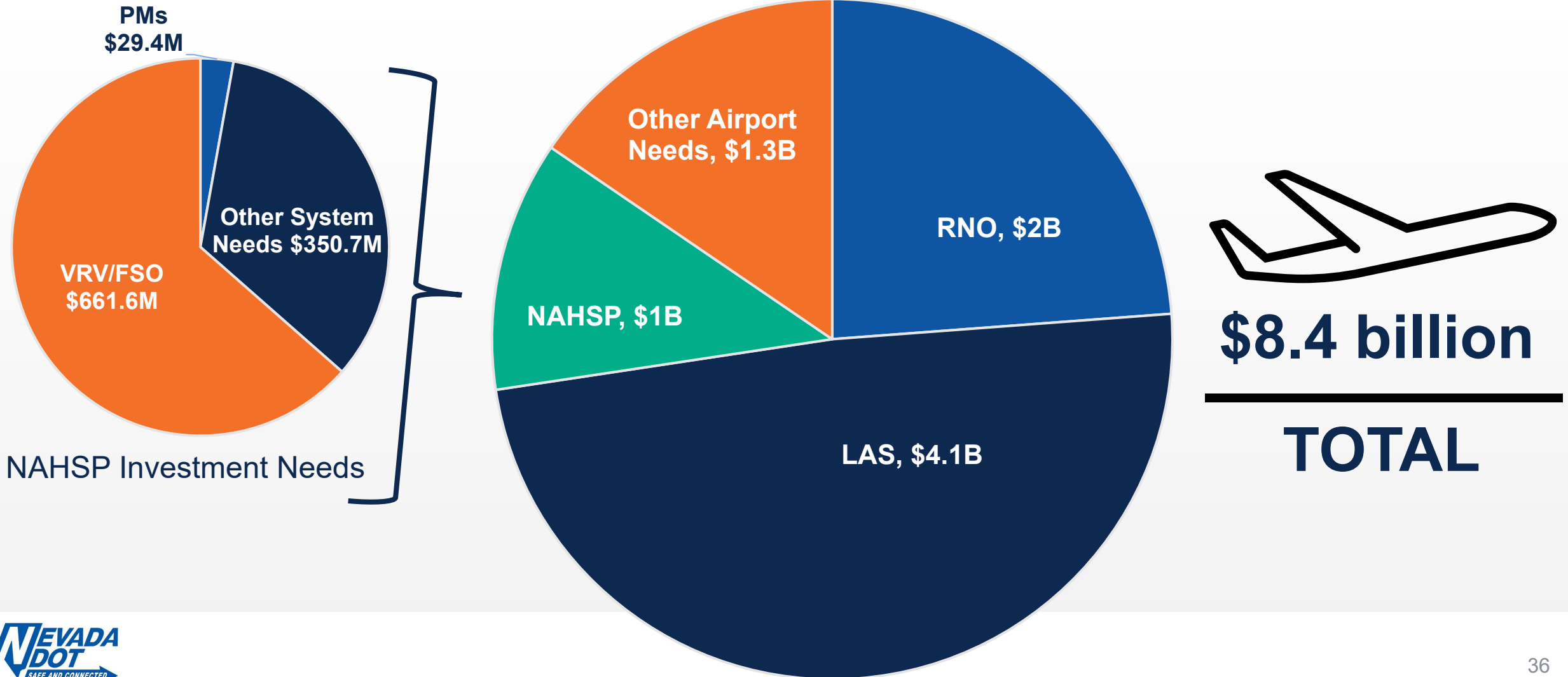
NAHSP Source	Amount
PMs	\$29.4 million
VRV/FSOs	\$661.6 million
Other System Needs	\$350.7 million
<b>Total NAHSP Investment Need</b>	<b>\$1.0 billion</b>



# Other Airport Investment Needs

- Other investment needs were considered to present a comprehensive picture of total investment needs for airports in Nevada
- Cost estimates were derived from reviewing:
  - Master Plans
  - Airport Capital Improvement Plans (ACIPs)
  - Airport Pavement Management Studies (APMS)
  - Other Statewide and Airport-specific Studies
- Direct coordination with large commercial service airports contributed to these cost estimates

# Total 20-year Investment Needs for Nevada's Airports





# Airport Economic Impact Study

# AEIS Methodology

- Comprehensive economic impact data was collected from all system airports, including:
  - Airport administration
  - Capital improvements
  - Tenant information
  - Commercial service and GA visitor impacts
- Inputs were modelled using IMPLAN (Impact Analysis for Planning)\*



# Statewide Results



STATEWIDE JOBS

**285,521 JOBS**

Number of employed people, regardless of part- or full-time status. Includes jobs created support the business' economic activity.



STATEWIDE LABOR INCOME

**\$12.2 BILLION**

All forms of employment income, including employee compensation (wages and benefits) and proprietor income.



STATEWIDE OUTPUT

**\$40.0 BILLION**

Represents the value of industry production and economic activity associated with Nevada airports.

# Special Events Considered in the AEIS

Burning Man	High Sierra Fly-in	Reno Air Races
Black Rock City Airport (88NV)	Dead Cow Lakebed Airstrip	Reno-Stead Airport (RTS)
		



# Thank you!

## Any Questions?

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