

# 2023 WASHINGTON-BALTIMORE REGIONAL AIR PASSENGER SURVEY

## General Findings from the Data

Kenneth Joh, Ph.D., AICP, CPM  
Principal Statistical Survey Analyst

Aviation Technical Subcommittee (ATS)  
May 23, 2024



This Photo by Unknown Author is licensed under CC BY-SA-NC

This Photo by Unknown Author is licensed under CC BY-SA-NC

This Photo by Unknown Author is licensed under CC BY-NC-ND



# OUTLINE

---

- Survey Overview
- Enplanements
- General Findings:
  - Passenger Characteristics
  - Ground Access
  - Preferences and Behavior
- Next Steps



# SURVEY OVERVIEW

- The 2023 Washington-Baltimore Regional Air Passenger Survey (APS) was conducted last October at Dulles International Airport (IAD), Reagan National Airport (DCA), and Baltimore/Washington International Thurgood Marshall Airport (BWI), under the oversight of the TPB Aviation Technical Subcommittee.
- To test new survey methods, a pretest was conducted at IAD in April 2023.
- This presentation highlights general findings from the APS drawn from the weighted data, focusing on air passenger characteristics, ground access, and preferences and behavior.

Airport	Flights Surveyed	Valid Responses	Revenue Passengers Response Rate	Intercept Passengers Response Rate
BWI	149	4,018	21%	58%
DCA	185	3,039	18%	59%
IAD	152	2,542	15%	41%
<b>All Airports</b>	<b>486</b>	<b>9,599</b>	<b>18%</b>	<b>52%</b>



# Enplanements

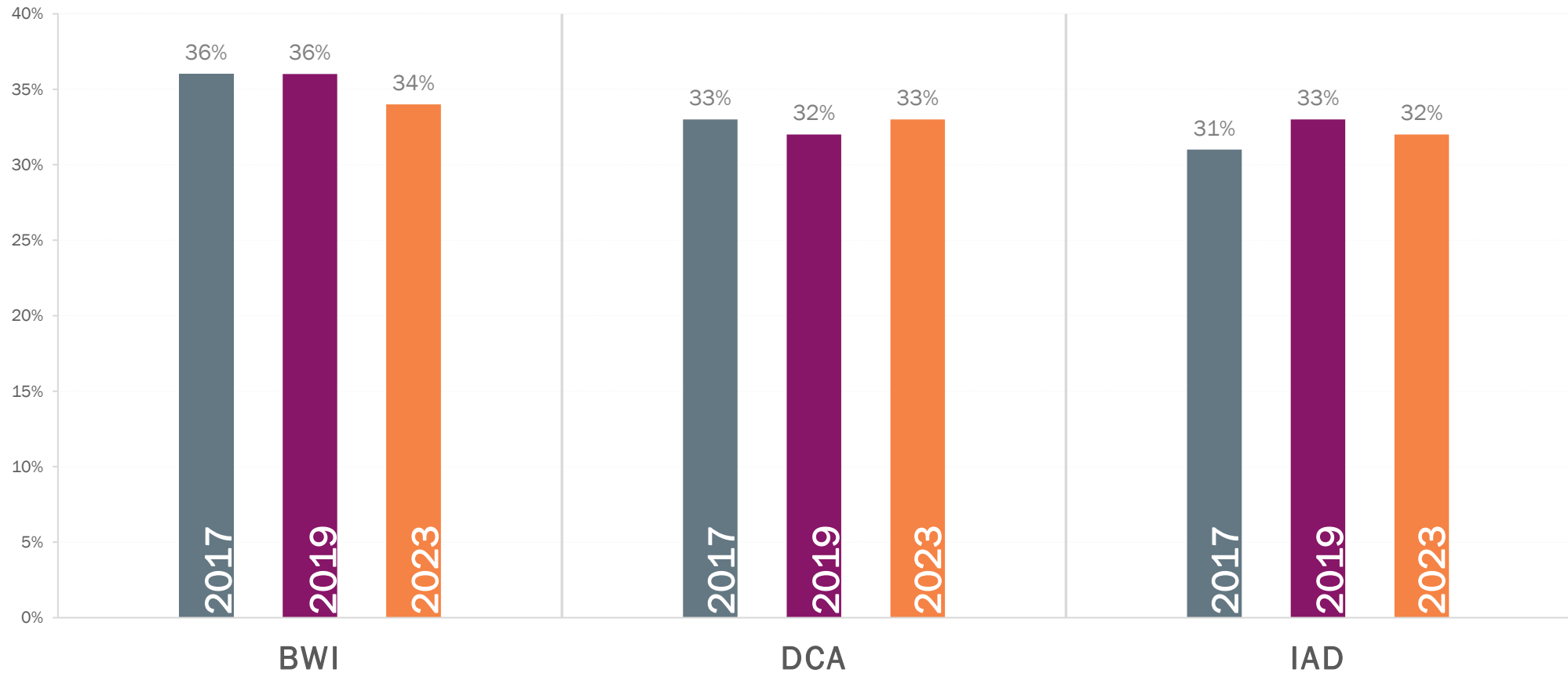
- Annual air passenger enplanements in **2023** were about **421,000 higher (38.2 million)** than in **2019 (37.8 million)**
- Local originations decreased slightly from 80% to 79% of total enplanement in 2023 compared to 2019

**BWI:** 77% (2019) --- **↓ 74% (2023)**  
**DCA:** 91% (2019) --- **↓ 87% (2023)**  
**IAD:** 71% (2019) --- **↑ 76% (2023)**

ENPLANEMENT TYPE		BWI			DCA			IAD			REGION		
		2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Local originations	Number (In 1000's)	8,910	10,426	9,679	10,499	10,918	11,062	7,245	8,726	9,447	26,654	30,070	30,189
	Percent	67%	77%	74%	88%	91%	87%	64%	71%	76%	73%	80%	79%
Connected from another flight	Number (In 1000's)	4,305	3,116	3,420	1,458	1,031	1,673	4,062	3,603	2,960	9,825	7,750	8,052
	Percent	33%	23%	26%	12%	9%	13%	36%	29%	24%	27%	20%	21%
Total Enplanement	Number (In 1000's)	13,215	13,542	13,099	11,957	11,949	12,735	11,307	12,329	12,407	36,479	37,820	38,241
	Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



# Enplanement Share by Airport



**BWI** total enplanement share decreased from 36% to 34% since 2019.

**DCA** total enplanement share increased from 32% to 33% since 2019.

**IAD** total enplanement share decreased from 33% to 32% since 2019.

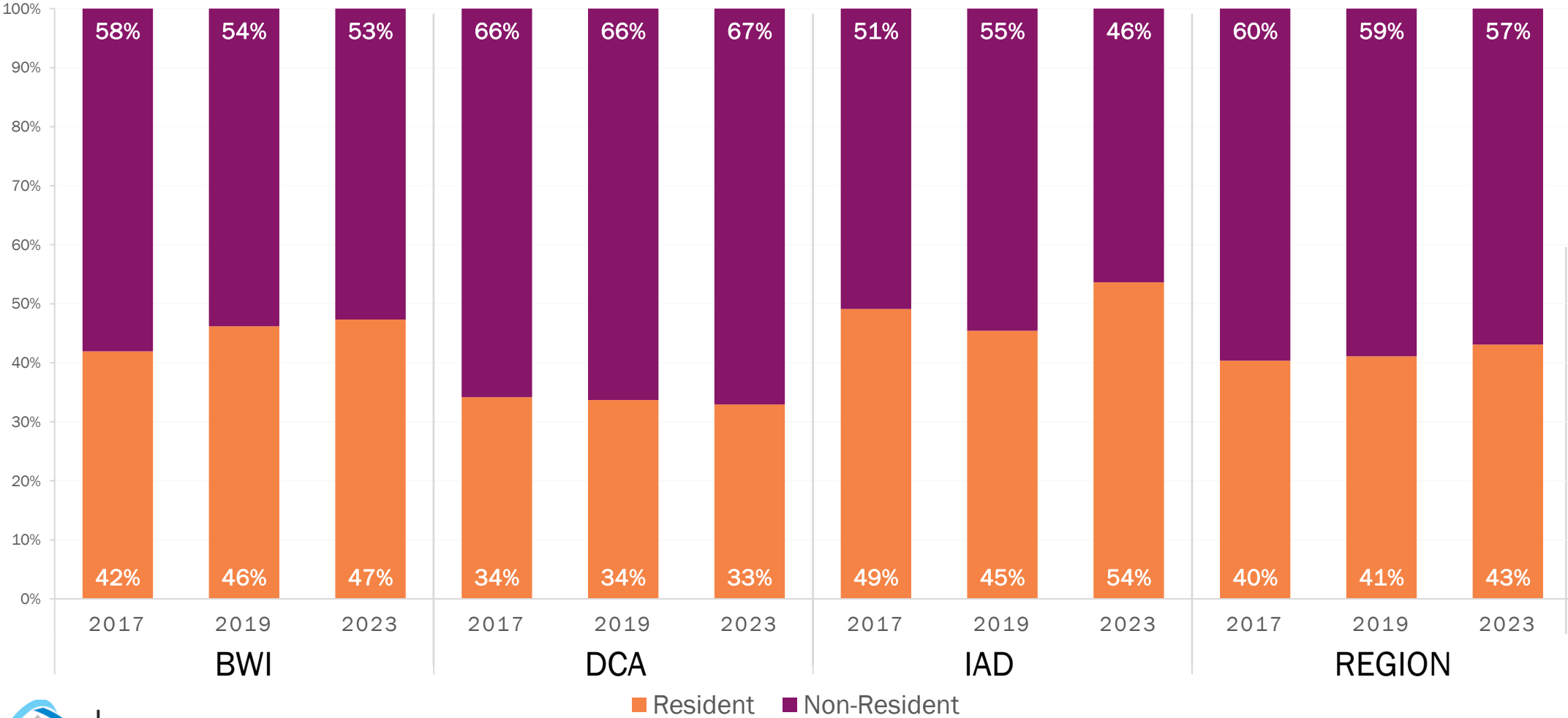


# PASSENGER CHARACTERISTICS

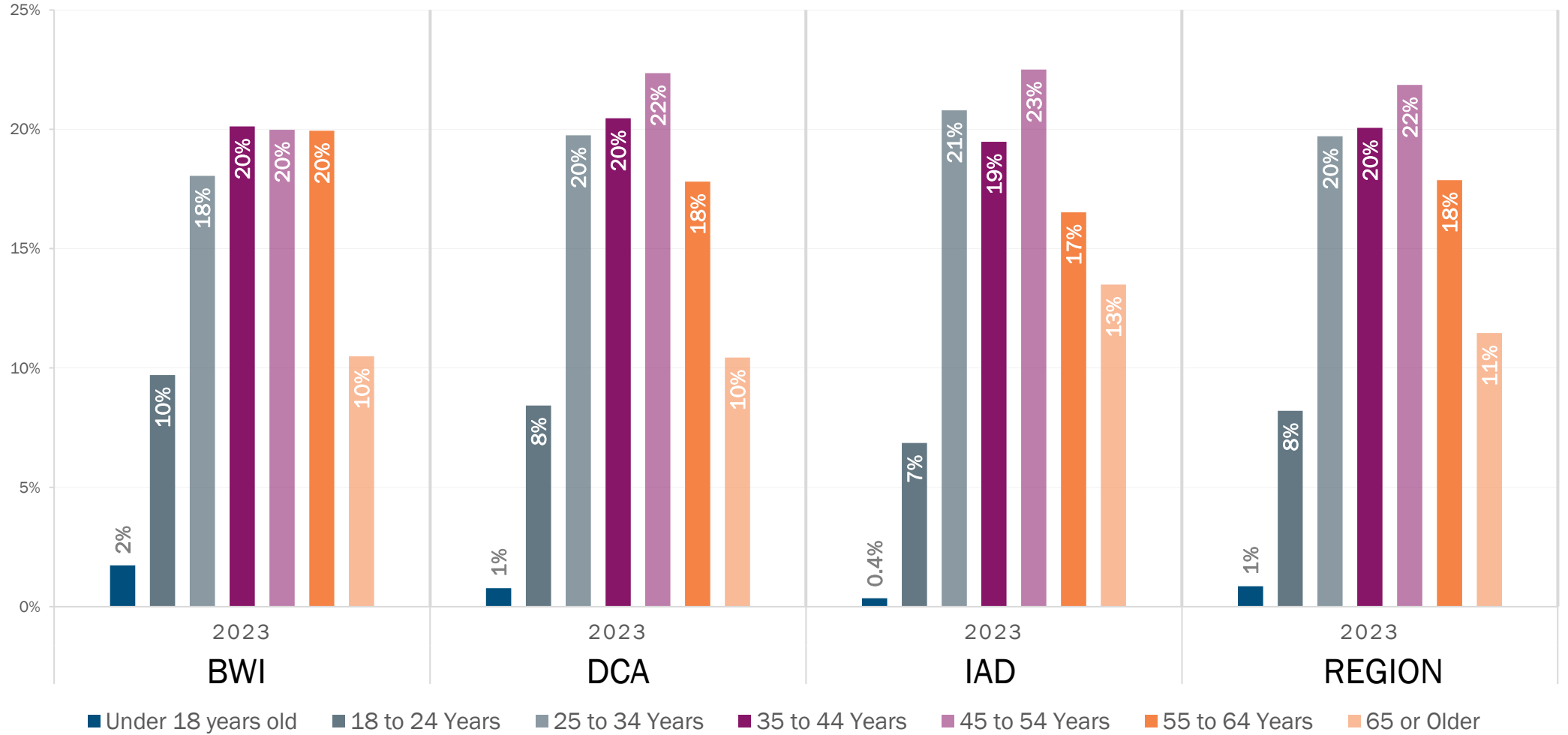
---



# RESIDENT VS. NON-RESIDENT PASSENGERS

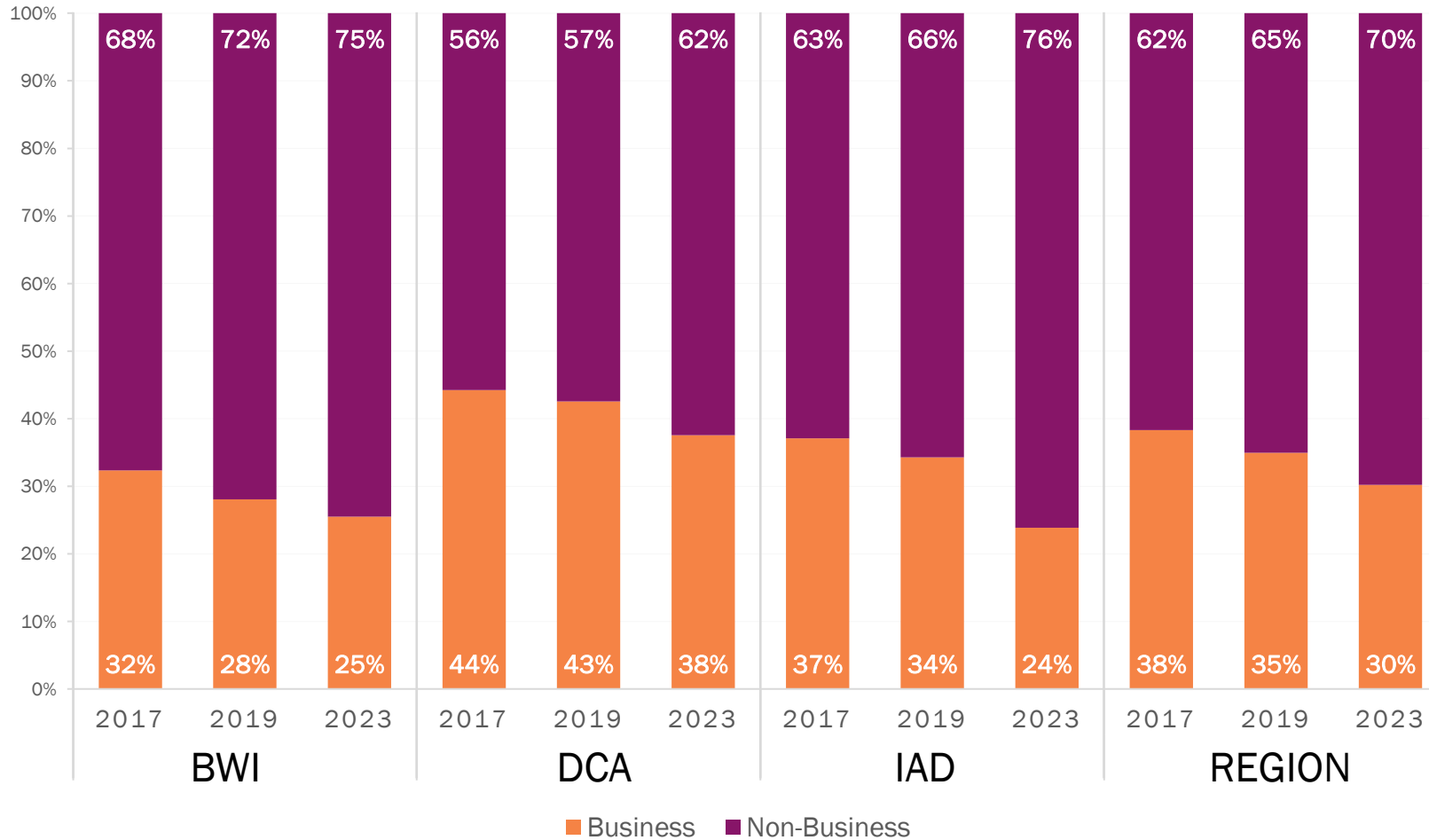


# AGE DISTRIBUTION – BY AIRPORT





# TRIP PURPOSE



## CATEGORIES INCLUDED

### Business:

- Business related to federal
- Business related to state and local government
- Other business

### Non-Business:

- Vacation
- Personal or family affairs
- Student or school related
- Other non-business

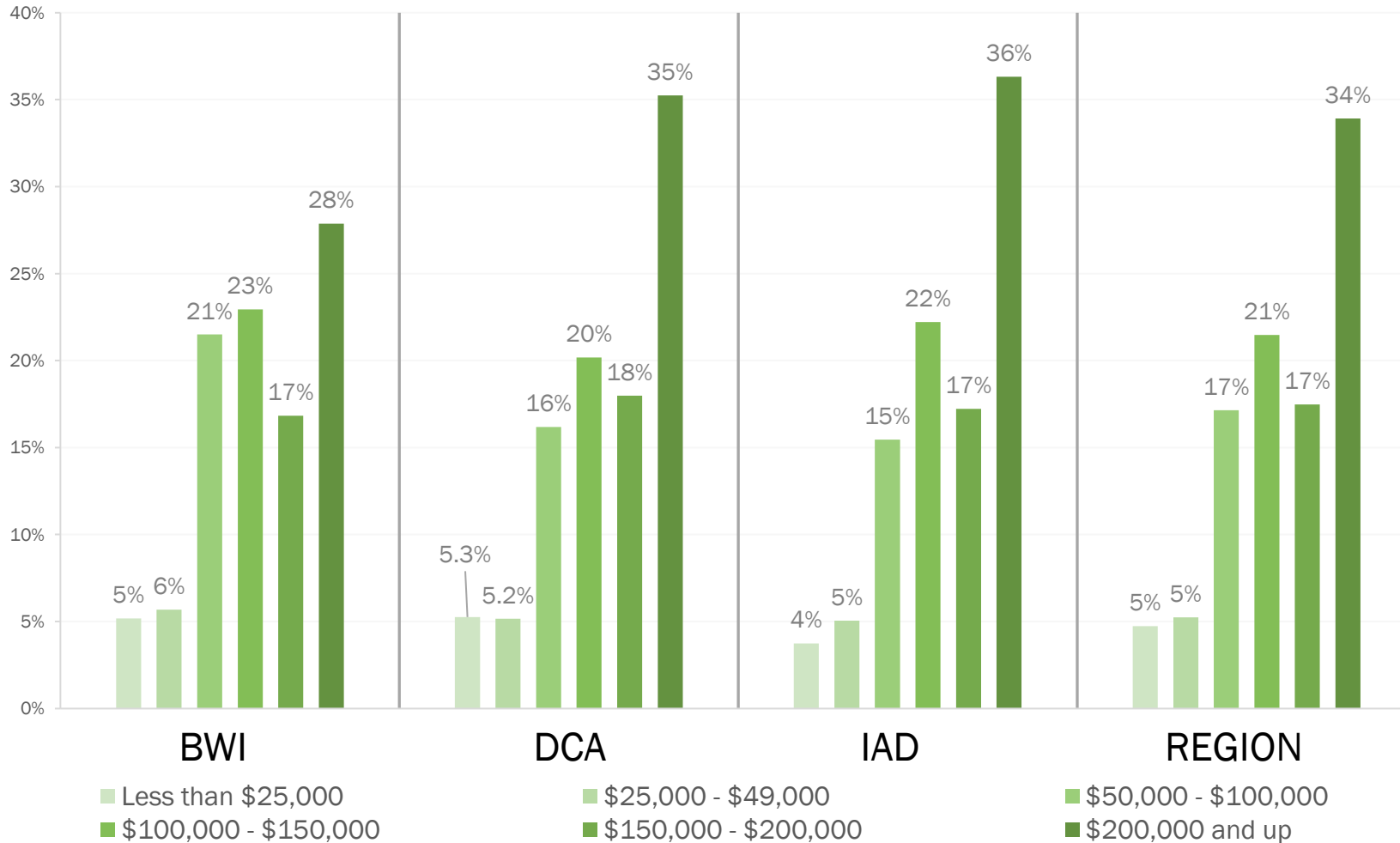


# TRIP PURPOSE BY CATEGORIES

Trip Purpose	BWI			DCA			IAD			REGION		
	2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Business related to federal government	9%	8%	5%	17%	17%	12%	13%	11%	7%	13%	12%	9%
Business related to state government	2%	2%	4%	2%	2%	3%	1%	2%	1%	2%	2%	3%
Other business	22%	19%	17%	25%	23%	22%	23%	21%	16%	23%	21%	19%
Vacation	25%	32%	37%	21%	24%	30%	28%	28%	43%	24%	28%	36%
Personal or family affairs	34%	33%	32%	27%	26%	24%	27%	28%	29%	30%	29%	28%
Student or school related	6%	6%	5%	5%	6%	7%	6%	8%	2%	6%	7%	5%
Other non-business	3%	1%	1%	2%	1%	2%	2%	2%	2%	2%	1%	2%



# HOUSEHOLD INCOME



- The share of travelers earning over **\$200,000 is the highest** across all airports (34%) in 2023. This income group comprised:
  - 28% of travelers at BWI
  - 35% of travelers at DCA
  - 36% of travelers at IAD



# SUMMARY OF PASSENGER CHARACTERISTICS

- Non-resident passengers continue to outnumber resident passengers, although the share of resident passengers has been gradually increasing across the region.
- The youngest and oldest age groups represent smaller proportions of passengers compared with other age ranges.

**Business travel has declined while non-business (i.e., leisure/vacation and personal) travel has increased across the region and at all airports.**

- More than one-third of passengers in the region earn over \$200,000 annually, suggesting that air travelers tend to be more affluent with nearly three-quarters having household incomes exceeding \$100,000.

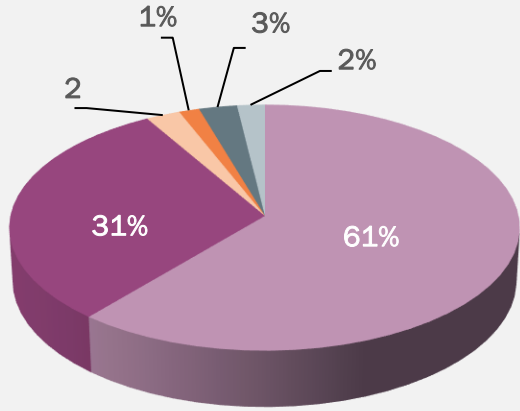


# GROUND ACCESS

---

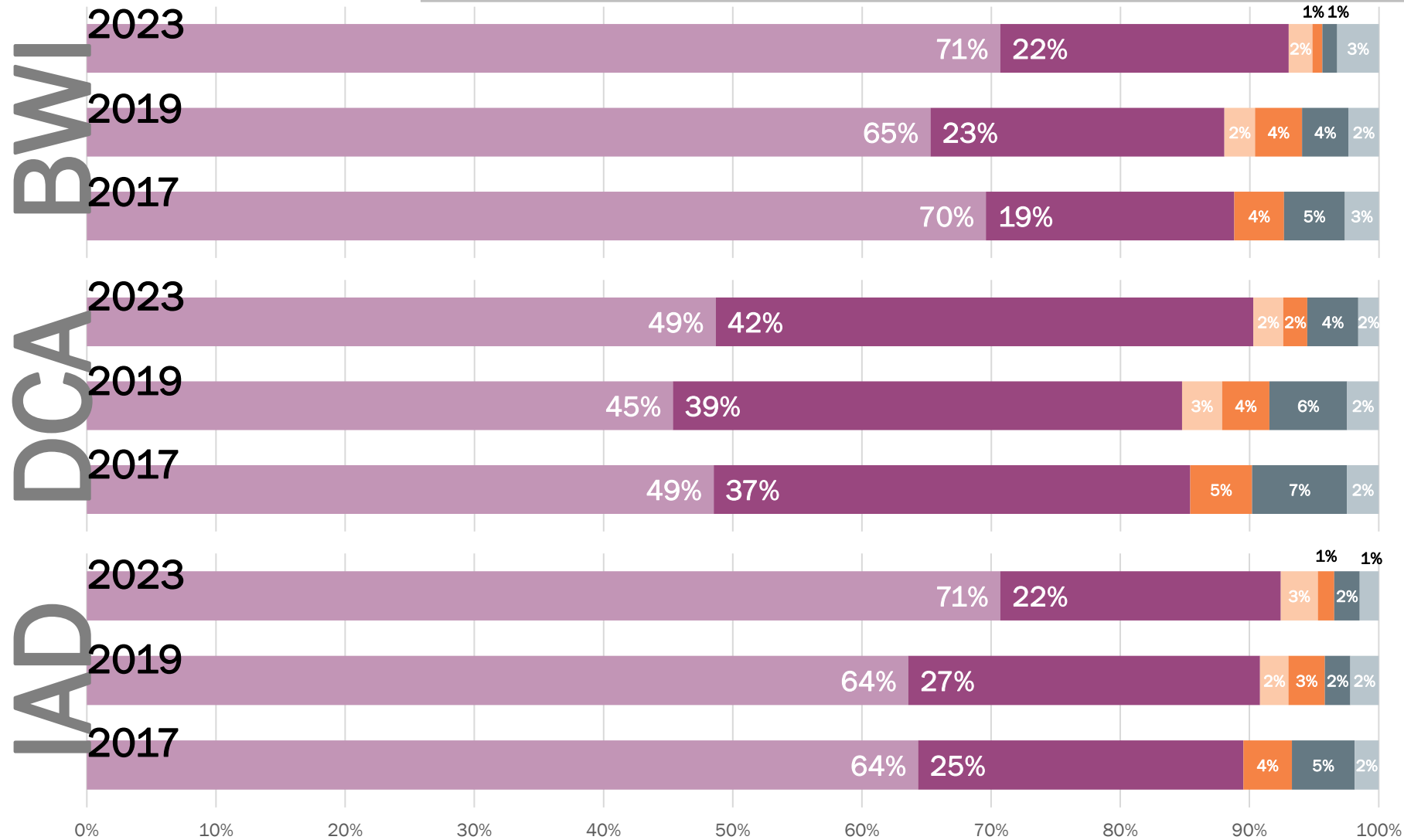


# REGION

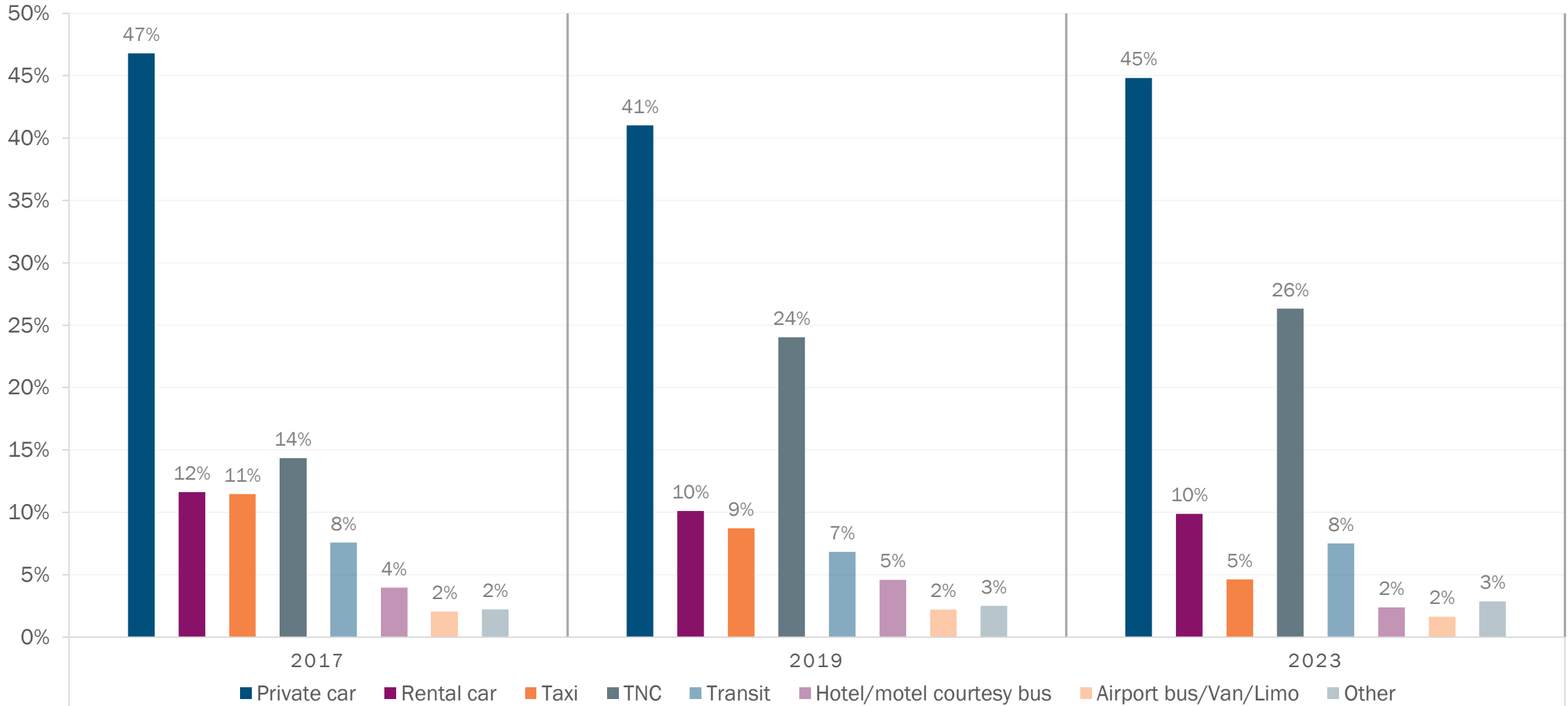


- Private residence
- Hotel/motel
- Short Term Rental (Air BNB, VRBO)
- Passenger's regular place of employment
- Another place of business
- Other

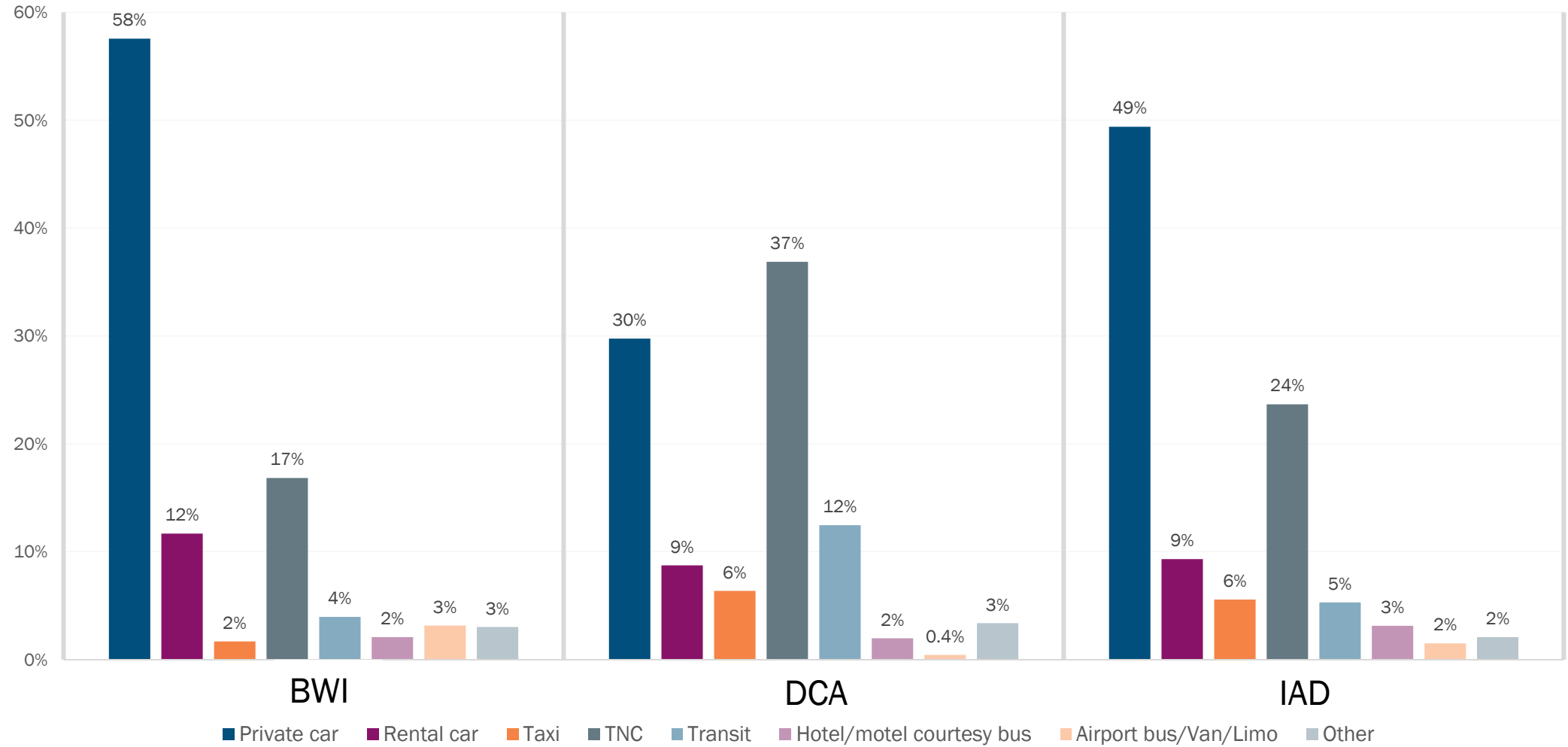
# PASSENGER TRIP ORIGIN



# PASSENGER MODE ACCESS - REGION



# PASSENGER MODE ACCESS BY AIRPORT - 2023



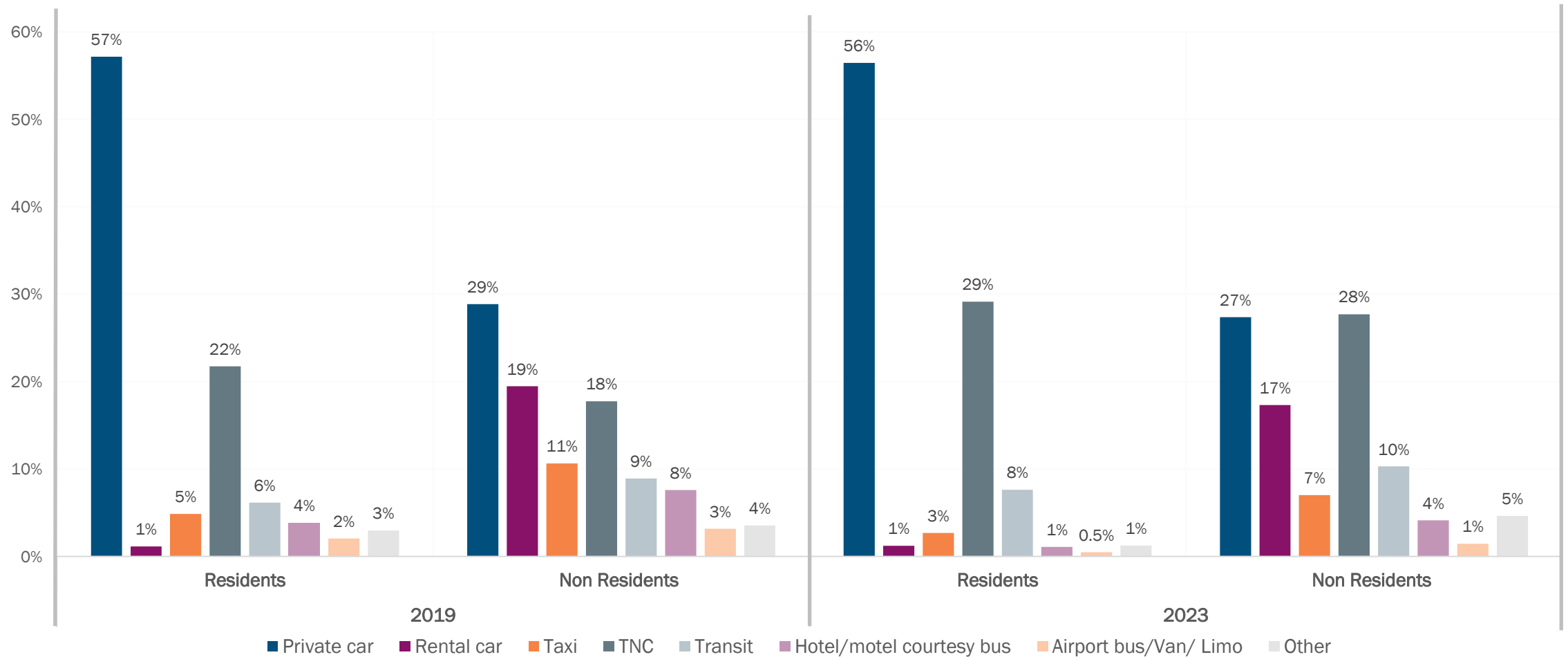


# PASSENGER MODE ACCESS BY AIRPORT 2017-2023

Mode of Access	BWI			DCA			IAD			REGION		
	2017	2019	2023	2017	2019	2023	2017	2019	2023	2017	2019	2023
Private car	63%	57%	58%	29%	23%	30%	52%	45%	49%	47%	41%	45%
Rental Car	14%	13%	12%	9%	8%	9%	13%	10%	9%	12%	10%	10%
Taxi	4%	3%	2%	18%	12%	6%	11%	12%	6%	11%	9%	5%
TNC	8%	13%	17%	21%	36%	37%	13%	22%	24%	14%	24%	26%
Transit	4%	4%	4%	14%	13%	12%	3%	3%	5%	8%	7%	8%
Hotel/motel courtesy bus	3%	5%	2%	5%	5%	2%	4%	4%	3%	4%	5%	2%
Airport bus/Van/Limo	2%	2%	3%	2%	2%	0%	2%	2%	2%	2%	2%	2%
Other	2%	3%	3%	2%	2%	3%	2%	2%	2%	2%	3%	3%

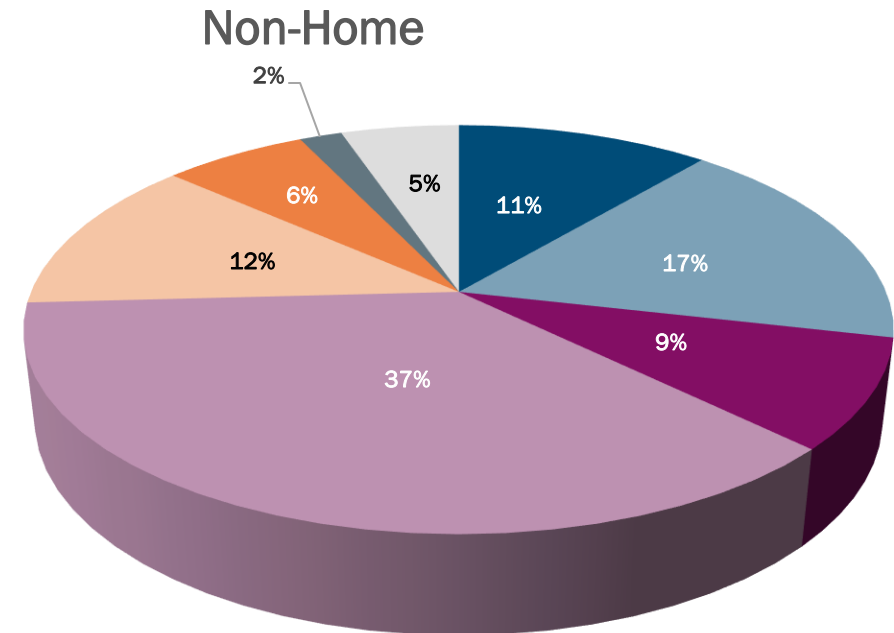
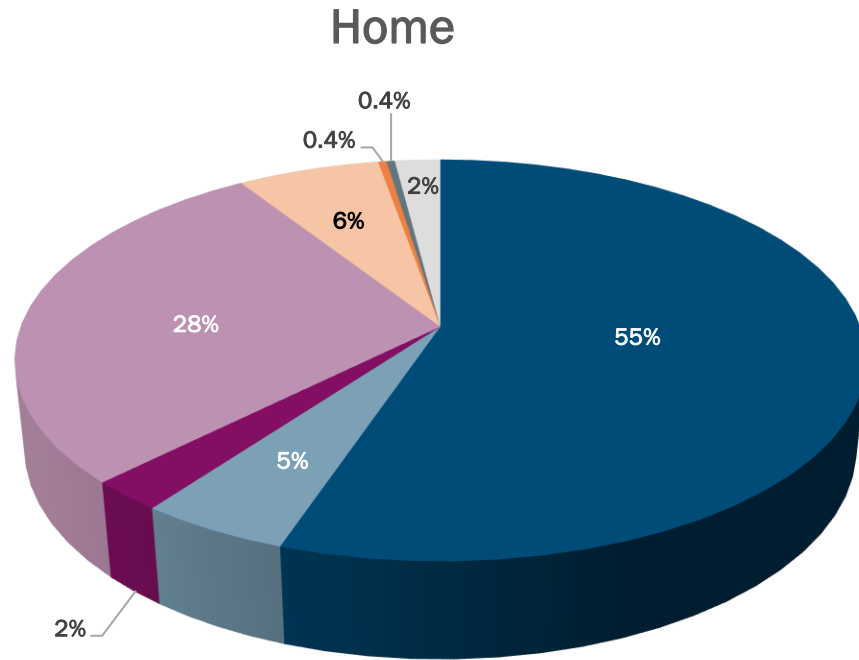


# PASSENGER MODE ACCESS – RESIDENT STATUS



# PASSENGER MODE ACCESS – HOME / NON-HOME

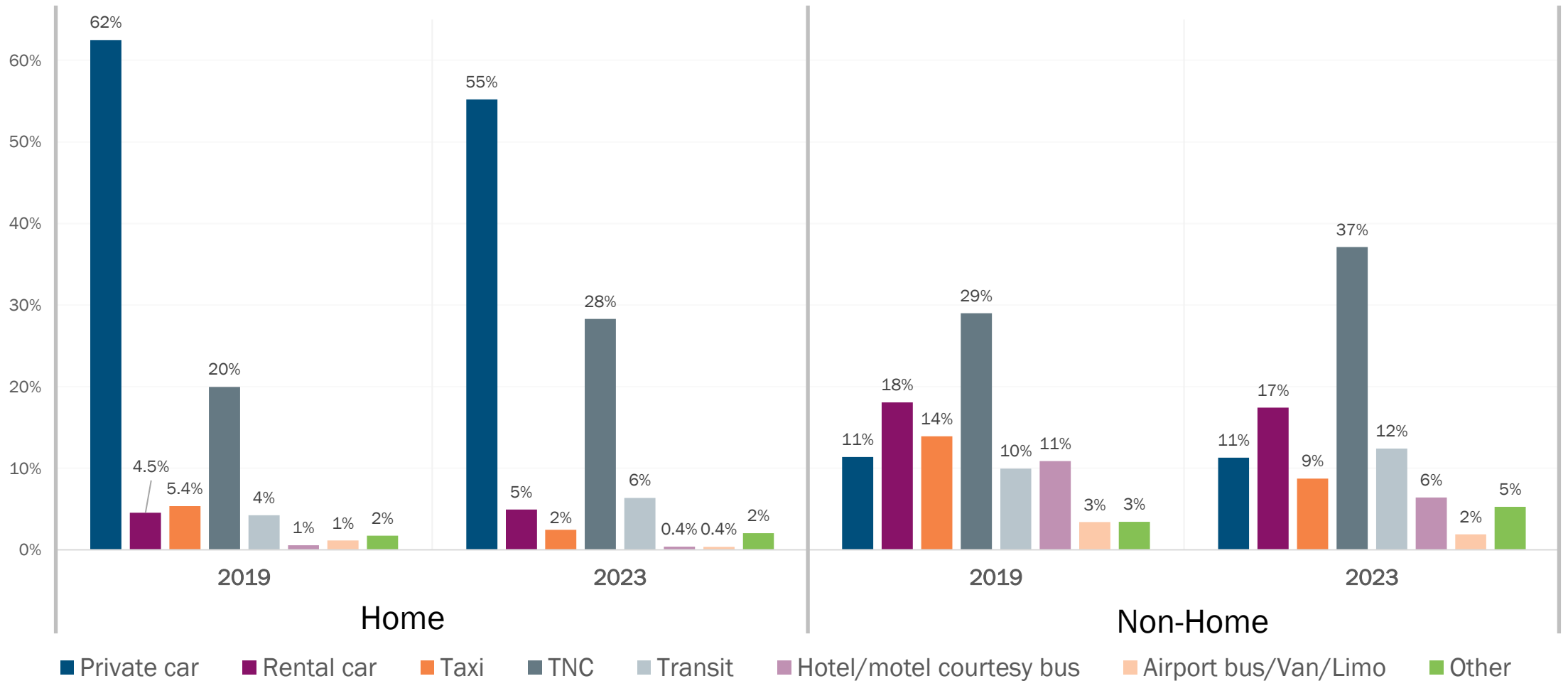
## REGION - 2023



■ Private car ■ Rental car ■ Taxi ■ TNC ■ Transit ■ Hotel/motel courtesy bus ■ Airport bus/Van/Limo ■ Other

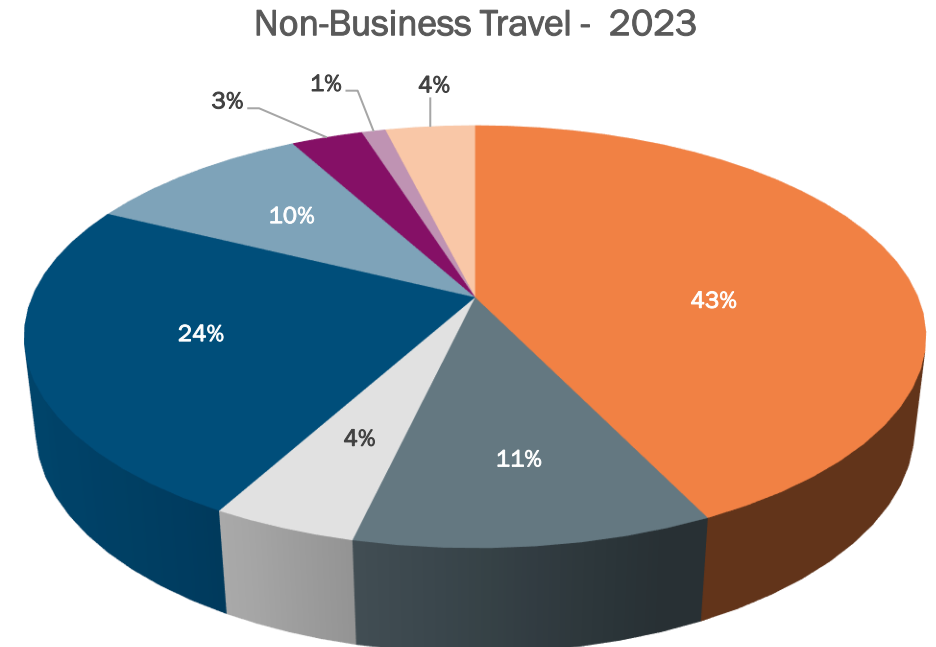
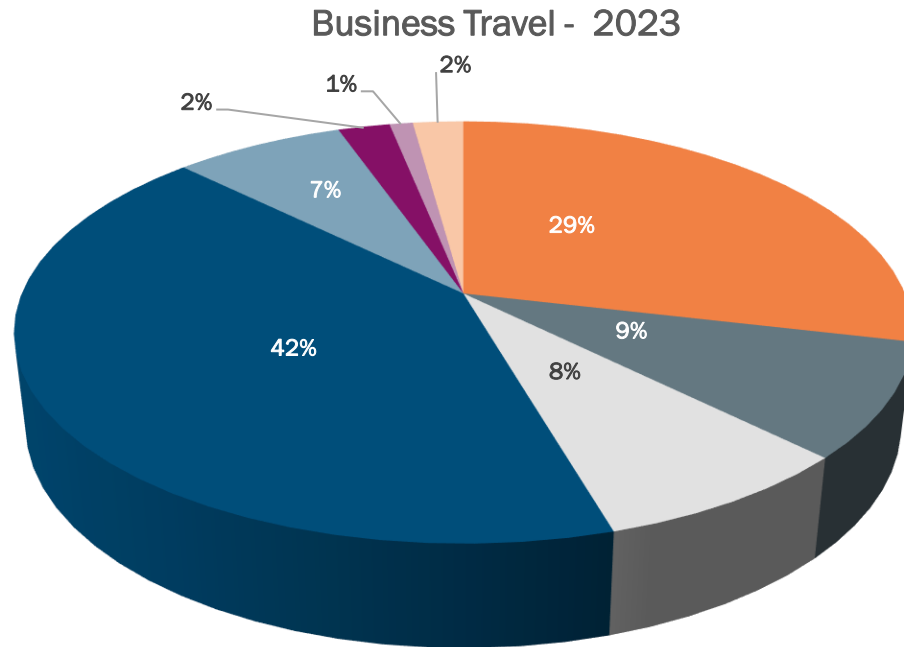


# PASSENGER MODE ACCESS – HOME / NON-HOME



# PASSENGER MODE ACCESS – BUSINESS / NON-BUSINESS

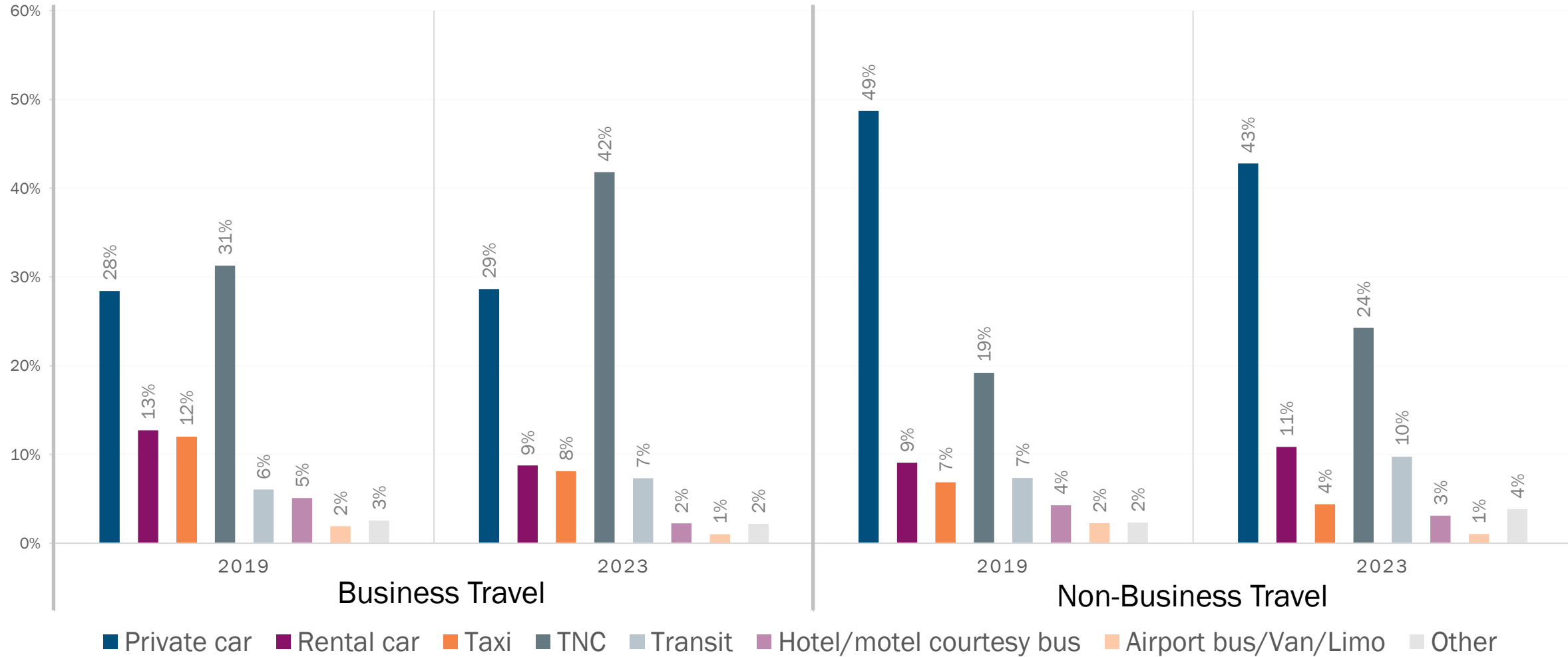
## REGION - 2023



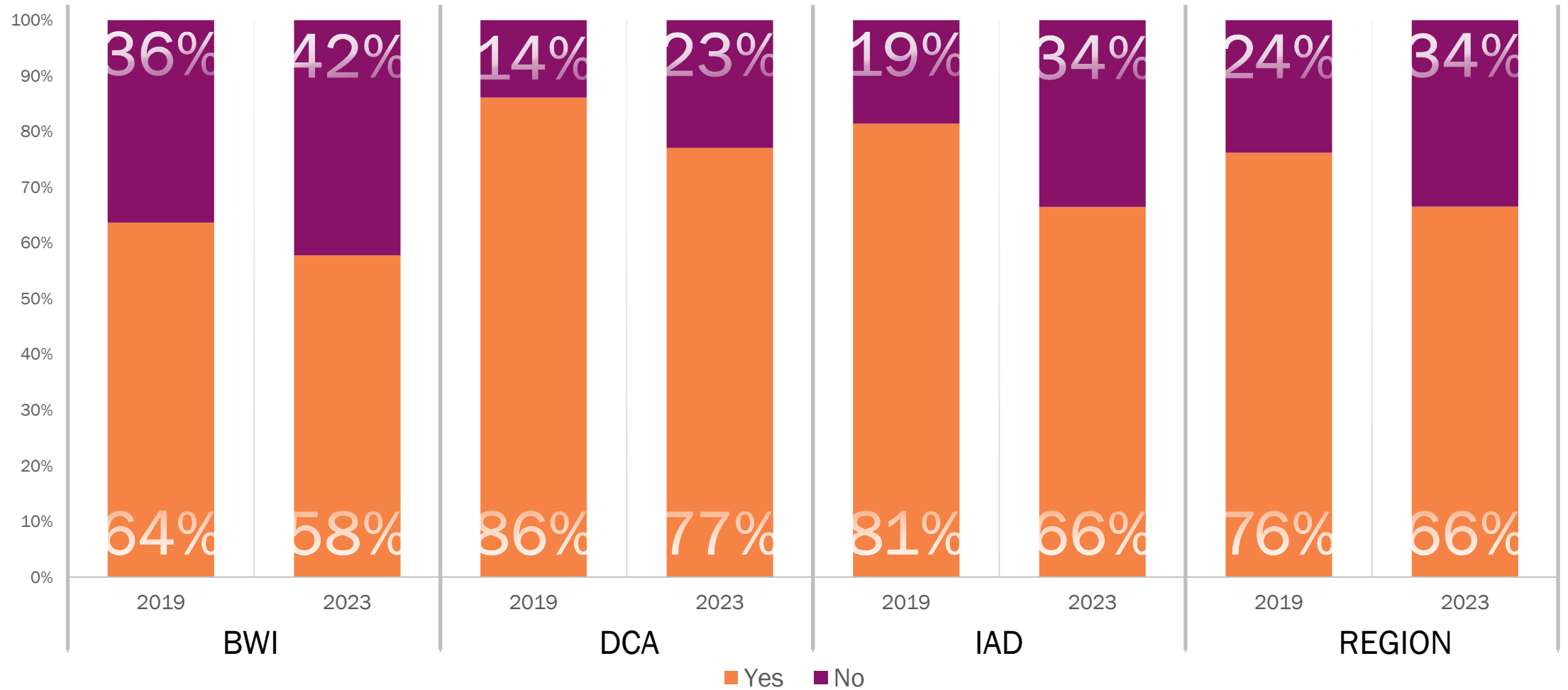
■ Private car  
 ■ Rental car  
 ■ Taxi  
 ■ TNC  
 ■ Transit  
 ■ Hotel/motel courtesy bus  
 ■ Airport bus/Van/Limo  
 ■ Other



# PASSENGER MODE ACCESS – BUSINESS / NON-BUSINESS



# AIRPORT TRIP DROPOFF



# SUMMARY OF GROUND ACCESS

---

- The primary origins for air passengers are private residences, followed by hotel/motels, together comprising over 90% of all trip origins.
- While private car remains the primary mode of access, TNC usage has steadily risen across all airports, accounting for a quarter of all airport trips.
- Private cars are the preferred travel mode for residents, while TNCs are the top choice for non-residents.
- Private cars are the primary choice of travel mode for home locations, while TNCs dominate trips from non-home locations.
- For business trips, TNC usage increased while rental car and taxi trips declined; for business trips, TNC, transit, and rental car usage increased while private car and taxi trips decreased.
- Airport drop-offs decreased from three-quarters to about two-thirds of all airport trips.





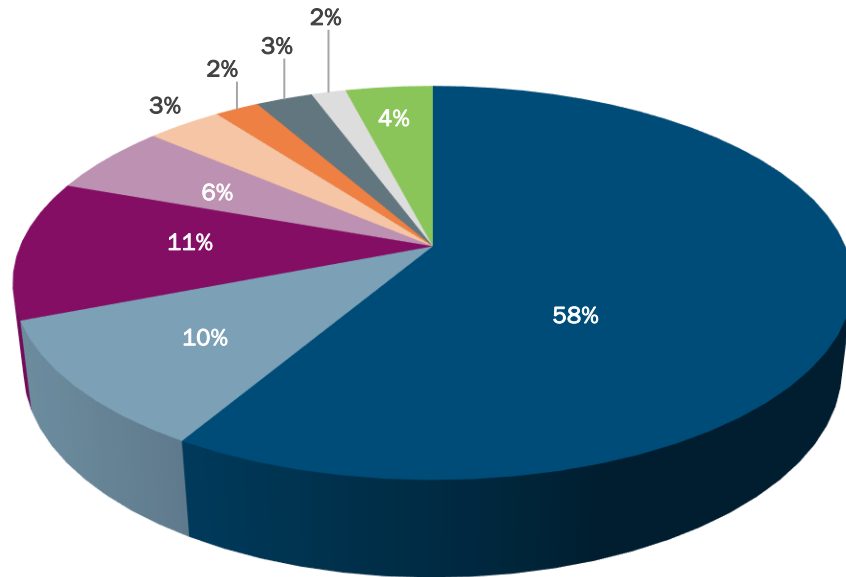
# PREFERENCES AND BEHAVIOR

---



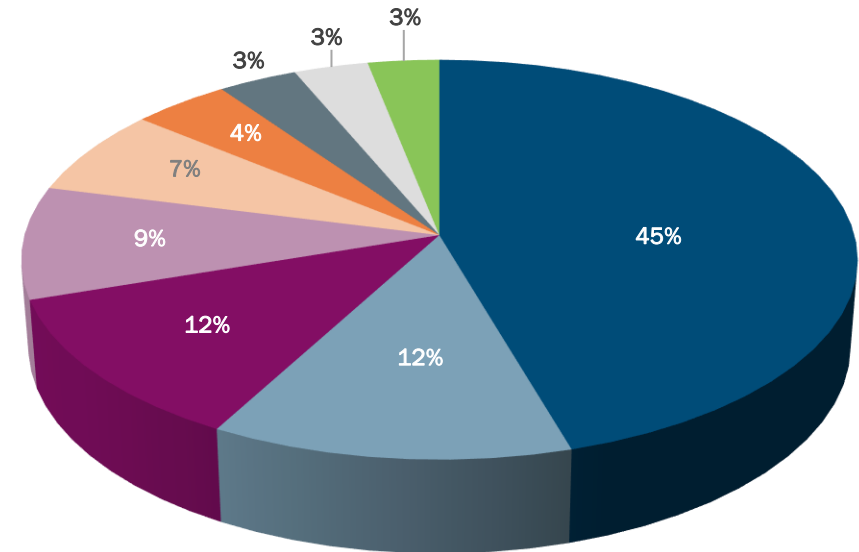
# TOP REASON FOR CHOOSING THE AIRPORT

REGION - 2019



- Closest airport
- Only airport with direct/non-stop flight
- Better public ground transportation

REGION - 2023

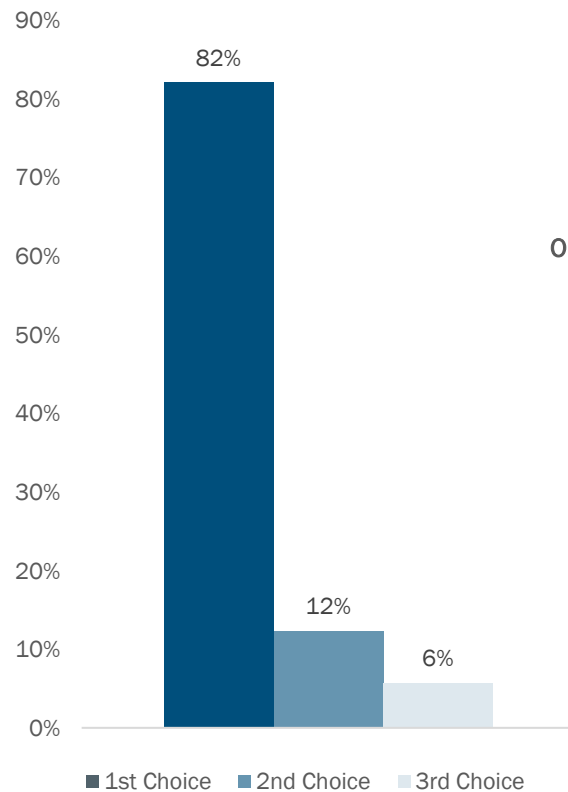


- More convenient flight times
- Only airport serving market
- Frequent flyer with specific airline
- Less expensive airfare
- Better access roads and Parking
- Other

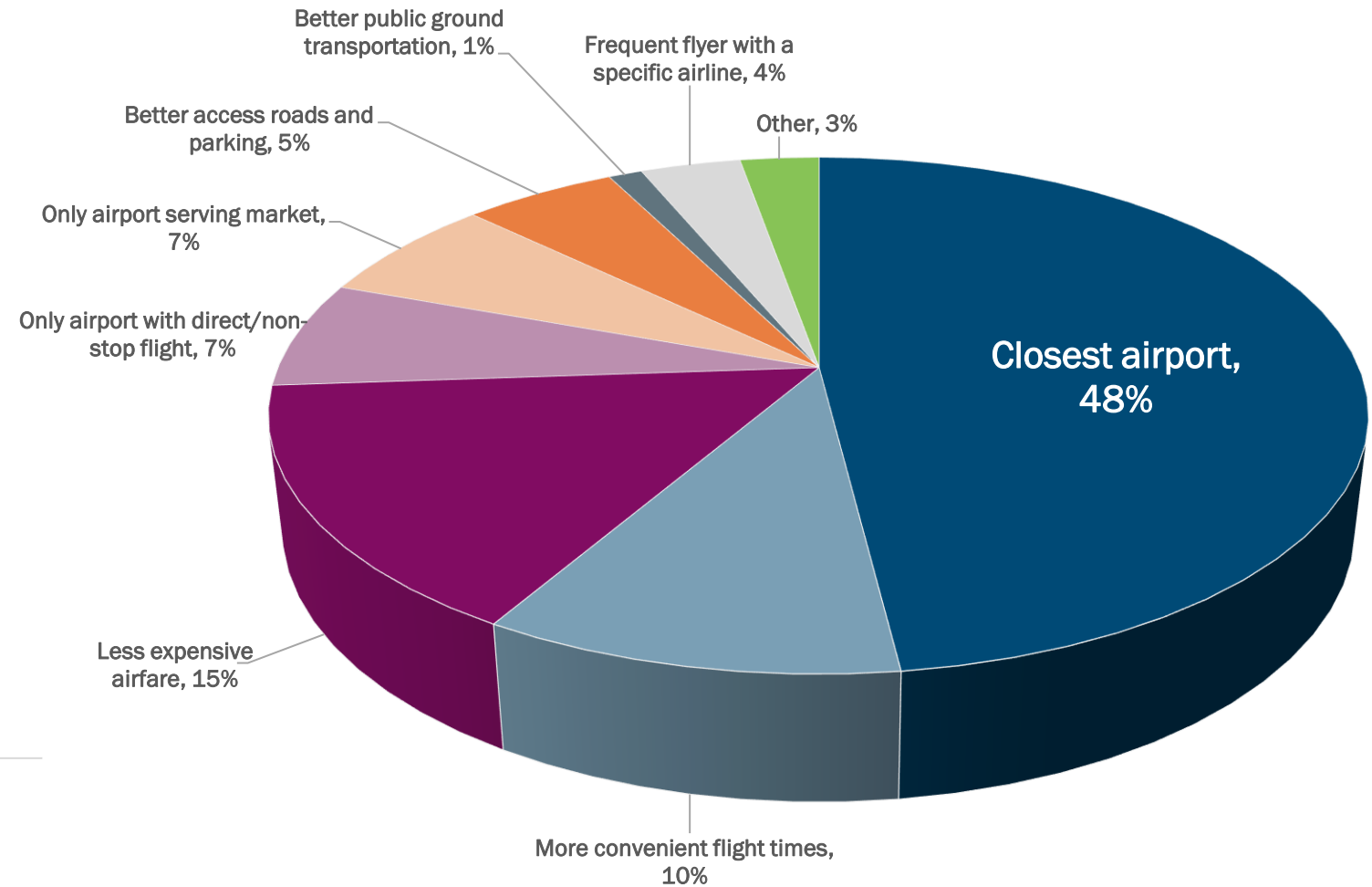


# AIRPORT CHOICE FOR BWI PASSENGERS

AIRPORT CHOICE FOR BWI PASSENGERS - 2023

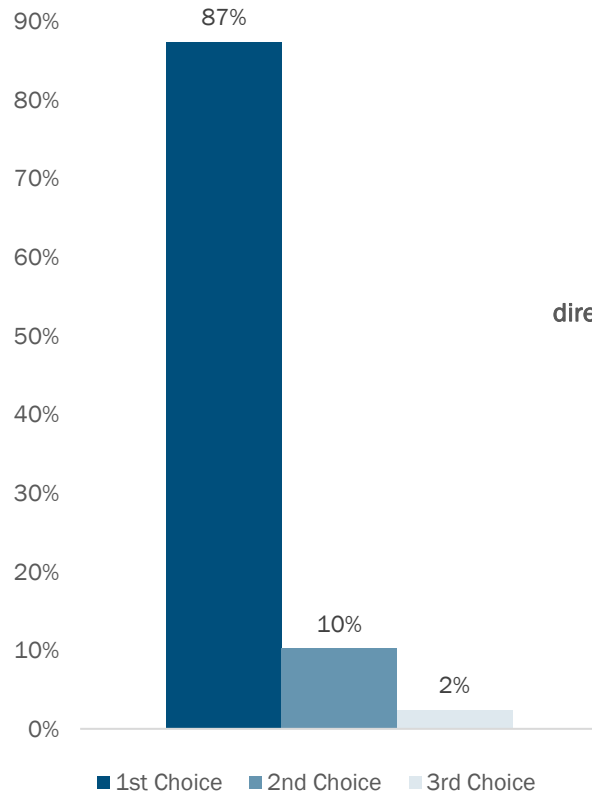


BWI – TOP REASON FOR CHOOSING THE AIRPORT - 2023

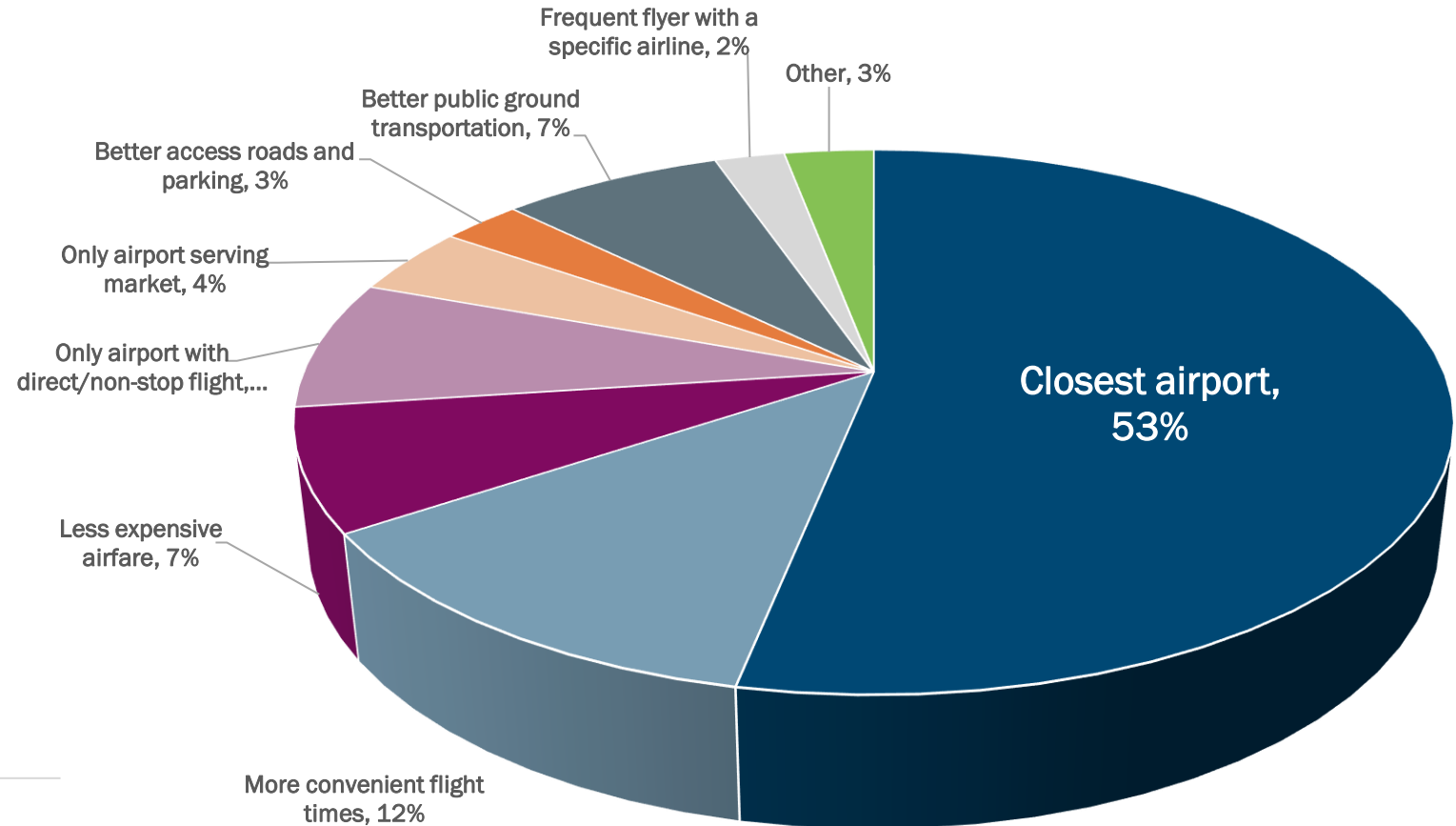


# AIRPORT CHOICE FOR DCA PASSENGERS

AIRPORT CHOICE FOR DCA PASSENGERS - 2023

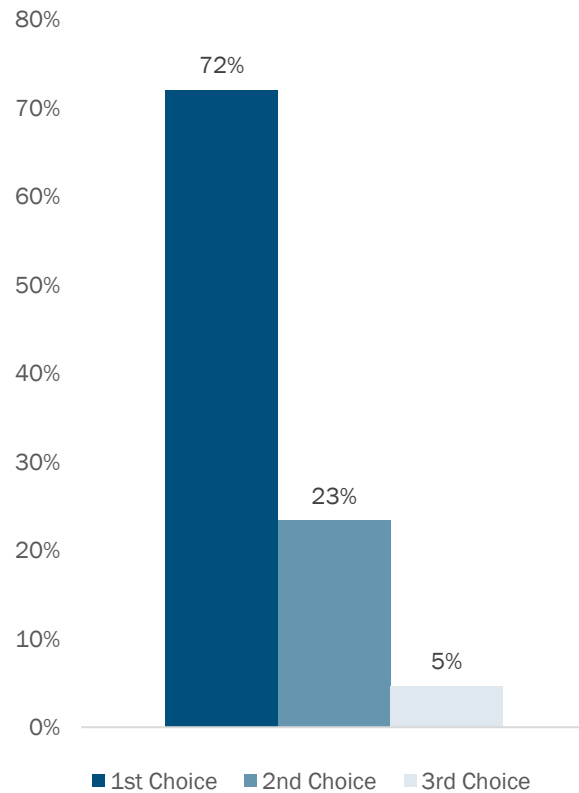


DCA – TOP REASON FOR CHOOSING THE AIRPORT - 2023

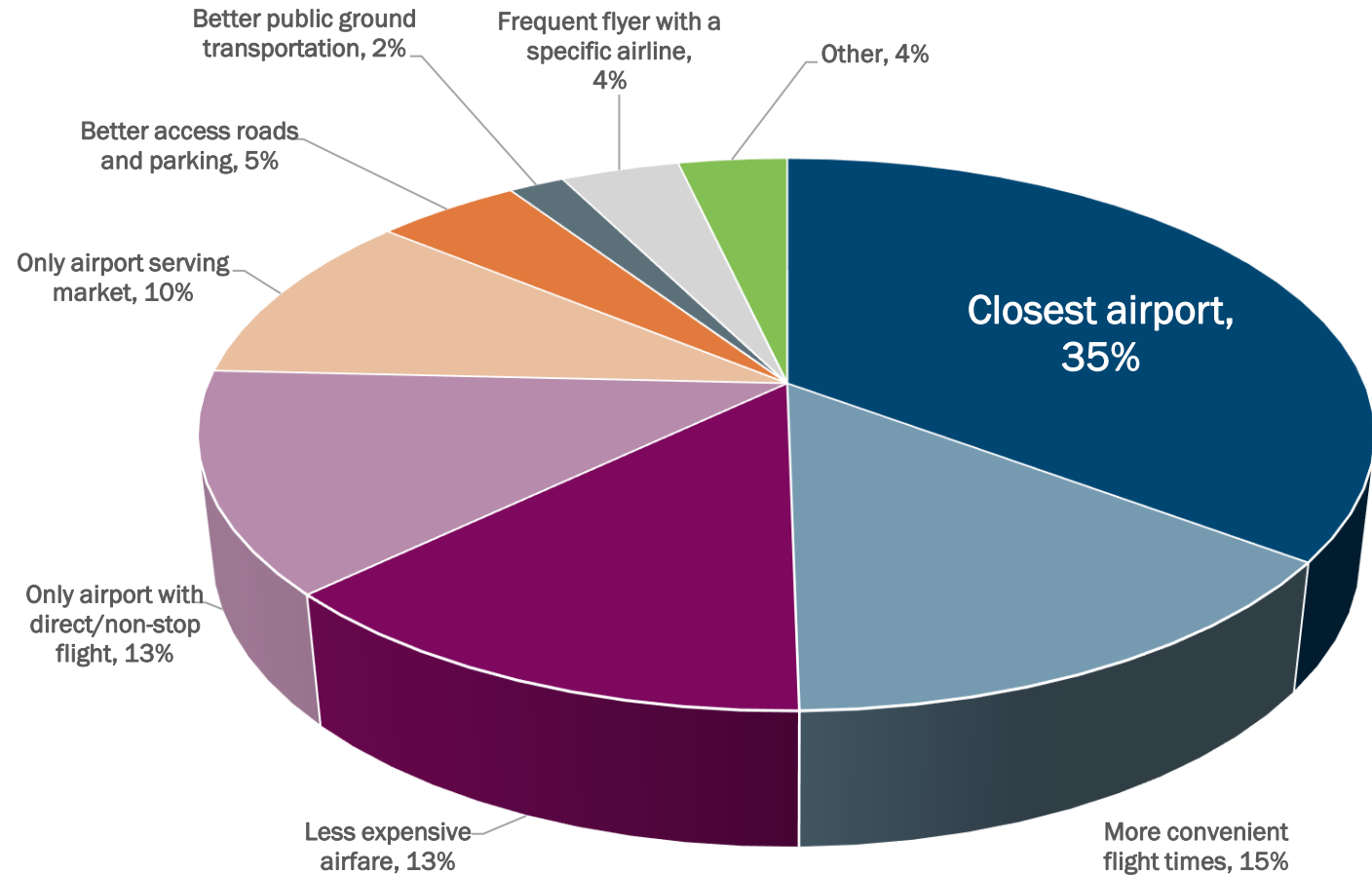


# AIRPORT CHOICE FOR IAD PASSENGERS

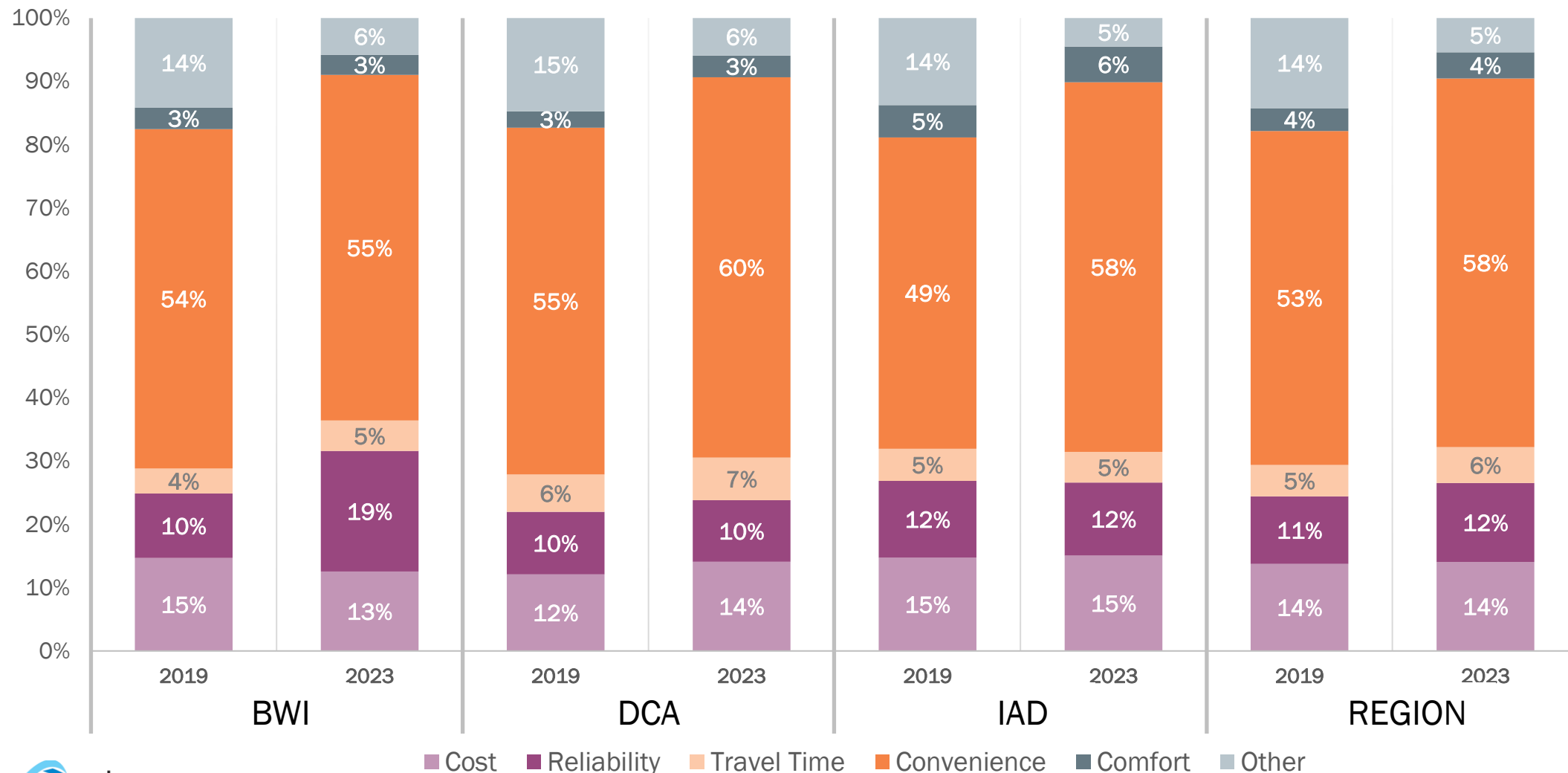
AIRPORT CHOICE FOR IAD PASSENGERS - 2023



IAD – TOP REASON FOR CHOOSING THE AIRPORT - 2023

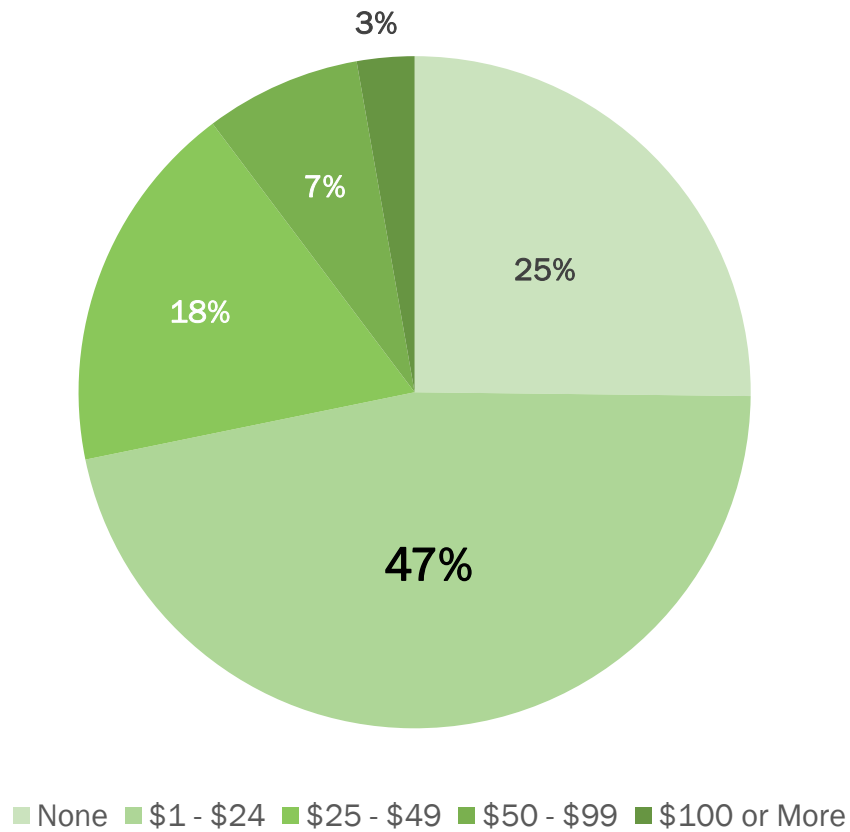


# REASON FOR CHOOSING MODE OF ACCESS

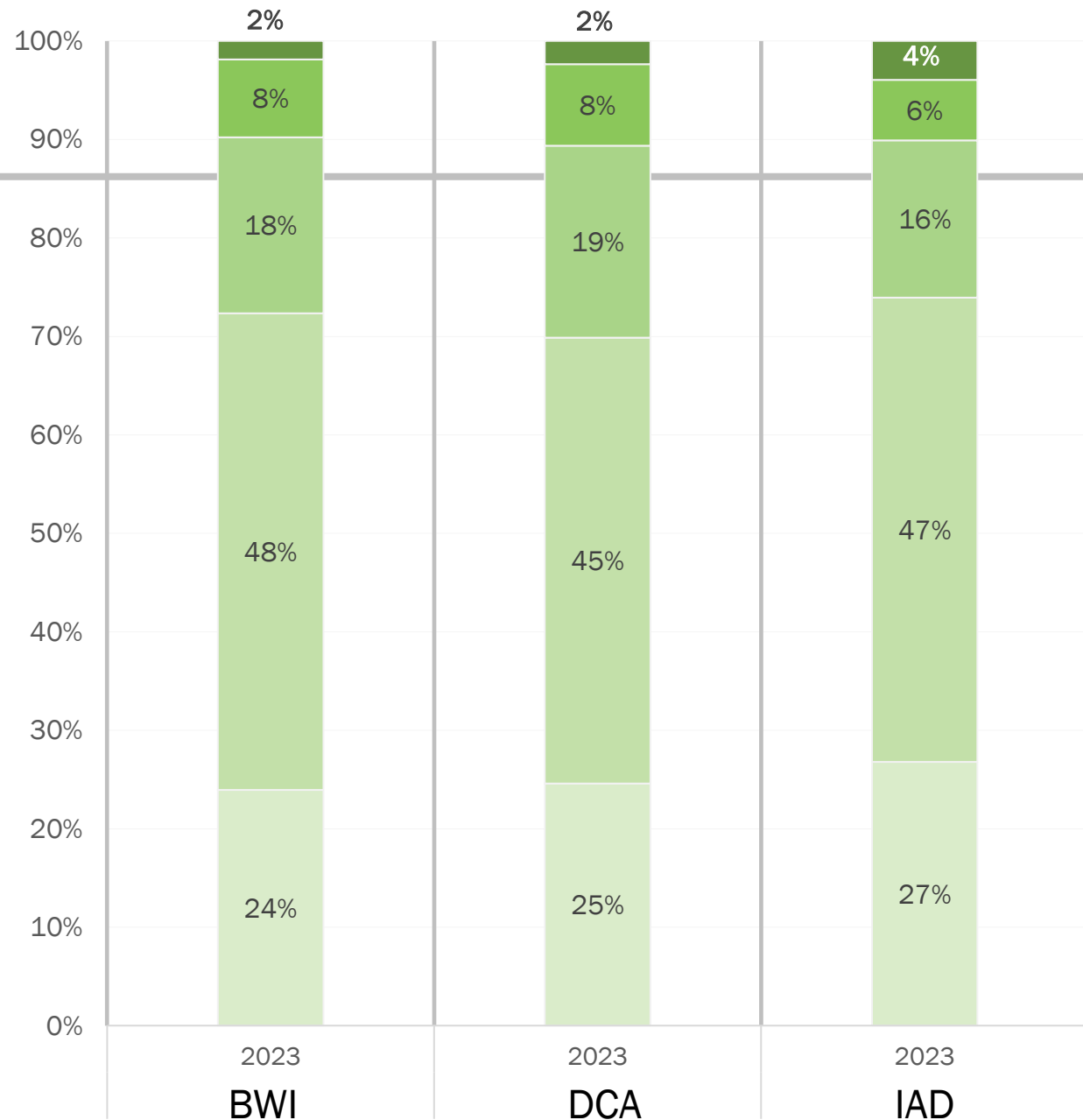


# AIRPORT SPENDING

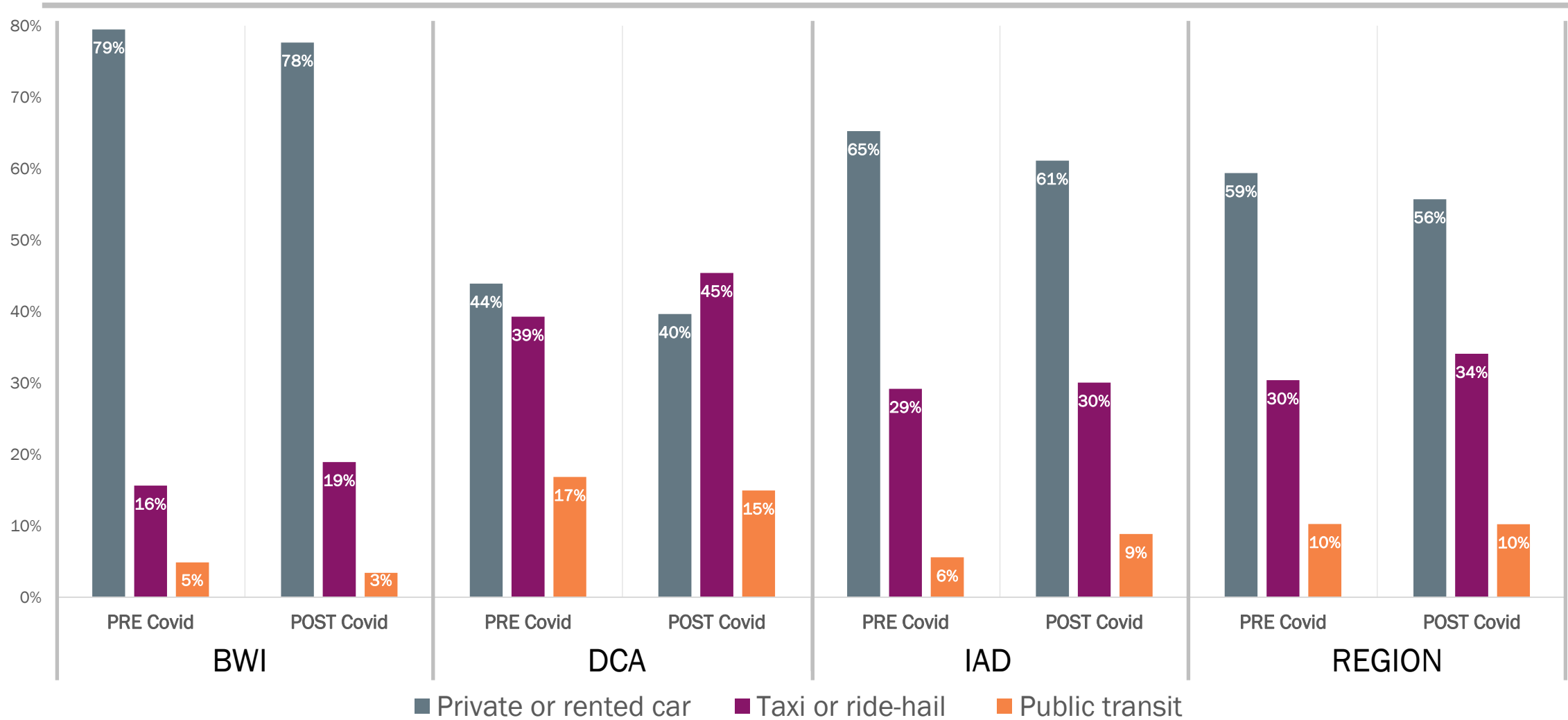
MONEY SPENT ON CONCESSIONS IN THE REGION



National Capital Region  
**Transportation Planning Board**

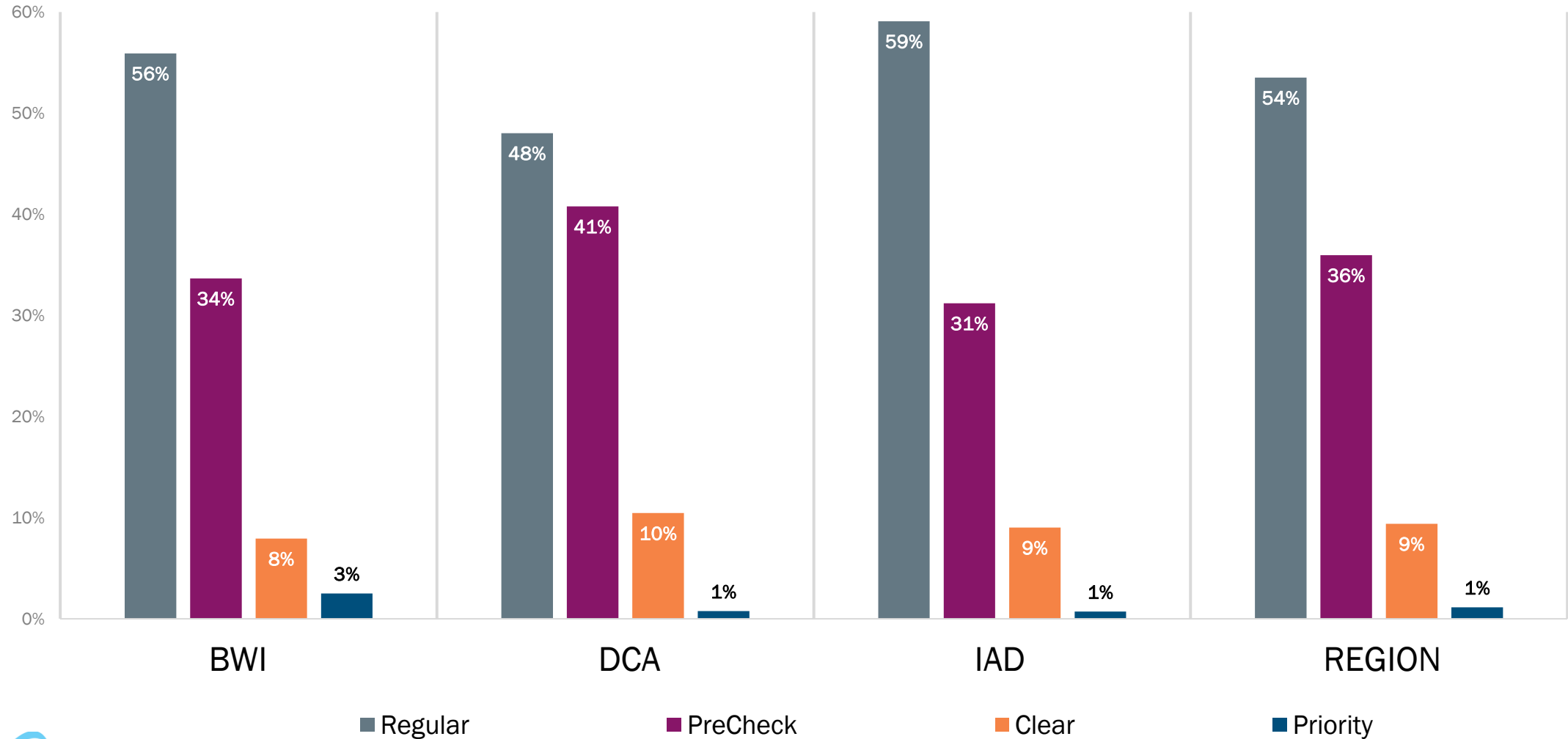


# TYPICAL MODE OF TRAVEL - PRE/POST PANDEMIC





# AIRPORT SECURITY LANE



# SUMMARY OF PREFERENCES AND BEHAVIOR

---

- The largest share of air passengers chose their airport because it was the closest airport, especially for DCA passengers.
- Convenience was the top reason for choosing mode of access, followed by cost and reliability across the region.
- Nearly half of all air passengers spent \$1-24 on concessions, one-quarter did not engage in any airport spending.
- From pre- to post-pandemic, the share of passengers who typically traveled to the airport by private or rented car decreased slightly while the share of passengers who typically used taxi or ride-hail increased in the region.
- Nearly half of all passengers in the region used an expedited security lane; just over a one-third used TSA PreCheck, followed by Clear and Priority. The majority of DCA passengers used an expedited security lane, highest among all airports.



# NEXT STEPS

---

- Complete the APS General Findings Report, including enhanced visualizations.
- Perform geographic analysis to produce the Geographic Findings report, which will provide ground trip information by Aviation Analysis Zones (AAZs) and used to prepare updated Ground Access Forecasts.



# ACKNOWLEDGEMENTS

---

- **COG/TPB staff**
  - Zhuo Yang, Transportation Data Analyst
  - Tim Canan, Program Director, Planning Data and Research
- **Metropolitan Washington Airports Authority (MWAA) Partners**
  - Glen Warren, Airport-Landside Planner
- **Maryland Aviation Administration (MAA) Partners**
  - Shawn Ames, Deputy Director
  - Kevin Clarke, Director, Office of Planning & Environmental Services



## **Kenneth Joh, Ph.D., AICP, CPM**

Principal Statistical Survey Analyst

(202) 962-3276

[kjoh@mwkog.org](mailto:kjoh@mwkog.org)

## **Olga Perez**

Planning Program Specialist

(202) 962-3265

[opelaez@mwkog.org](mailto:opelaez@mwkog.org)

## **Suraj Vujjini**

Transportation Data Analyst

(202) 217-8908

[svujjini@mwkog.org](mailto:svujjini@mwkog.org)

[mwkog.org](http://mwkog.org)

---

777 North Capitol Street NE, Suite 300

Washington, DC 20002



National Capital Region  
**Transportation Planning Board**