

Direct Aviation Market Outlook



Aviation Has Entered a

NEW ERA

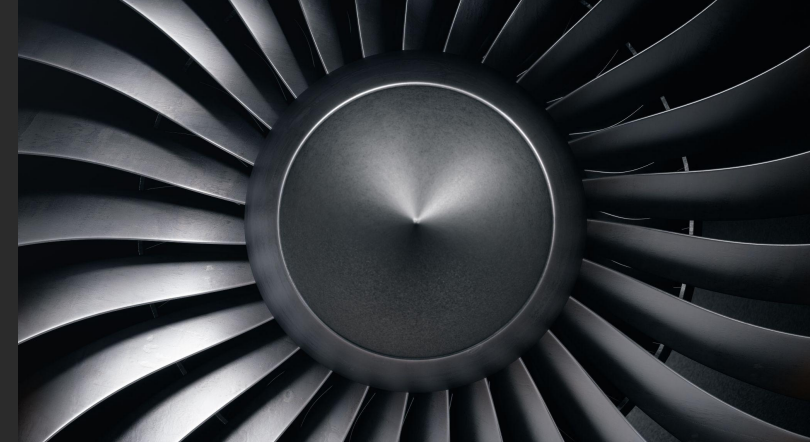
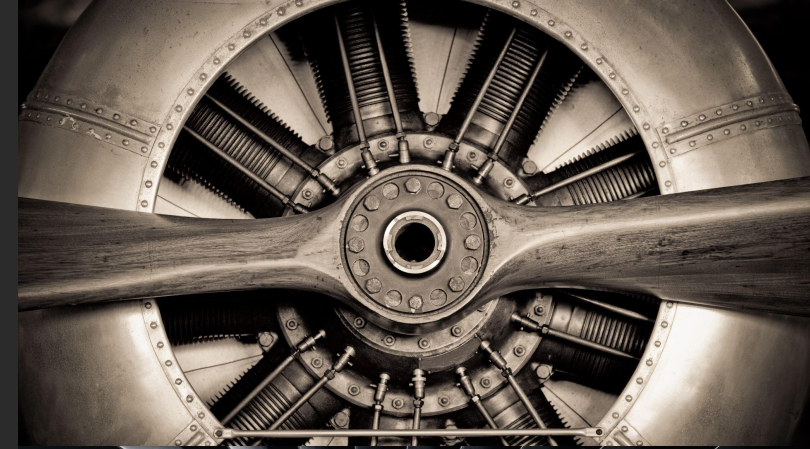


Regional Mobility Reimagined

Hybrid-electric propulsion has unlocked transformative capabilities that piston and turbine technologies could never achieve. This era, by reshaping how we use the skies, will **redefine how people and goods move across the United States and around the world.**

Regional mobility will be transformed.

Direct Aviation – regional air travel that meets you where you are – will be the first application.



HYBRID
ELECTRIC
PROPULSION



The Unlock: Direct Aviation

Direct Aviation means flying from where people are to where they want to go. It enables people to avoid long drives or connections at crowded airport hubs. It creates a mesh network of access points, freeing travelers from the tyranny of gridlock and airport chokepoints.

What enables it to scale?

Direct Aviation becomes real when the Rule of Six is satisfied so service is commercially viable and community compatible.



Rule of Six



Access & Quiet



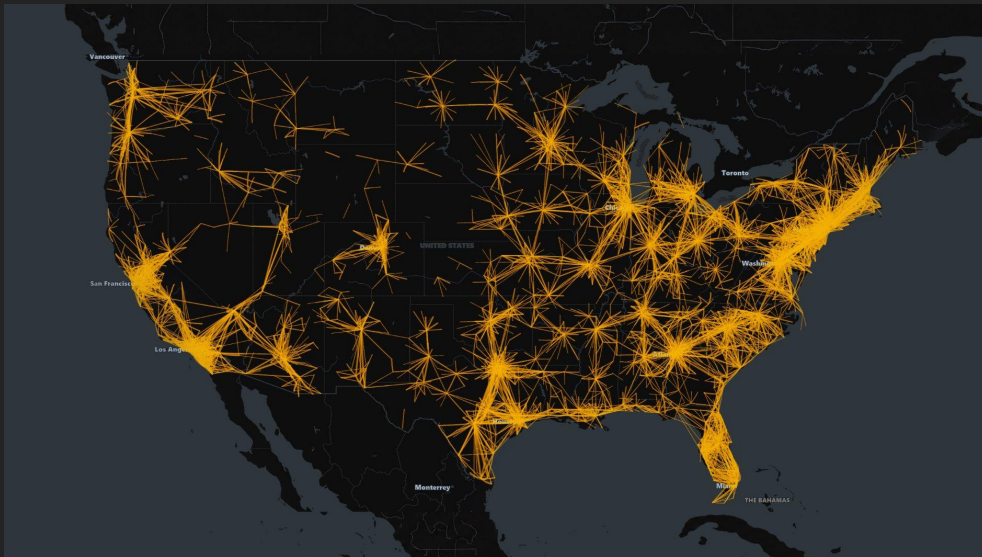
Payload & Range



Safety & Affordability

Regional Travel Today

Electra has rigorously examined US regional travel patterns to identify the level of demand for Direct Aviation



50–500-mile routes with >1,000 travelers per day (ground)

1.6T

estimated
person-miles/yr
(all routes)

35M+

estimated daily
passenger trips
(all routes)

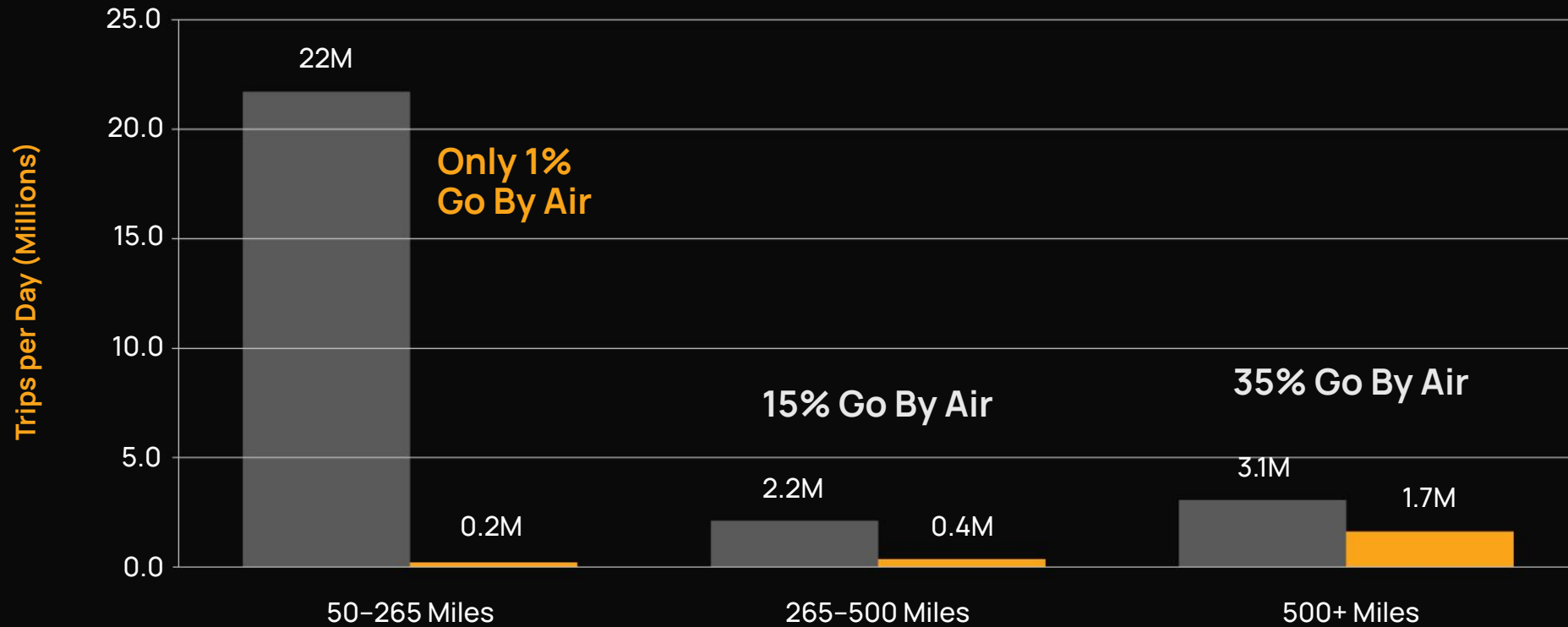
6,249

routes w/ >1,000
travelers/day

The Heart of the Market: 50–265 Miles

Daily Ground Trips vs Daily Air Trips by GCD* Distance Band

● Daily Ground Trips
● Daily Air Trips



*Great Circle Distance

The Heart of the Market: 50–265 Miles

85%

of these routes lack air service
within 40 miles of origin and/or
destination

1.2T

estimated
person-miles/yr
(all routes)

33M+

estimated daily
passenger trips
(all routes)

6,073

routes w/ >1,000
travelers/day

Significant Time Savings via Direct Aviation

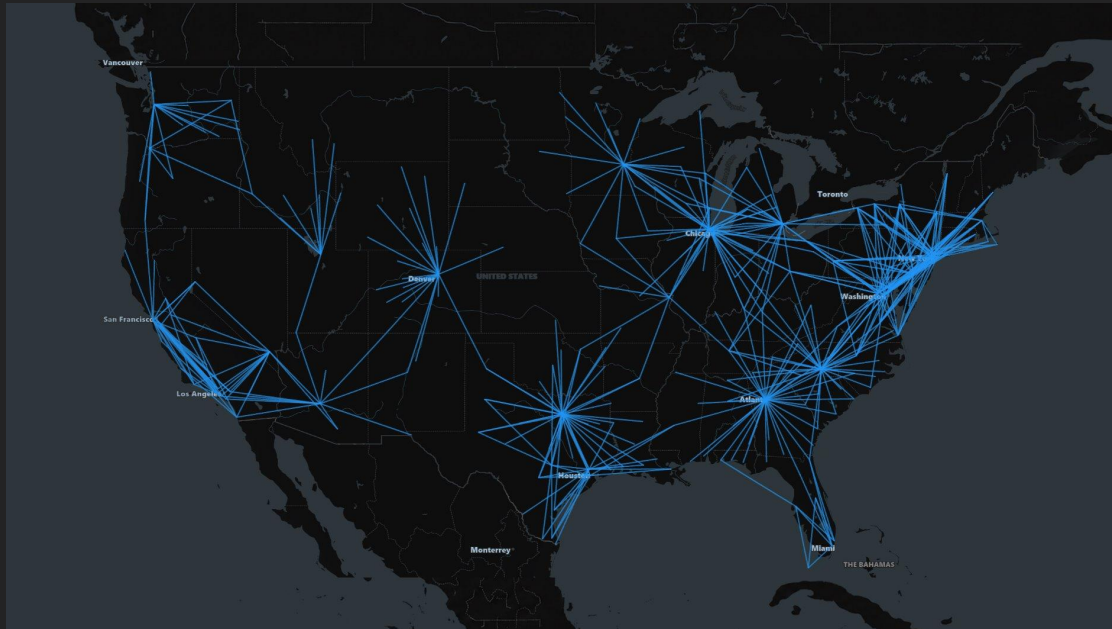
All data for >1,000 travelers per day, 50-265 GCD* miles

TIME SAVINGS	PERSON-MILES/YEAR	# DAILY PAX TRIPS	# ROUTES
> 1H	264B	4.9M	1,851
> 2H	100B	1.2M	540
> 3H	46B	0.6M	227

*Great Circle Distance

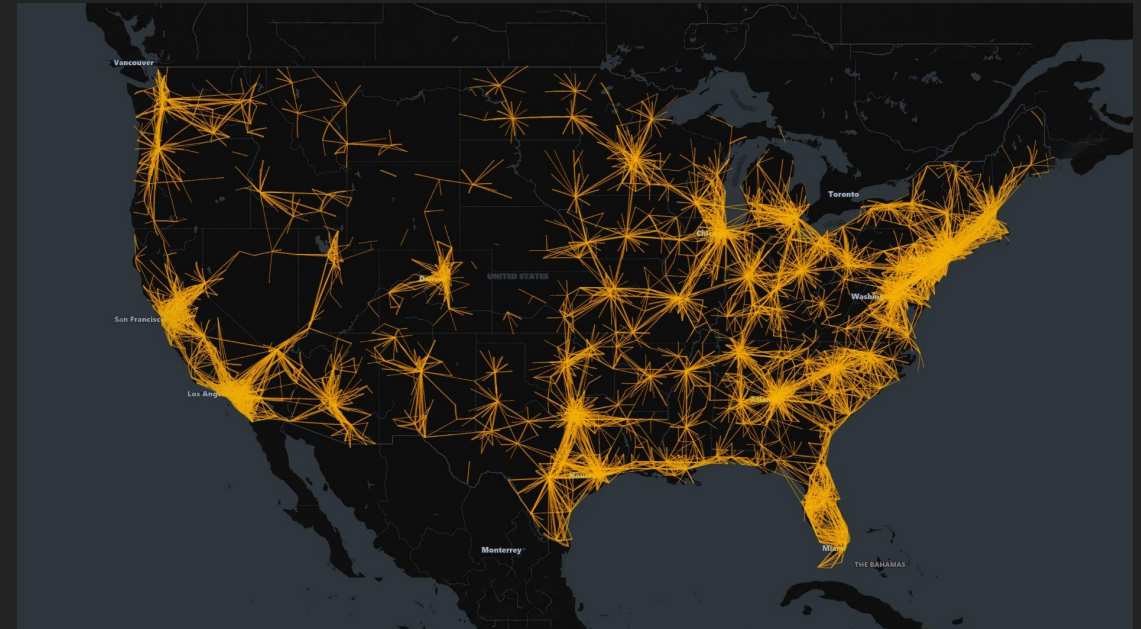


Transforming Regional Air Travel



Sparse Regional Air Service

Commercial Aviation Routes (50–365 miles, >78 pax/day)* – 487 routes



Direct Aviation

Ground Routes addressable by EL9 (50–265 miles, >1,000 pax/day) – 6,073 routes

**Routes with at least 1 flight/day. Adding 50 miles on either end to account for 1st and last mile to/from airport*





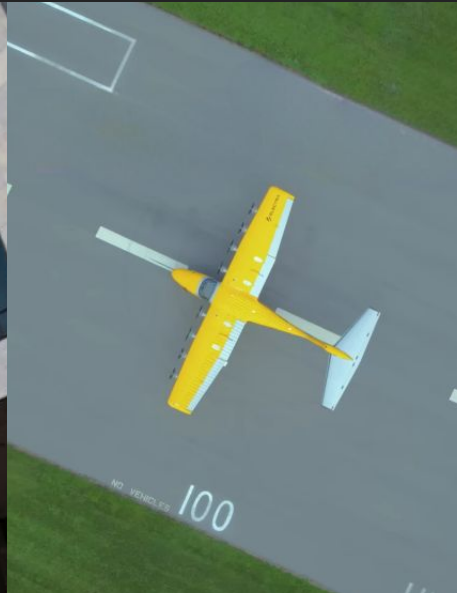
A New Era Requires a New Ecosystem



AIRCRAFT



AAM GUIDELINES



ACCESS POINTS



PARTNERS



SUPPLIERS



The Ultra-Short Airplane That Makes Direct Aviation Work.

Operational flexibility like a helicopter. Economics, safety, and simplicity of fixed-wing.

9 passengers
1 pilot + 2,700 lb payload

1,100 nm
max range (+ 45 min reserve)

175 KTAS
max cruise speed

<75 dba on takeoff (300 ft)
comparable to urban background

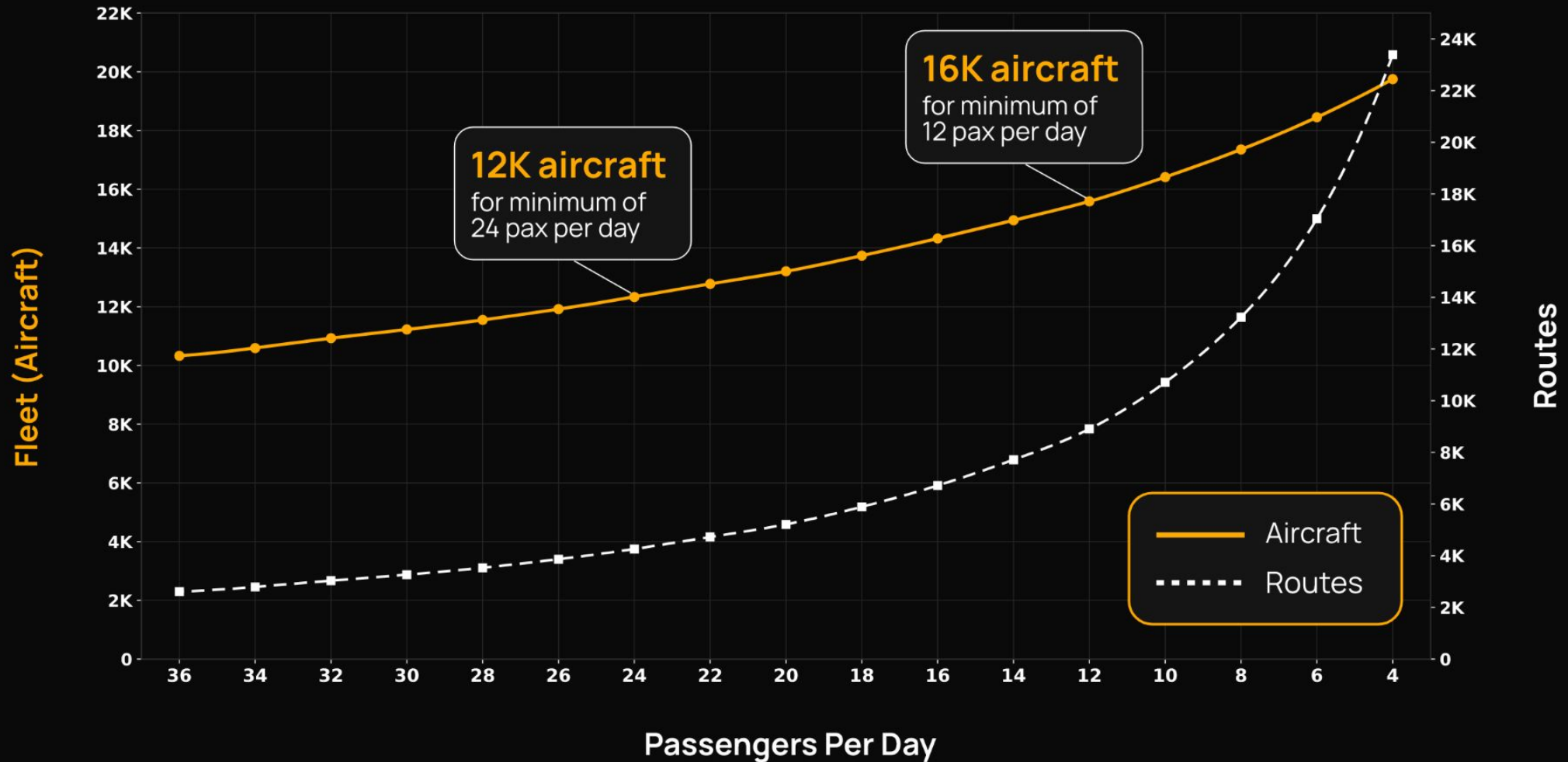
~150 ft
nominal takeoff and landing roll



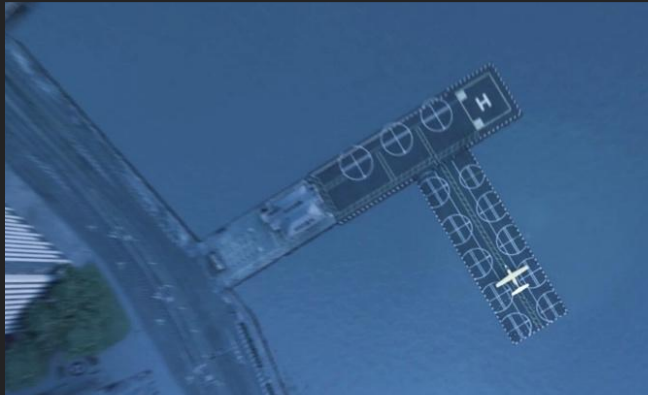
12K–16K Aircraft Required for 2030–2040

Direct Aviation Market

EL 9 Fleet and Route Opportunity by Passengers Per Day

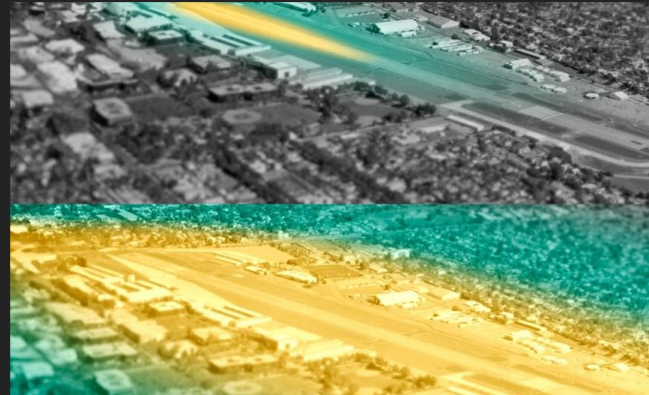


Innovation Allows Operations Not Possible With Traditional Aircraft



01

Add Novel Access Points.
Helicopter-like convenience



02

Maximize GA Airports.
Good neighbor policy



03

Feed Large Airport Hubs.
Congestion-free integration



Novel Access Points



Pier-Based Ultra Short Access Point Plans



Remote Ultra Short Access Point



Elevated Ultra Short Access Point



Rooftop Ultra Short Access Point
in Urban Setting



Noise-Sensitive Airports, Such as Santa Monica



Redevelopment of Suburban Municipal Airports

CUSTOMERS EXIST TODAY

Direct Aviation Will Connect Us to Our Destinations.

- Intercity Connectors
- Leisure Launchpads
- Airport Feeders
- Small Community Services



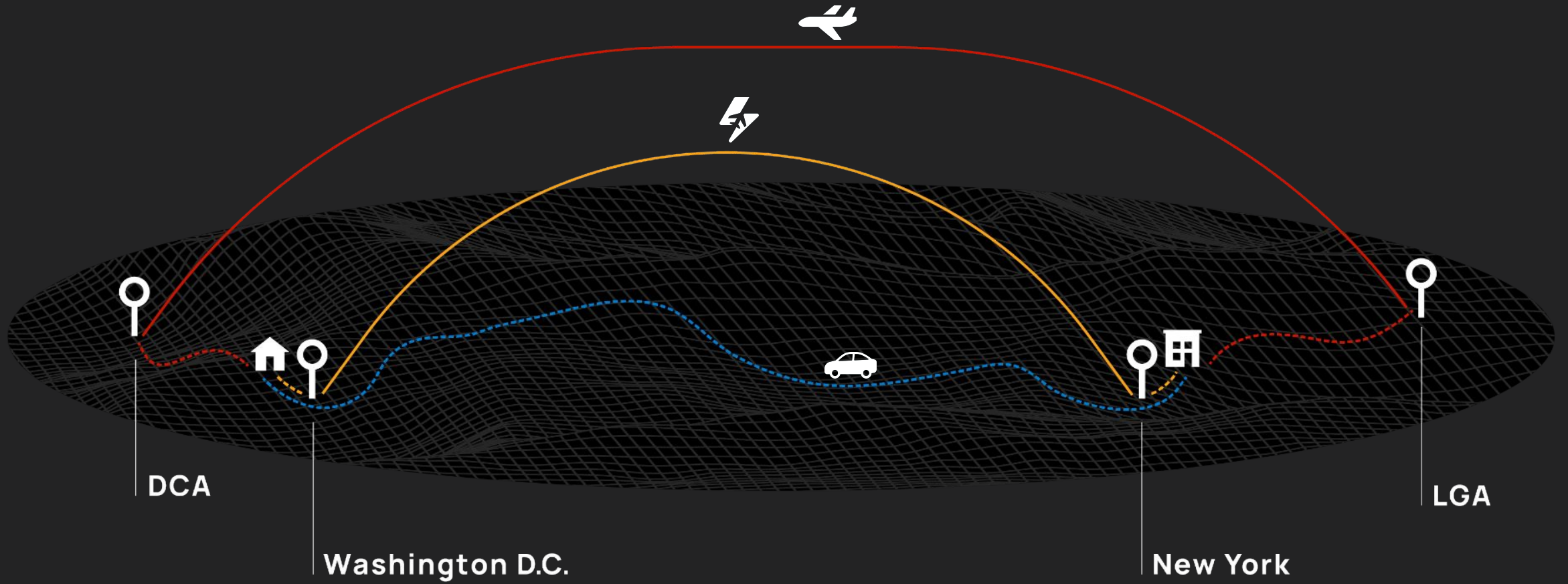
INTERCITY JOURNEY

The DMV to NYC


4H 30M
By Car


4H 00M
Commercial Flight

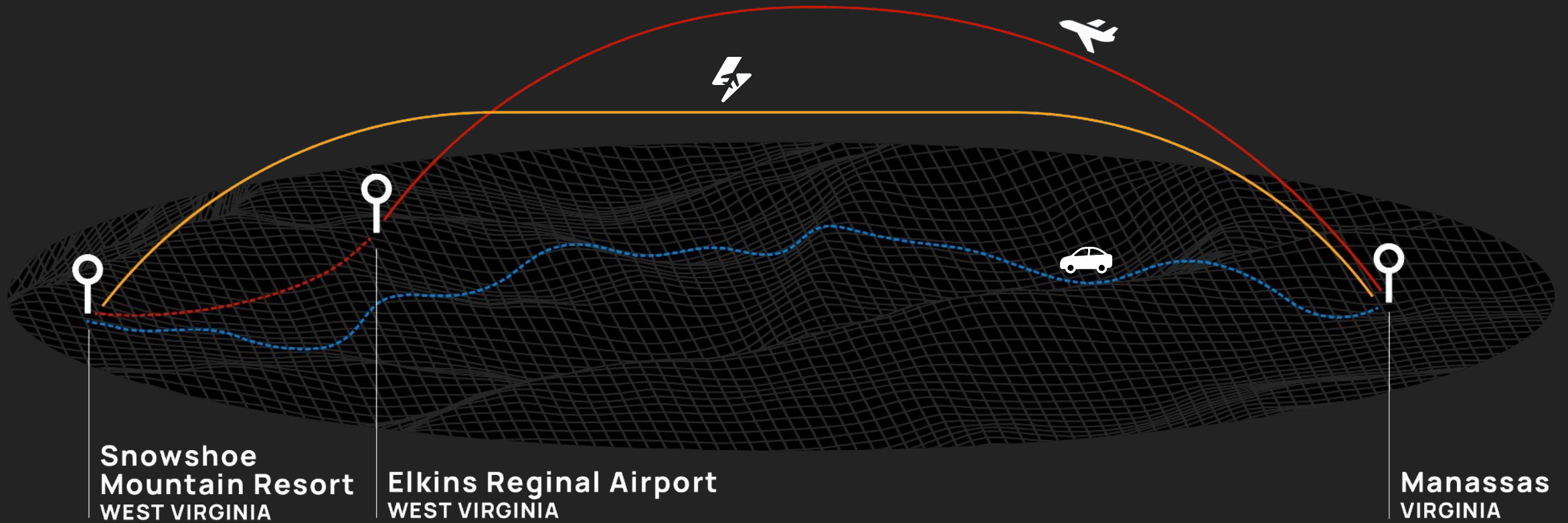

1H 45M
SAVE 2h 15m



LEISURE LAUNCHPAD JOURNEY

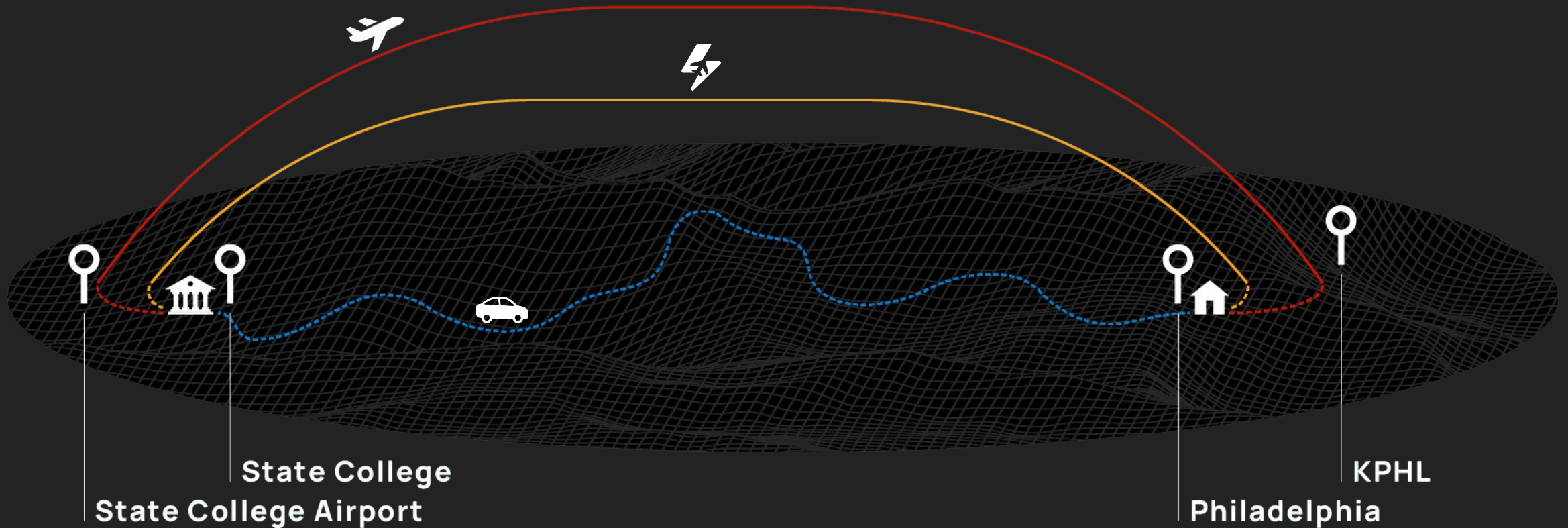
Manassas to Snowshoe

 4H 25M By Car	 3H 45M Charter Flight	 1H 00M SAVE 2h 45m
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SMALL COMMUNITY SERVICE JOURNEY

State College to Philadelphia



ROUTE OPTIONS

Intercity Connectors

Direct from urban center to urban center, avoiding slow, congested ground routes and busy airports

Routes	DRIVE		COMMERCIAL AIR	
	Time Savings	Daily Trips	Time Savings	Daily Trips
DC Area ↔ NYC	3h 30m	18,000	2h 40m	5,174
NYC ↔ Boston	1h 45m	17,200	2h 45m	6,490
Austin ↔ Houston	2h 00m	13,690	3h 10m	2,352
Orlando ↔ Miami	2h 30m	9,800	3h 00m	3,018
Memphis ↔ Nashville	1h 40m	9,350	2h 20m	144
DTLA/Pasadena ↔ San Diego	1h 30m	14,375	3h 30m	691
Austin ↔ Dallas	2h 15m	6,000	3h 00m	4,500



ROUTE OPTIONS

Leisure Launchpad

Links travelers directly to vacation destinations (lakes, beaches, ski towns) without long drives or multiple transfers

Routes	DRIVE		COMMERCIAL AIR	
	Time Savings	Daily Trips	Time Savings	Daily Trips
Long Beach/South LA ↔ Las Vegas	3h 20m	12,650	3h 20m	10,285
Miami ↔ Key West	2h 30m	2,500	2h 20m	552
Portland ↔ Bend	2h 20m	12,000	2h 10m	182
NYC ↔ Atlantic City/Ocean City*	1h 15m	10,000	NA	N/A
Bay Area ↔ Lake Tahoe	3h 00m	5,500	2h 30m	1,090
DC Area ↔ Snowshoe Mountain*	3h 00m	2,800 (Seasonal)	N/A	N/A

*No direct commercial air service



ROUTE OPTIONS

Airport Feeder (To and From)

Leveraging infrastructure to connect travelers from smaller cities to large hub airports without adding to congestion

Routes	DRIVE		COMMERCIAL AIR	
	Time Savings	Daily Trips	Time Savings	Daily Trips
Jacksonville ↔ Orlando Airport*	1h 30m	6,100	N/A	N/A
Norfolk ↔ DC Reagan Airport	2h 40m	9,625	3h 10m	1,926
Portland ↔ Seattle-Tacoma Airport	1h 35m	13,000	2h 30m	2,770
Colorado Springs ↔ Denver Airport	1h 40m	9,400	2h 50m	1,873
Fresno ↔ San Jose Mineta Airport*	1h 45m	6,300	N/A	N/A
Cincinnati ↔ Indianapolis Airport*	1h 10m	5,500	N/A	N/A

*No direct commercial air service



ROUTE OPTIONS

Small Community Service

Provide connectivity to locations with geographic barriers at low infrastructure cost

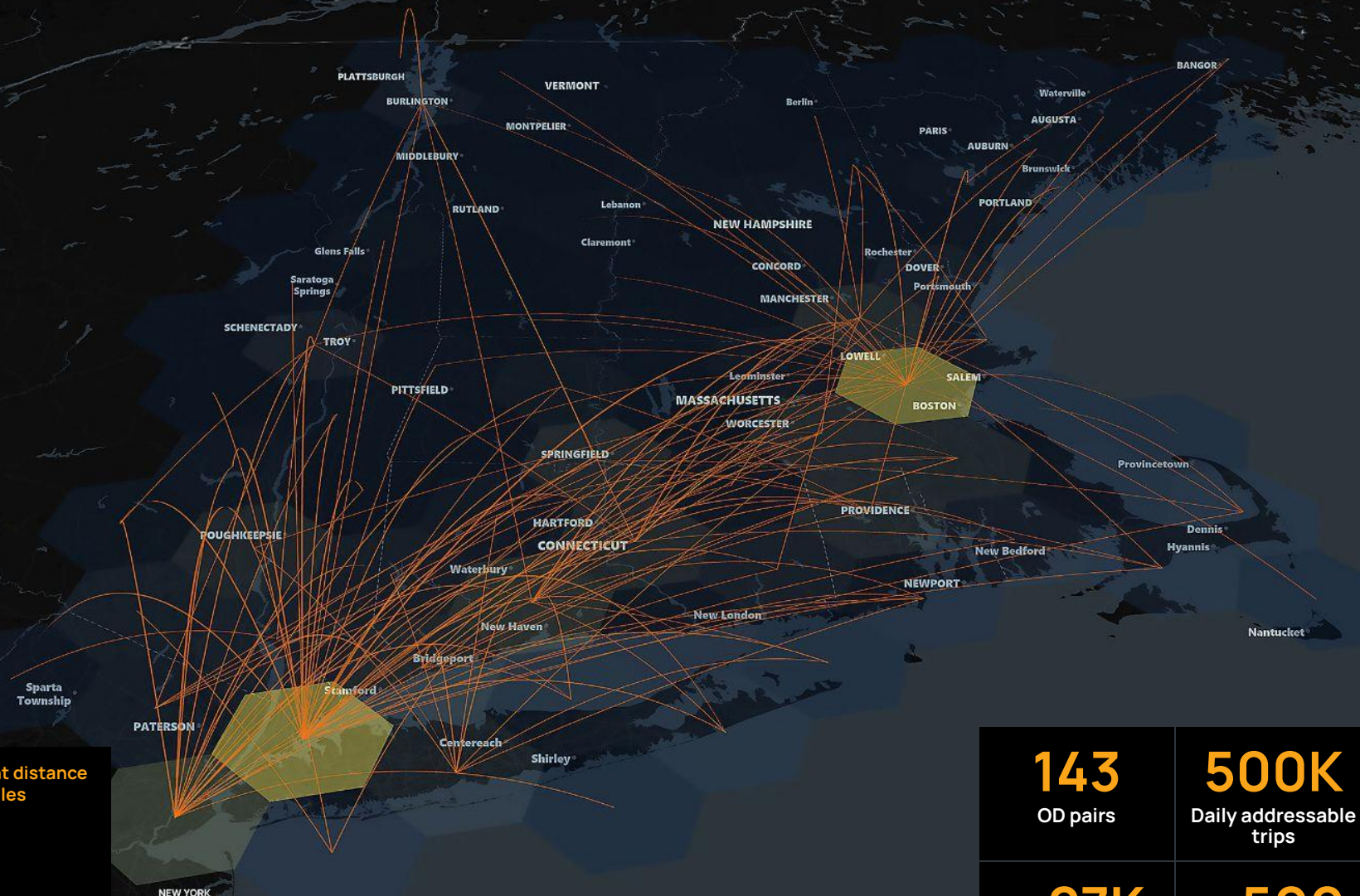
Routes	DRIVE		COMMERCIAL AIR	
	Time Savings	Daily Trips	Time Savings	Daily Trips
Blacksburg, VA ↔ Washington, D.C. Area*	2h 40m	1,850	N/A	N/A
Mendocino, CA ↔ Sacramento*	2h 50m	850	N/A	N/A
Akron, OH ↔ Detroit*	2h 30m	1,000	N/A	N/A
State College, PA ↔ Philadelphia	2h 40m	2,400	2h 30m	278
Jefferson City, MO ↔ St. Louis, MO*	1h 20m	1,500	N/A	N/A
Morgantown, WV ↔ Charleston, WV*	1h 30m	1,200	N/A	N/A
Burlington, VT ↔ Boston, MA*	2h 00m	2,200	N/A	N/A

*No direct commercial air service



Northeast Corridor

NYC to Montauk, door to door, in **75 minutes**.



Route	# of trips	EL9 D2D travel time	Rush-hour time savings	Flight distance in miles
Boston ↔ NYC	22,391	1h 45m	1h 30m	180
NYC ↔ Montauk	3,741	1h 15m	1h 40m	100
New Haven ↔ Long Island	2,673	39m	2h 17m	29

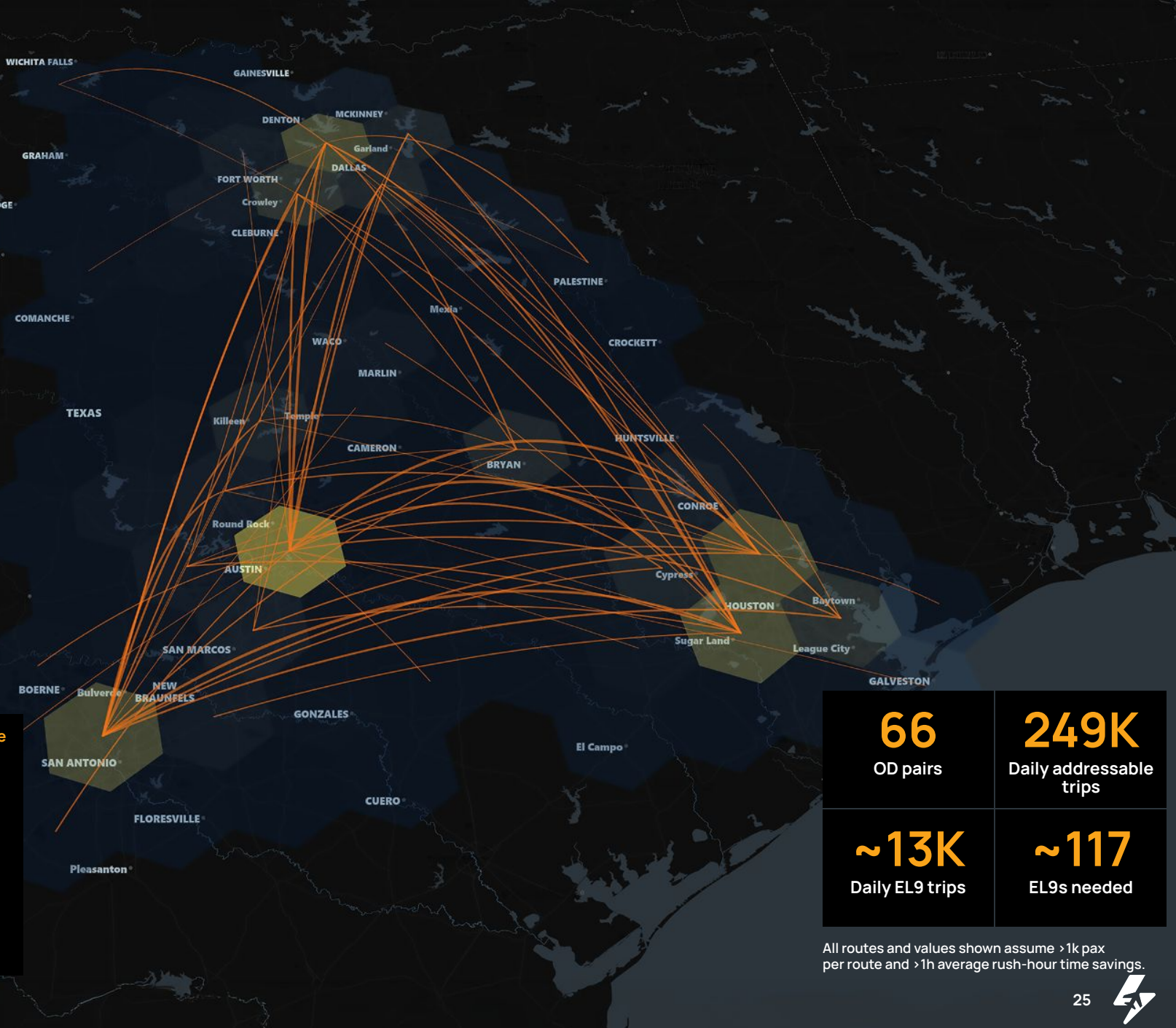
143 OD pairs	500K Daily addressable trips
~27K Daily EL9 trips	~500 EL9s needed

All routes and values shown assume >1k pax per route and >1h average rush-hour time savings.

Texas Triangle

Austin to Dallas in **93 minutes**.

Route	# of trips	EL9 D2D travel time	Rush-hour time savings	Flight distance in miles
Dallas ↔ Austin	9,412	1h 33m	1h 56m	186
Dallas ↔ Shreveport	3,721	1h 30m	3h 20m	185
Austin ↔ Corpus Christi	3,263	1h 32m	2h 17m	182



66 OD pairs	249K Daily addressable trips
~13K Daily EL9 trips	~117 EL9s needed

All routes and values shown assume >1k pax per route and >1h average rush-hour time savings.

Southern California

DTLA to San Diego in **67 minutes**.



Route	# of trips	EL9 D2D travel time	Rush-hour time savings	Flight distance in miles
DTLA ↔ San Diego	16,627	1h 7m	1h 20m	106
Santa Monica ↔ Palm Springs	7,855	1h 10m	1h 30m	117
Palm Springs ↔ Las Vegas	6,884	1h 32m	2h 35m	176
Long Beach ↔ Santa Barbara	5,645	1h 10m	1h 10m	88

106 OD pairs	445K Daily addressable trips
~14K Daily EL9 trips	~296 EL9s needed

All routes and values shown assume >1k pax per route and >1h average rush-hour time savings.

Florida

Miami to the Magic Kingdom in **97 minutes**.

Route	# of trips	EL9 D2D travel time	Rush-hour time savings	Flight distance in miles
Jacksonville ↔ Orlando	8,794	1h 24m	1h 30m	126
Sarasota ↔ Orlando	9,591	1h 18m	1h 15m	102
Ft. Myers ↔ Miami	9,393	1h 18m	1h 10m	107
Miami ↔ Orlando	11,108	1h 37m	2h 30m	195

114 OD pairs	273K Daily addressable trips
~10K Daily EL9 trips	~164 EL9s needed

All routes and values shown assume >1k pax per route and >1h average rush-hour time savings.



The Midwest

The Loop to the Lakes in **45 minutes**.



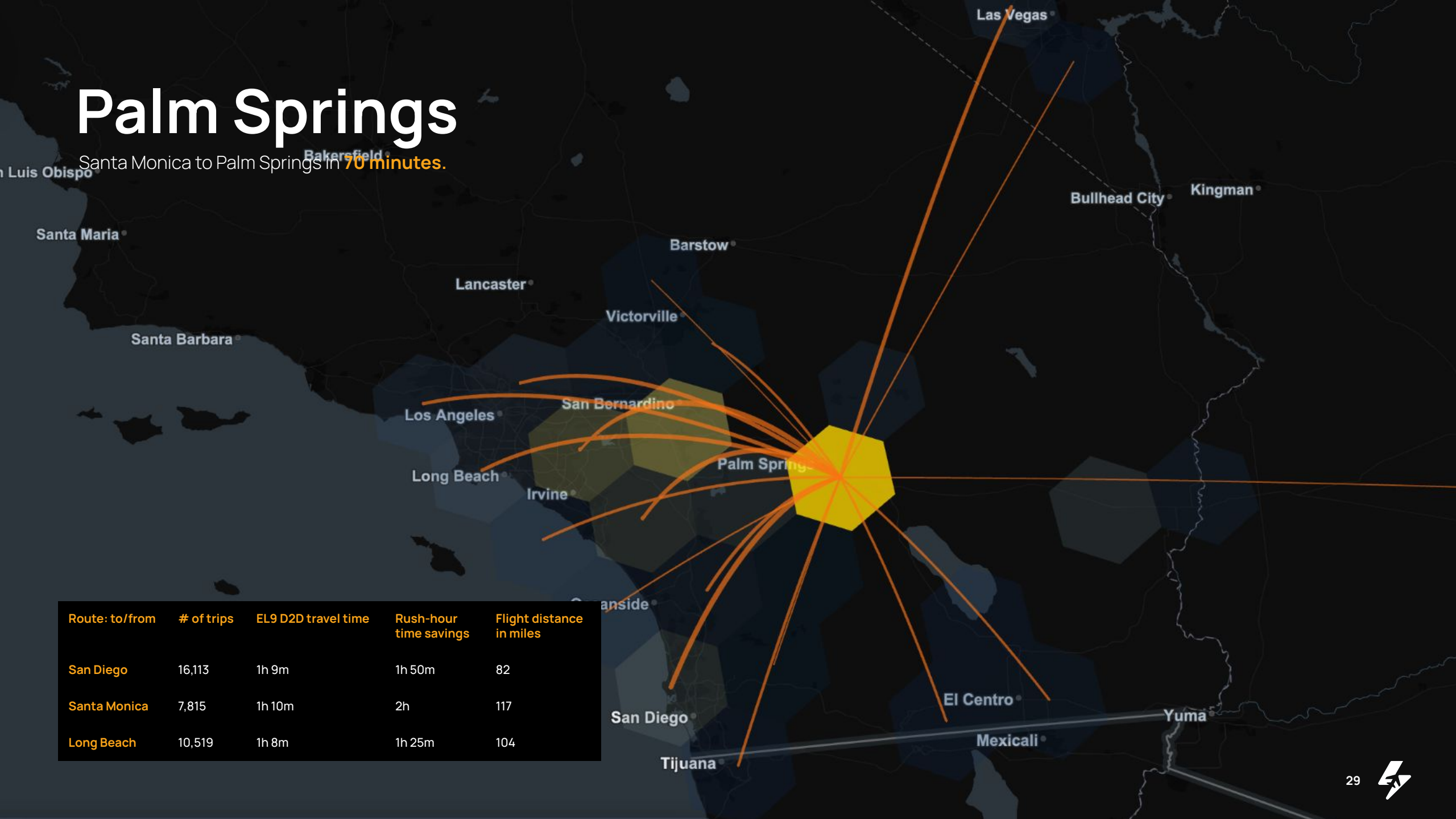
Route	# of trips	EL9 D2D travel time	Rush-hour time savings	Flight distance in miles
Detroit ↔ Cleveland	8,282	1h 4m	2h	101
Madison ↔ Chicago	4,264	1h 10m	1h 22m	119
Grand Rapids ↔ Milwaukee	1,459	1h 21m	3h 5m	113

121 OD pairs	300K Daily addressable trips
~15K Daily EL9 trips	~222 EL9s needed

All routes and values shown assume >1k pax per route and >1h average rush-hour time savings.

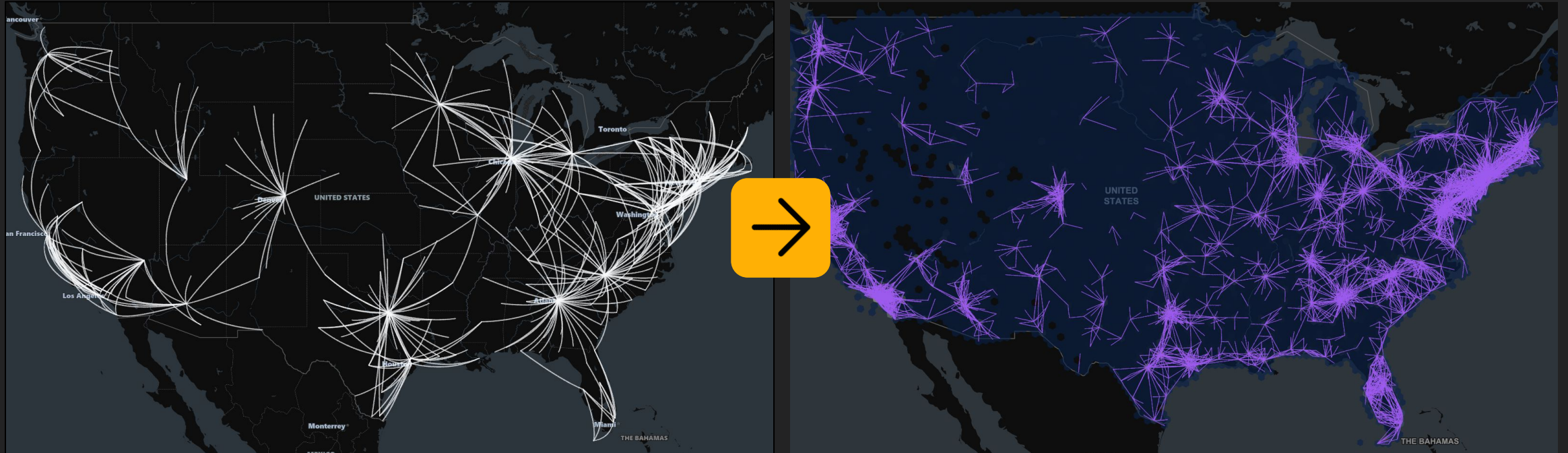
Palm Springs

Santa Monica to Palm Springs in **70 minutes**.



Route: to/from	# of trips	EL9 D2D travel time	Rush-hour time savings	Flight distance in miles
San Diego	16,113	1h 9m	1h 50m	82
Santa Monica	7,815	1h 10m	2h	117
Long Beach	10,519	1h 8m	1h 25m	104

12–16K Airplanes Needed to Build This Transformative Model for Regional Mobility





US Outlook

GLOBAL POSSIBILITIES



The Bottom Line



Too Far to Drive. Too Close to Fly.

Regional trips fall within the 50–265 driving mile range, where current transportation options are either too slow (passenger vehicles) or too inconvenient (traditional air travel).



Hours Lost.

Current options leave travelers spending multiple hours stuck in transit, time that Direct Aviation could reclaim and put to more productive use.



This Isn't What We Were Promised.

Whether in a plane, train, or automobile, the regional travel experience leaves much to be desired.



Demand Backed by Spending Power.

Many of these routes are in areas where travelers are willing to pay the cost of business-class airfare if it means time and hassle savings.



Hybrid-Electric, Today, Is the Only Practical, Cost-Effective Way to Scale AAM Regionally.

Opens up new mesh networks and has the range, access, and payload to make the trip, Advanced mobility solutions offer a better way.



Methodology & Assumptions

Examined commercially available ground transportation data across the US:

- Three-month period in Spring 2025 that includes location-based data, connected vehicle data, credit-card usage, and other sources to capture how people travel
- Considers trips of 50–500 driving miles, as well as airport feeder trips of 30–500 driving miles
- Analysis excludes effects of seasonal travel and special events
- Built on the pilot developed by researchers from Georgia Tech

Looked at peak- and off-peak use cases:

- Travel times based on door-to-door analysis compared to driving
- Time savings quoted for rush-hour traffic (P85)

Key assumption for computing traffic volume:

- Trips are grouped by city-sized origin/destination zones. Each zone covers about a 15-minute drive from center to edge in normal congested areas, and up to 30 minutes in dense urban cores like LA or NYC
- 4,564 zones used to cover the full US, roughly. Centroids of one zone to the next are spaced by 24.3 miles.

Key assumption for computing EL9 trip time travel time savings (trip-level calculation):

$$\text{Time Savings} = \text{Driving Time} - \text{EL9 Total Trip Time}$$

EL9 Total Trip Time

$$= \text{Access Time}_{\text{Origin}} + \text{AccessPointWaiting} + \text{EL9}_{\text{Ingress}} + \text{EL9 Flight Time} + \text{EL9}_{\text{Egress}} + \text{AccessTime}_{\text{Destination}}$$

- *Access Time* is the average driving time it takes an individual to go from their origin/destination to a local Ultra Short access point within their community (census block group)
- *AccessPointWaiting* = 20 minutes
- $\text{EL9}_{\text{Ingress}} + \text{EL9}_{\text{Egress}} = 6 \text{ minutes}$
- $\text{Flight Time} = \text{Taxi}_{\text{Origin}} + \text{Direct Flight} + \text{Taxi}_{\text{Destination}}$

