

DRAFT

PROJECT COOPER: BRIEFING FOR THE SENATE FINANCE COMMITTEE

November 15, 2018

AMAZON HAS SELECTED TWO LOCATIONS FOR HQ2: ARLINGTON, VIRGINIA AND NEW YORK CITY (LONG ISLAND CITY)

- The company has committed to create a minimum of 25,000 jobs in each location, with average annual wages in excess of \$150,000, escalating by at least 1.5% annually
- Our incentive package reflects a minimum of 25,000 jobs (Phase I), with a potential ramp to 37,850 jobs (Phase II)
- *The remainder of this presentation focuses on the 25,000-job phase to which the company has committed*

MOST OF VIRGINIA'S PROPOSED COMMITMENTS ARE INVESTMENTS IN THE TECH-TALENT PIPELINE AND TRANSPORTATION INFRASTRUCTURE

Focus area	Component	Description	Size (\$MM)
Tech-talent pipeline initiative	 Provide post-performance incentive grants	Provide post-performance job-creation grants to offset Amazon's talent acquisition and development costs associated with standing up HQ2	550*
	 Expand tech-talent pipeline across Virginia	Expand Virginia's statewide tech-talent pipeline, adding 12,500-17,500 bachelor's degrees in computer science and closely related fields in excess of current levels over the next 20 years, as well as invest \$25 million in expanded internship opportunities to connect tech students to tech jobs	Up to 710**
	 Launch tech campus(es) in Northern Virginia	Build a tech campus (or two distinct campuses) alongside a leading anchor university that will attract and retain top talent globally, creating an additional 12,500-17,500 master's degrees in computer science and closely related fields in excess of current levels over the next 20 years	Up to 375**
	 Broaden K-12 tech-talent pipeline	Boost the tech-talent pipeline of the future by further developing and deploying K-12 tech-talent education programming	25
Regional infrastructure expansion	 Enhance multimodal transportation infrastructure	Provide state support for priority transportation infrastructure projects that will improve mobility in the region	195***
Total of company incentives			550*
Total of state competitiveness investments (tech-talent pipeline initiative and infrastructure expansion)			Up to 1,305****

* Maximum value of \$550 million assumes company creates 25,000 jobs with average annual wages of \$150,000, plus benefits, escalated at 1.5% annually. Up to \$200 million in additional company incentives (for a cumulative total of \$750 million) is available if the company creates a total of 37,850 qualifying jobs within 20 years

** Value represents the maximum new state investment in capital and operational support that may be required to achieve the referenced degree production outcomes. Participating institutions will enter into MOUs that detail their plans for growth, state funding commitments, annual reporting requirements, and future funding parameters associated with performance. The total new state investment to grow bachelor's-level tech-talent education will be determined in part by how much of the growth in computer science and related fields is associated with an overall increase in college graduates at each institution and how much relates to a shift in the degree-field mix that may occur at some institutions

*** Maximum value of \$195 million assumes company creates 25,000 jobs with average annual wages of \$150,000, plus benefits, escalated at 1.5% annually. Up to \$100 million in additional state infrastructure commitments (for a cumulative total of \$295 million) is available if the company creates a total of 37,850 qualifying jobs within 20 years

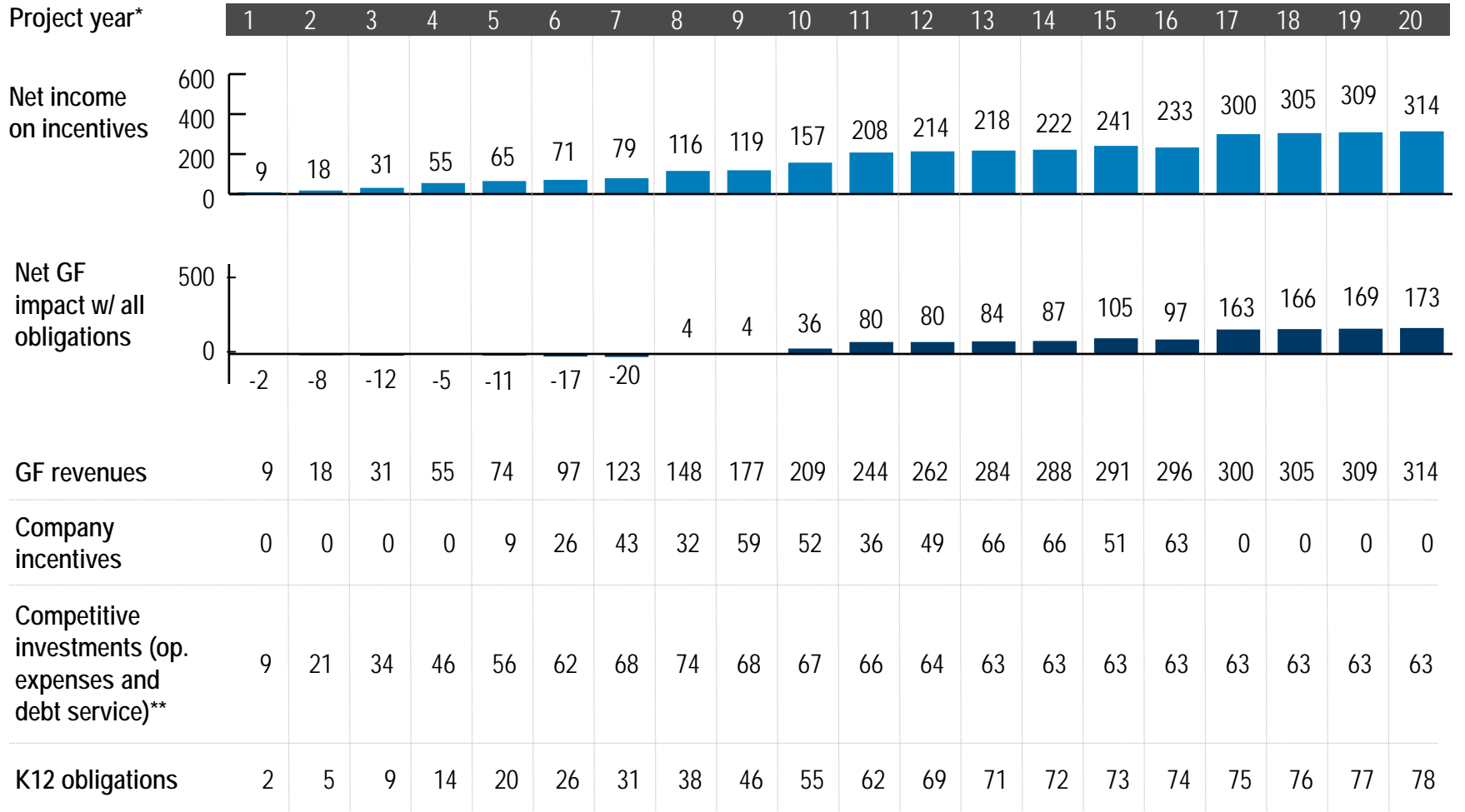
**** Maximum value assumes company creates 25,000 qualifying jobs and assumes maximum potential state investment for the tech-talent pipeline initiative

OUR PROPOSAL FOR AMAZON'S MAJOR NEW HEADQUARTERS INCLUDES A POST-PERFORMANCE INCENTIVE GRANT PROGRAM

- Phase I (up to 25,000 jobs): \$22,000 per job, for a total maximum of \$550 million
- Optional Phase II (25,001-37,850 jobs): \$15,564 per job, for a total potential of \$200 million
- Incentive payments will be paid four years after qualifying jobs (minimum average of \$150,000 per year, plus benefits, escalated at 1.5% annually) are created
- 6:1 return on incentives (ratio of 20-year estimated NPV of general fund revenues to NPV of post-performance company incentive payments)

ANALYSIS OF ANNUAL IMPACTS ON GENERAL FUND, INCLUDING ANNUAL RETURN ON INCENTIVES AND NET ANNUAL GF IMPACT

Project GF economics (\$, millions)



* Project years represent fiscal years, starting with FY2020 (project year 1)

** Higher ed and K12 tech-talent pipeline initiatives; debt service begins in FY2021; excludes transportation infrastructure projects that are expected to be funded with NGF sources

PROPOSED STATE TRANSPORTATION COMMITMENTS FOCUS ON THE COMPANY'S TOP FIVE PRIORITY PROJECTS

\$ Millions

Project	Est. total project cost	Already planned/ committed funding*	Additional needed funding			Proposed state funding source(s) for HQ2 support
			Total	Local/ NVTA Regional	State HQ2 Offer	
Crystal City East Metro Entrance	90.0	6.5	83.5	1.0	82.5	39.6 CMAQ 42.9 I-95 Concession
Potomac Yard SW Metro Entrance	370.0	320.0	50.0	0.0	50.0	50.0 CMAQ
Route 1 Improvements**	250.0	0.0	250.0	0.0	138.4	48.0 NHPP/STP 7.0 CMAQ 83.4 PTF
Connector Bridge from Crystal City to Washington Nat'l. Airport	36.0	8.7	27.3	17.7	9.5	9.5 CMAQ
Pentagon City/Crystal City/Potomac Yard Transitway Expansion	36.7	21.7	15.0	0.5	14.6	14.6 CMAQ
Total	782.7	356.9	425.8	19.2	295.0***	295.0

* Nearly all of the already planned/committed funding is local

** Potential additional funding sources: sale of unlocked land and/or a special assessment recommended by property owners

*** This value includes the optional phase II; if only phase I is completed, the total state support will be \$195 million

WITH HQ2, LOCALITIES OUTSIDE NOVA WOULD RECEIVE UP TO \$750-850MM IN NEW HIGHER ED AND K12 FUNDING OVER 20 YEARS

- While tech-talent pipeline funding allocations across higher ed won't be finalized until a later date, we expect the majority of new state funds (up to \$540-590 million*) to be invested outside Northern Virginia
- The local share of new state sales tax revenues dedicated for education outside NOVA are expected to total roughly \$200 million over 20 years
- Additionally, with HQ2 in Virginia, the whole Commonwealth will receive a reputation boost that likely will result in increased leads and project opportunities statewide

* Includes GF and capital investment contributions to VT-Blacksburg, UVA, and W&M, as well as potentially other publics with CS-related programs (e.g., ODU, JMU, VCU, CNU, Radford, UMW, UVA-Wise), plus community colleges; actual totals will depend upon institution-specific negotiations, including extent of reallocation vs. overall growth in degrees

RECAP OF MAJOR POINTS

- A transformational opportunity to drive diversification and innovation
- Retention of college grads and reversal of out-migration trend
- Doubling of Virginia's tech-talent pipeline, benefiting all tech firms
- Post-performance incentives, with positive GF revenues from day one
- Transportation commitments funded by non-GF sources
- Non-incentive elements would be good investments even without HQ2
- \$1.2B+ in net new GF \$s after all obligations (over 20 years at 25k jobs)
- Scale and character of growth aligned with existing community plans
- Modest impacts on rents and traffic mitigated by investments, long ramp up
- ~\$700 million in new higher ed and K12 funding outside of Northern Va.
- A winning package for far less than many others offered (e.g., MD, NYC)

APPENDIX

PRELIMINARY FORECAST FOR PERFORMANCE-BASED, STATE TECH-TALENT PIPELINE INVESTMENTS BY FISCAL YEAR

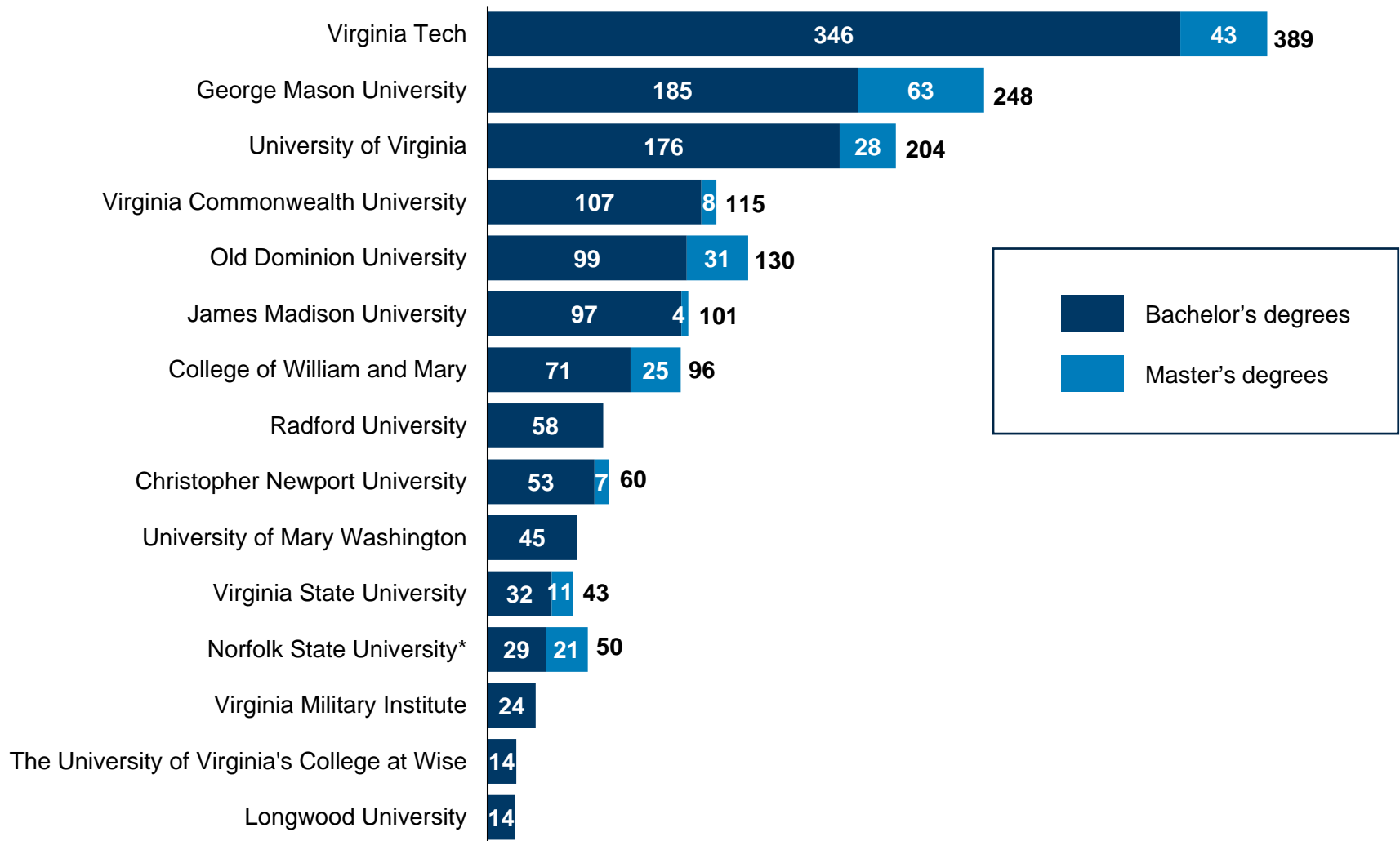
DRAFT

Project Year Fiscal Year (Academic Year)	1 2020	2 2021	3 2022	4 2023	5 2024	6 2025	7 2026	8 2027	9 2028	10 2029	11 2030	12 2031	13 2032	14 2033	15 2034	16 2035	17 2036	18 2037	19 2038	20 2039	Total	
BS degree production				98	211	340	469	591	703	812	903	927	937	937	937	937	937	937	937	937	937	12,552
BS degree production (cumulative)				98	308	648	1,117	1,708	2,411	3,223	4,126	5,053	5,991	6,928	7,865	8,803	9,740	10,678	11,615	12,552		
MS degree production	64	159	287	414	542	669	797	956	956	956	956	956	956	956	956	956	956	956	956	956	956	15,364
MS degree production (cumulative)	64	223	510	924	1,466	2,136	2,933	3,889	4,845	5,801	6,758	7,714	8,670	9,626	10,583	11,539	12,495	13,451	14,408	15,364		
Total degree production	64	159	287	512	753	1,009	1,266	1,548	1,659	1,768	1,860	1,883	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894	27,916
Total degree production (cumulative)	64	223	510	1,022	1,775	2,784	4,049	5,597	7,256	9,024	10,884	12,767	14,661	16,554	18,448	20,342	22,235	24,129	26,022	27,916		
State capital investment (\$MM)																						
BS	34	34	34	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135
MS	8	15	23	30	30	30	30	30	30	27	-	-	-	-	-	-	-	-	-	-	-	252
Total capital investment	41	49	56	64	30	30	30	30	30	27	-	-	-	-	-	-	-	-	-	-	-	387
Debt service for capex		3	6	10	15	17	19	21	23	26	27	27	27	27	27	27	27	27	27	27	27	
Operational support (\$MM GF)																						
BS	5	11	18	26	31	34	37	39	37	35	32	29	28	28	27	27	27	27	27	27	27	553
MS	3	6	8	9	9	9	10	12	6	5	5	5	5	5	5	5	5	5	5	5	5	123
Total state op. support	8	17	26	34	40	43	47	51	43	39	37	34	33	32	32	32	32	32	32	32	32	676
Total debt service and op. support	8	20	32	45	55	60	66	72	66	65	64	61	60	60	60	60	60	60	60	60	60	1,092

Note that numbers above are provided for state fiscal years (i.e., 7/1 of previous year to 6/30 of the label year); employment totals are for each fiscal year-end

PUBLIC INSTITUTIONS IN VA PRODUCE MORE THAN 1,300 BACHELOR'S AND 200 MASTER'S DEGREES IN CS AND RELATED FIELDS EACH YEAR

Three-year annual average through AY 2017-2018

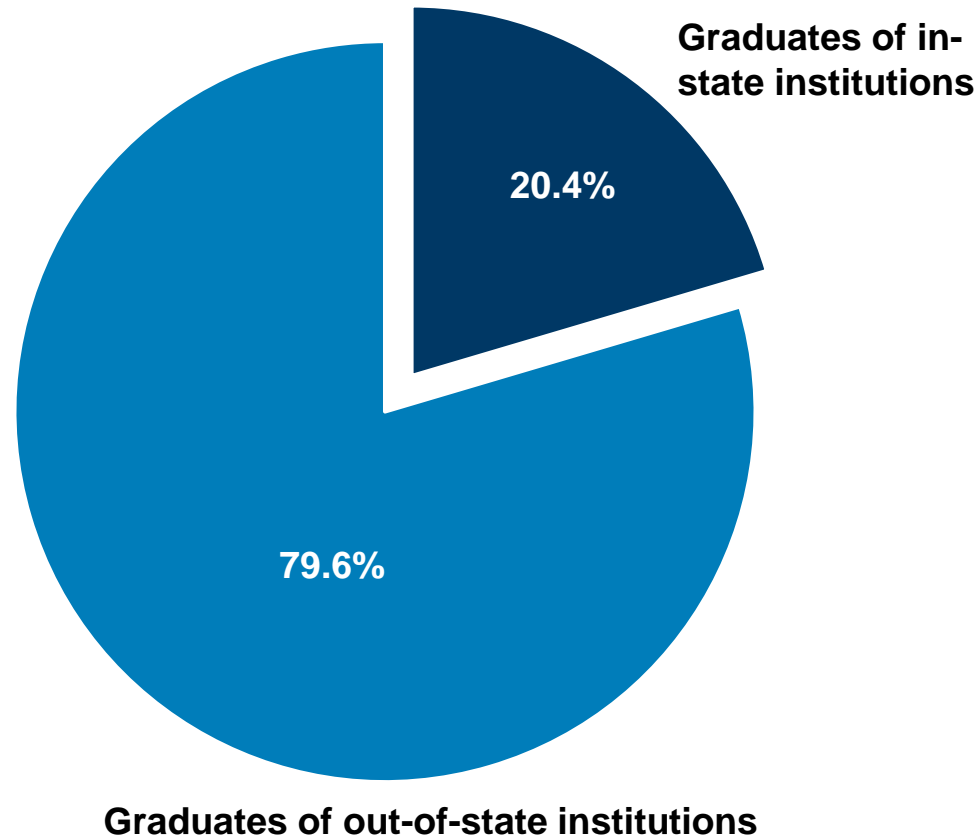


Note: This data is based on information provided by Virginia's higher education institutions for computer science, computer engineering, and software engineering degrees at the bachelor's and master's levels

*NSU did not provide information; degree production estimated based on IPEDS reporting for related fields

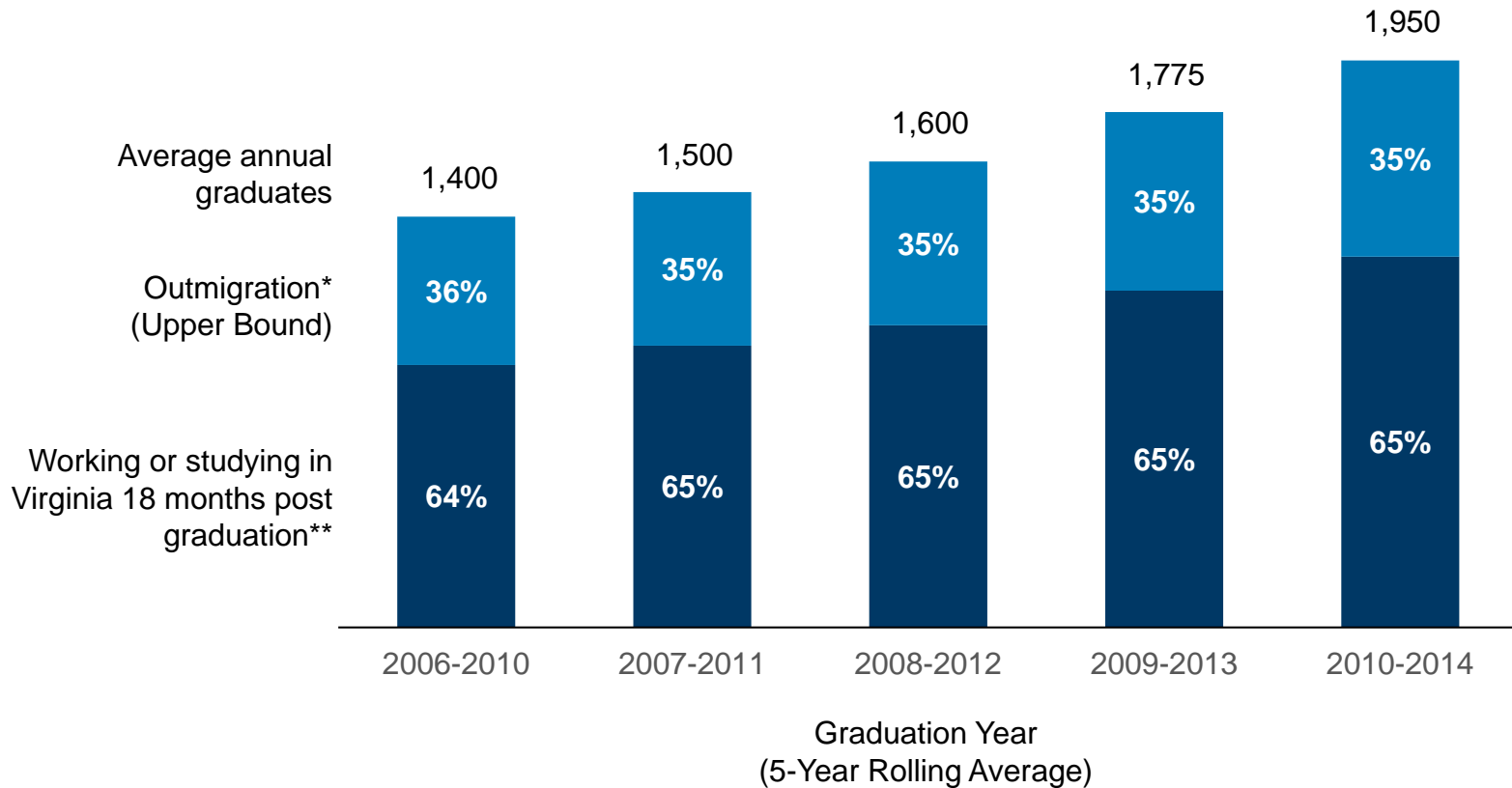
Source: Virginia's public higher education institutions; SCHEV; VEDP analysis

NEARLY 80% OF AMAZON'S COLLEGE-EDUCATED EMPLOYEES AT HQ1 IN SEATTLE ATTENDED OUT-OF-STATE COLLEGES



Amazon likely would be a magnet for talent across the U.S. and the world, as it has been in Seattle

UP TO A THIRD OF GRADS IN CS AND RELATED FIELDS FROM VA INSTITUTIONS APPEAR TO BE LEAVING THE COMMONWEALTH



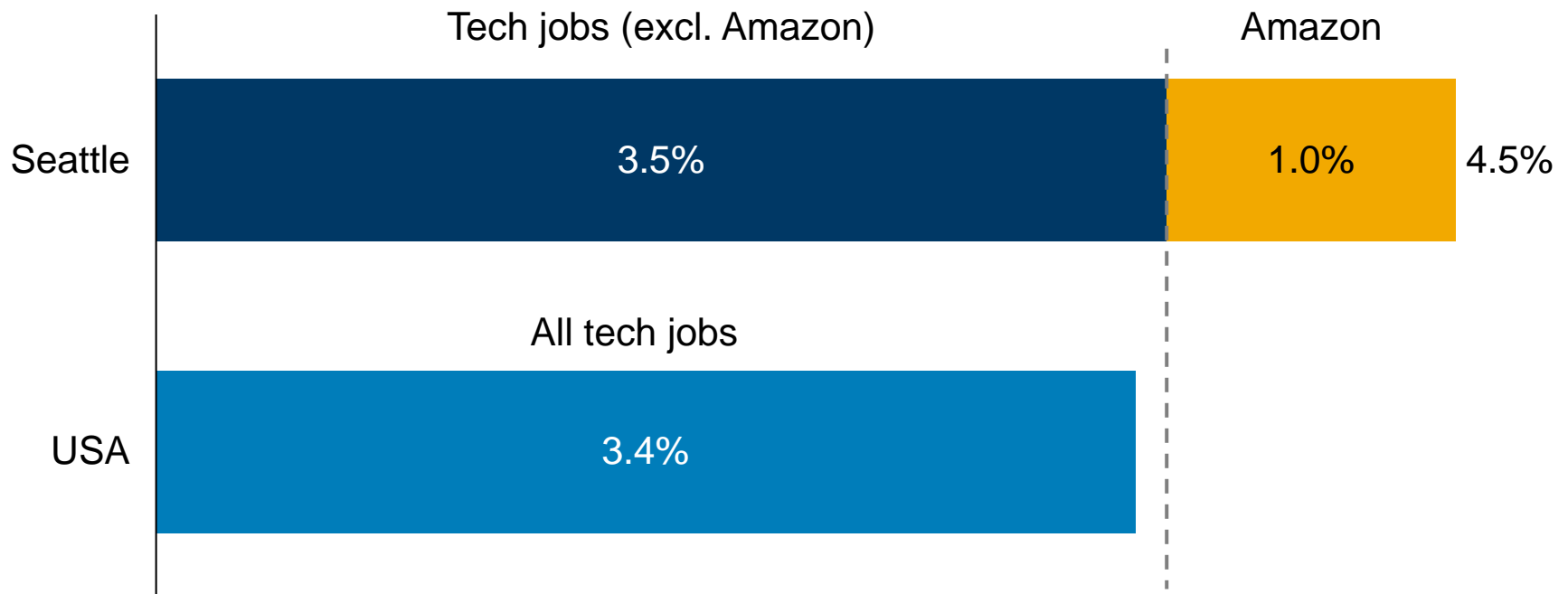
* Based on graduates who were not matched against VEC wage records and Virginia higher education records, and may include some graduates who reside in Virginia but work for employers not on VEC records or are currently out of the labor force

** Using average annual degree production for each five-year rolling average period

Source: Virginia Longitudinal Data System; VEDP analysis

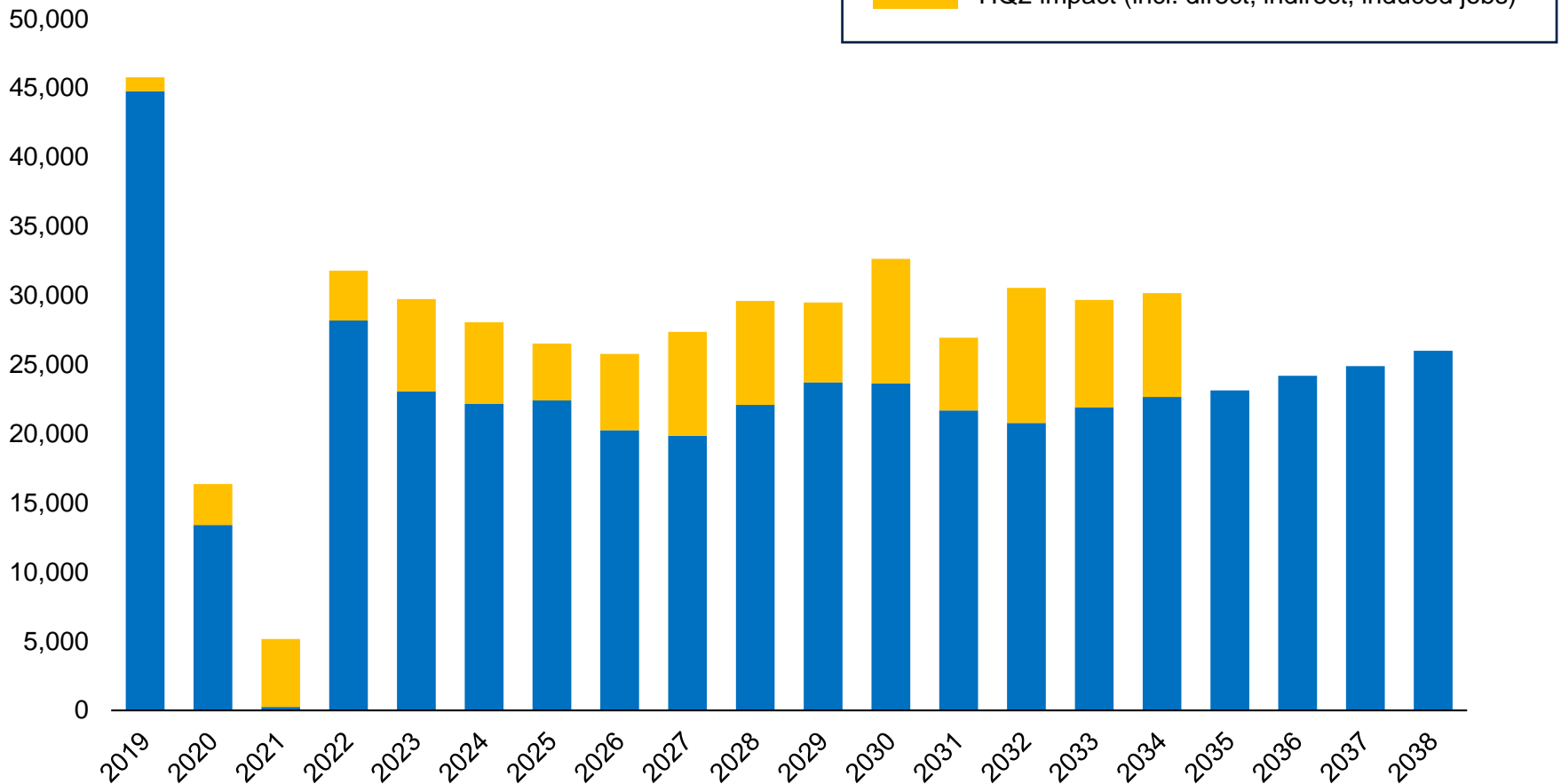
EXCLUDING AMAZON'S DIRECT EMPLOYMENT, SEATTLE'S TECH SECTOR JOBS EXPERIENCED HEALTHY GROWTH FROM 2007-2017

Seattle and USA 2007-2017 tech job CAGR



AMAZON'S HEADQUARTERS WOULD SUBSTANTIALLY INCREASE REGIONAL EMPLOYMENT GROWTH WITHOUT DOMINATING IT

Forecasted regional job growth and HQ2 impact



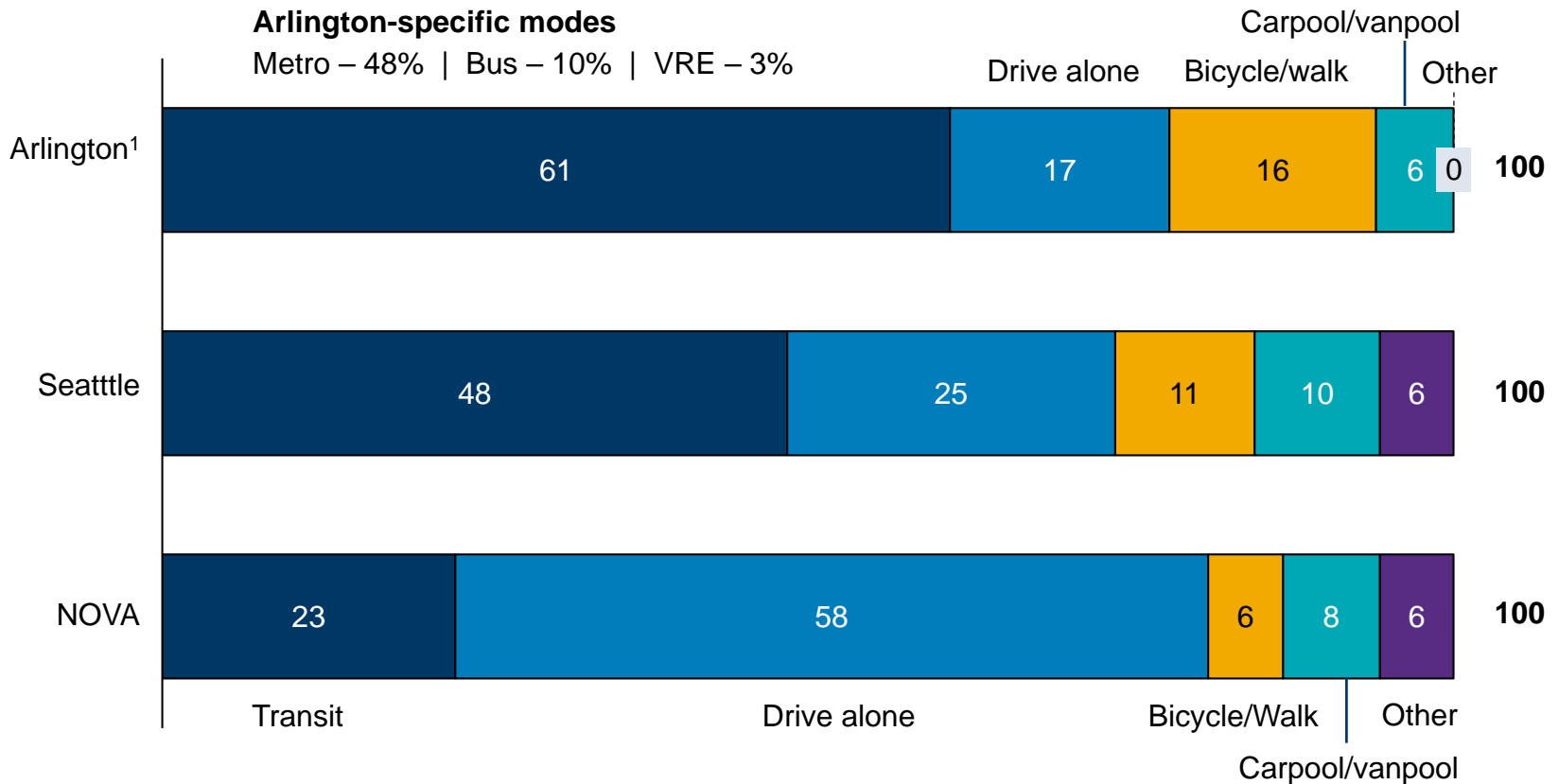
Note: While the entire DC MSA is only forecast to grow by ~200 jobs in 2021 (meaning the HQ2 impact of nearly 5,000 new direct, indirect, and induced jobs created in that year appears larger than in other years), this is not anomalous for Moody's forecast for the entire U.S., which is forecast to lose over 175,000 jobs in this year.

Source: Moody's Analytics; VEDP analysis

ARLINGTON EXPECTS OVER 75% OF AMAZON'S WORKERS TO COMMUTE WALK, BIKE, OR USE TRANSIT

Commuting patterns

Share of commuters commuting to work by mode

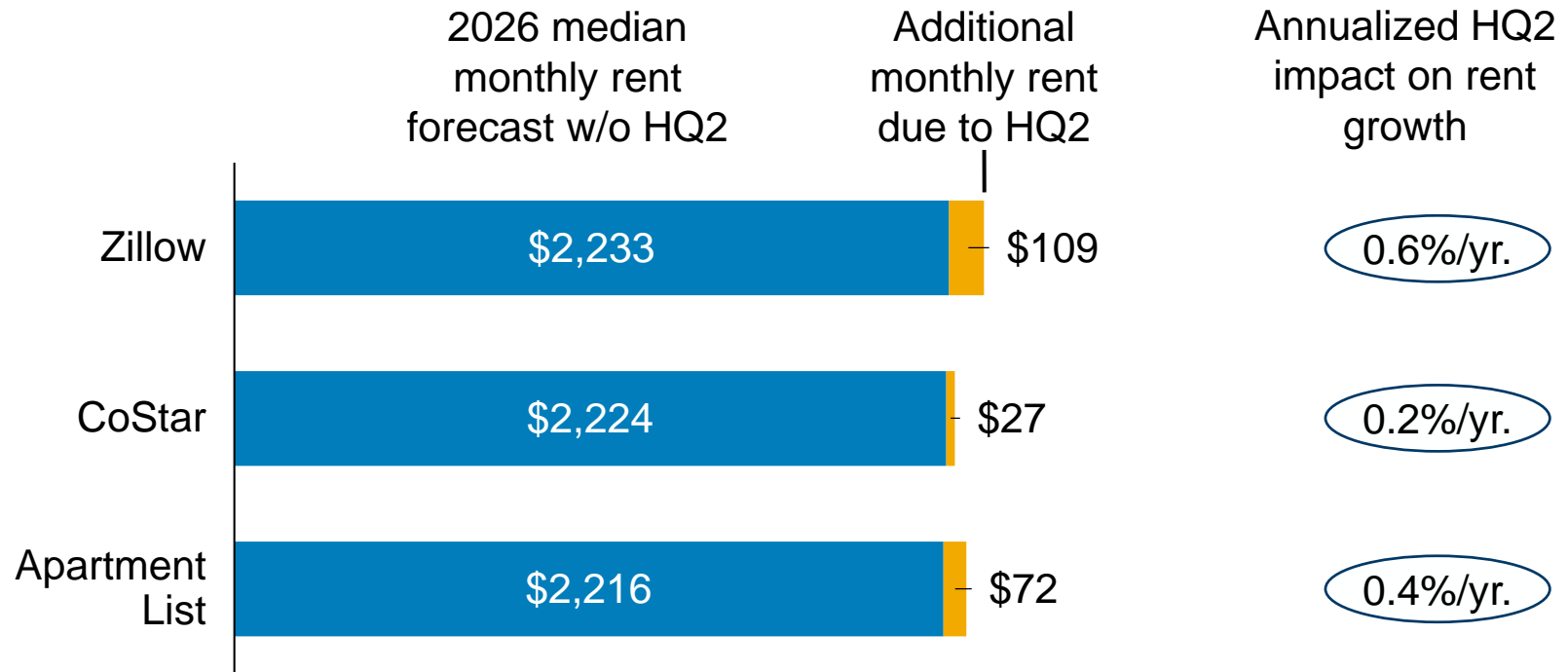


¹ Arlington-only commute trip-making projections based on 50,000 employees; 10M square feet of office; 200 square feet of office per employee; one parking space for every 1,150 square feet of office; 85% daily attendance making 2 trips per day.

Source: Seattle (2017 Center City Commuter Mode Split Survey Results); NOVA includes Herndon, McNair, Alexandria, and Arlington (ACS, 2012-2016); Arlington estimates are from the county planner

3RD-PARTY ANALYSES SUGGEST HQ2 IN THE DC METRO AREA WOULD RESULT IN SMALL INCREASES IN RENT OVER A DECADE

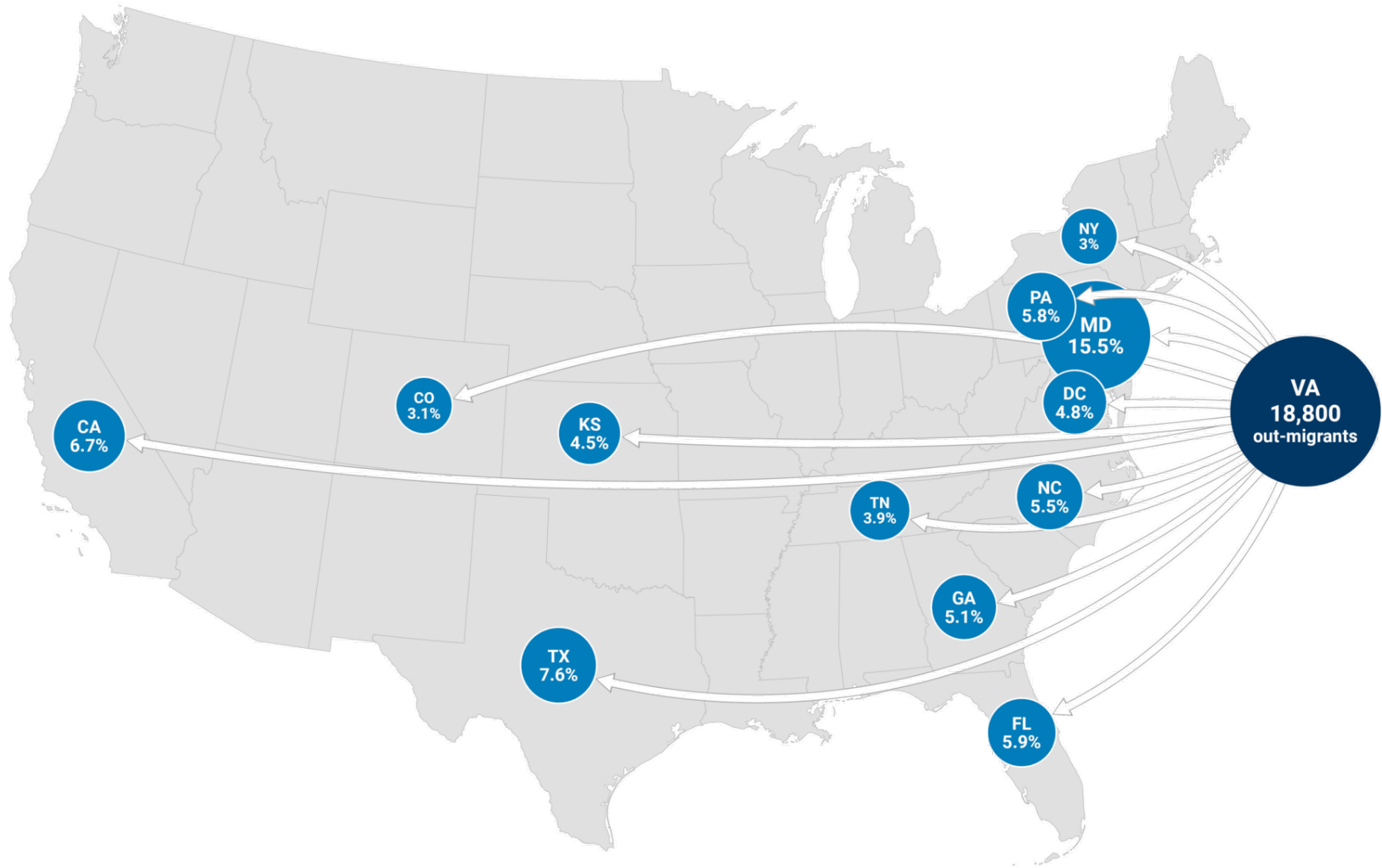
Projected rents in Northern Virginia in 2026



- 2026 median monthly rent expected to be between **\$2,216-2,233/mo.**
- HQ2 expected to add **<\$110** to that monthly bill

* All three studies envisioned employment growth much faster than the latest forecast
 Source: Zillow; Apartment List; CoStar; VEDP analysis

NEARLY 19,000 COLLEGE GRADUATES WITH COMPUTER SCIENCE DEGREES LEFT VIRGINIA OVER THE LAST FIVE YEARS*



* Includes Virginia residents under age 65 with a Bachelor's degree or above in computer science and related fields who left the Commonwealth between 2012 and 2016

Source: American Community Survey Public Use Microdata Sample (ACS PUMS); VEDP analysis