

ANALYSIS OF CURRENT WORKFORCE DEMANDS IN THE METROPOLITAN WASHINGTON REGION

Initial Findings

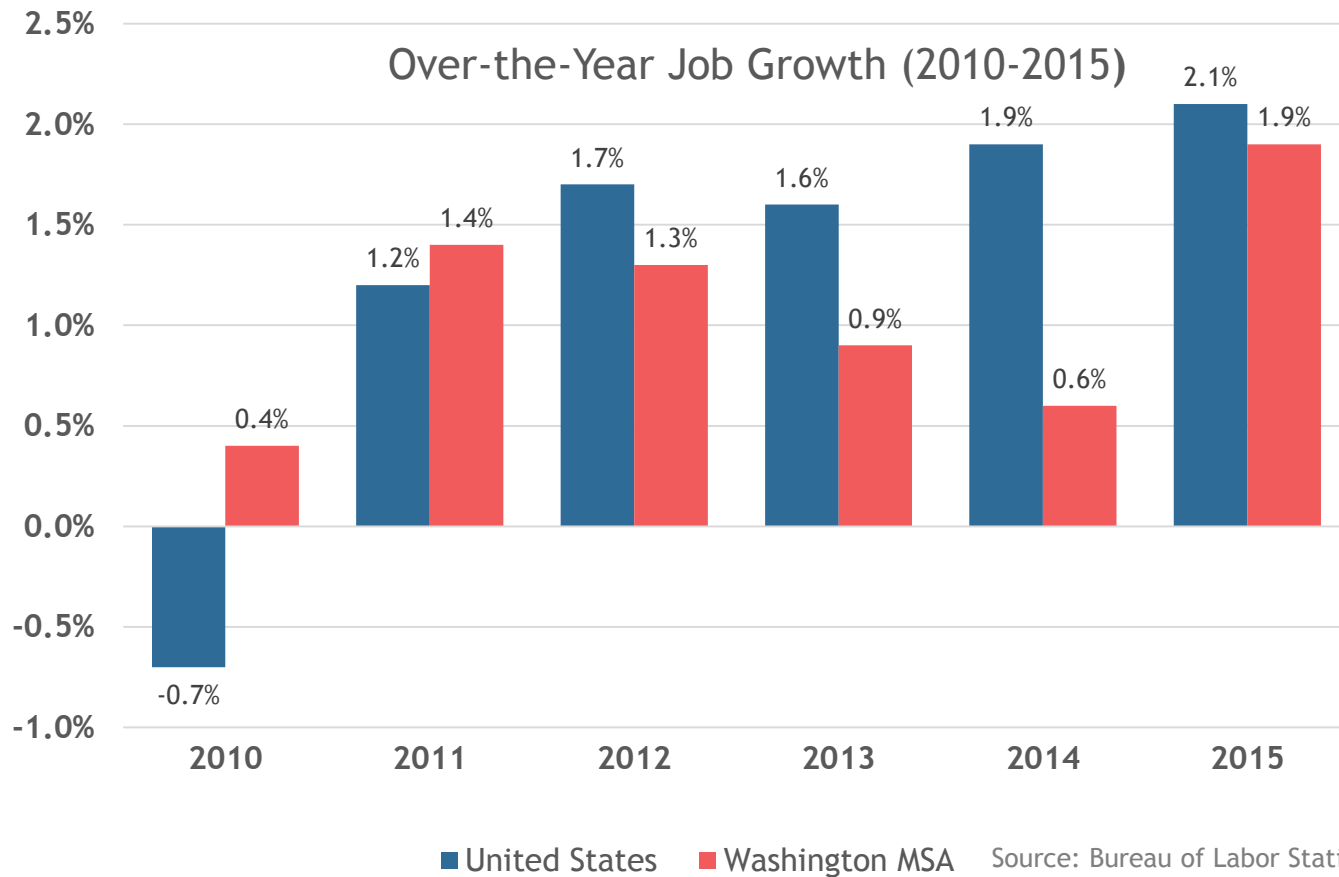
Nicole McCall
Transportation Planner, TPB

Planning Directors Technical Advisory Committee
April 15, 2016

Presentation Overview

- Job Growth: Region v. Nation
- Job Postings: A Leading Indicator?
- Occupations Most in Demand
- Education and Skills Needed for Jobs in Greatest Demand
- Question for the Region Forward Coalition

Job Growth in the Region Has Lagged the Nation since 2012

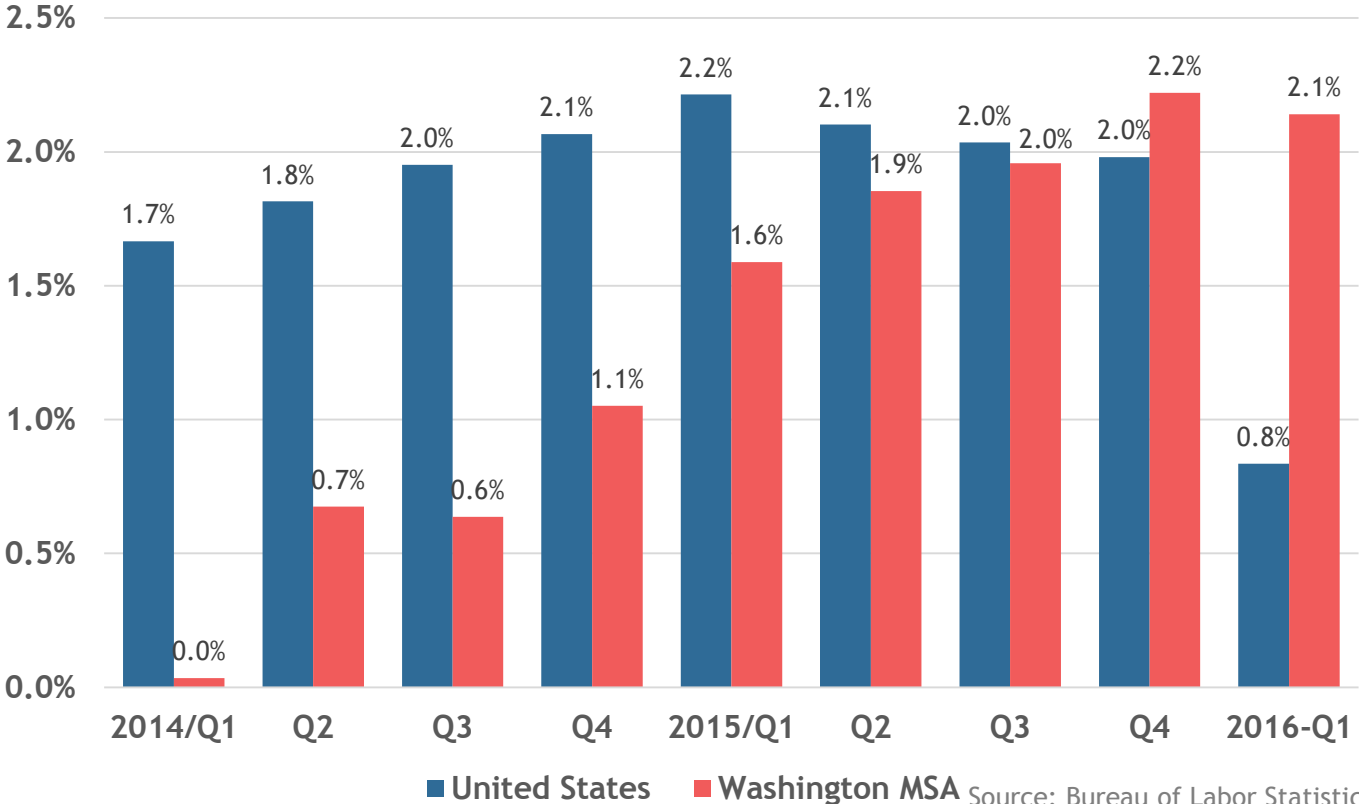


Source: Bureau of Labor Statistics,
Current Employment Survey



Job Growth in the Region Began to Accelerate in 2014

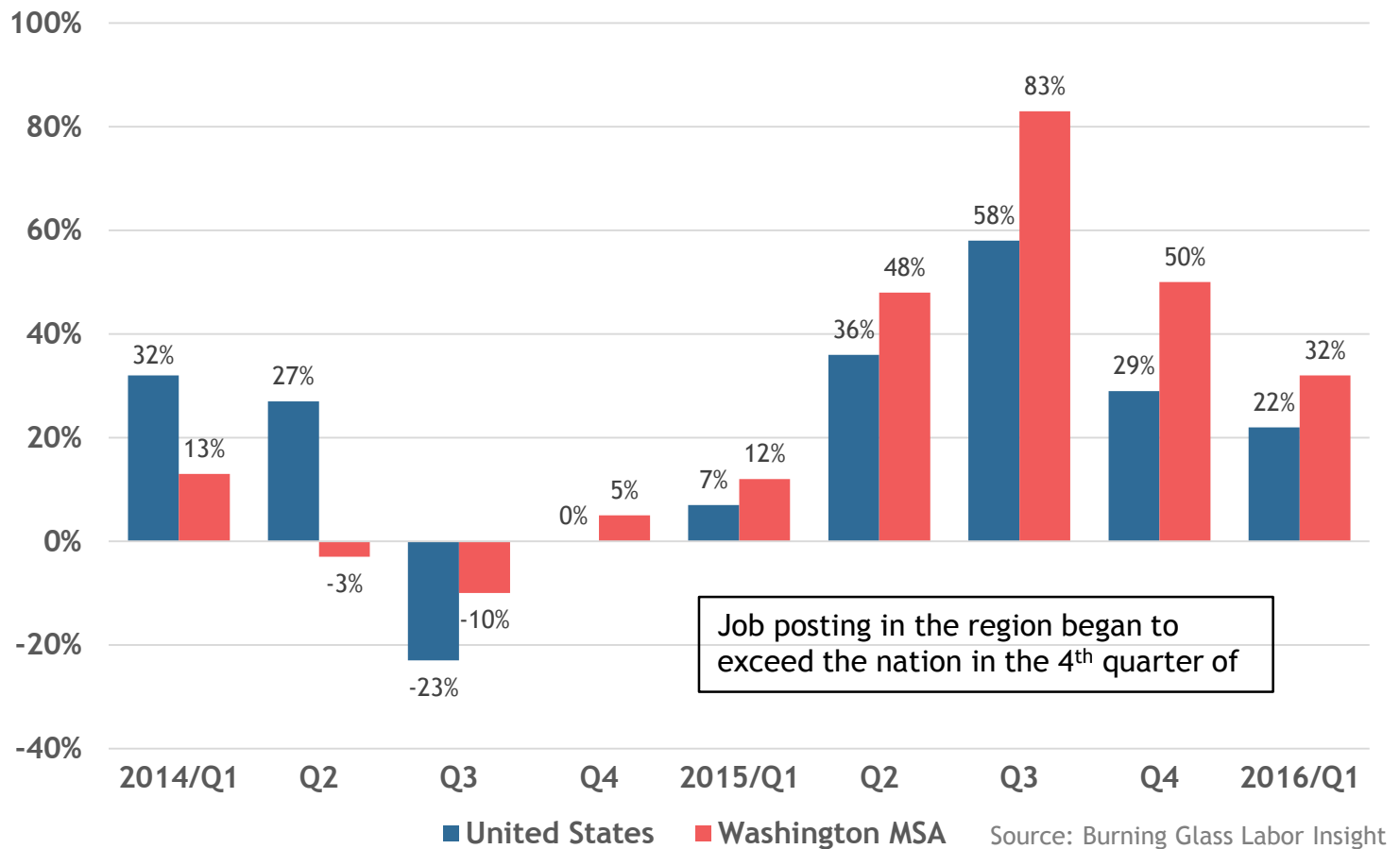
Over-the-Year Job Growth by Quarter 2014-2016



Source: Bureau of Labor Statistics, Current Employment Survey; 2016 Q1 preliminary; March 2016 estimate for Washington projected by MWCOG

Job Postings as a Leading Indicator?

Over-the-Year Growth in Job Postings by Quarter 2014-2016

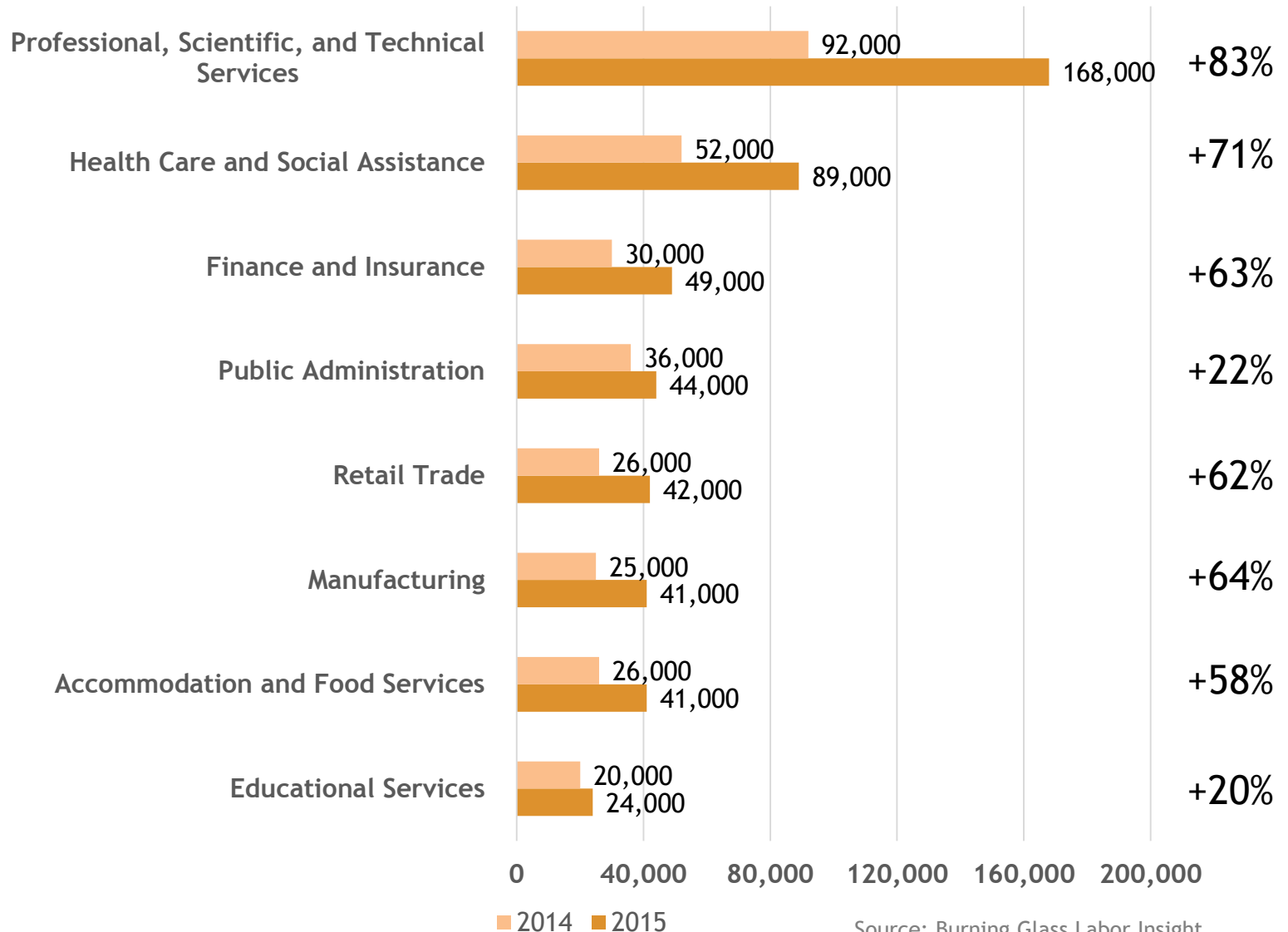


New Tools / Data Sources

- What can job postings tell us about where the region's economy is heading, the occupations in greatest demand and the education and skills needed by workers wanting to fill these jobs ?



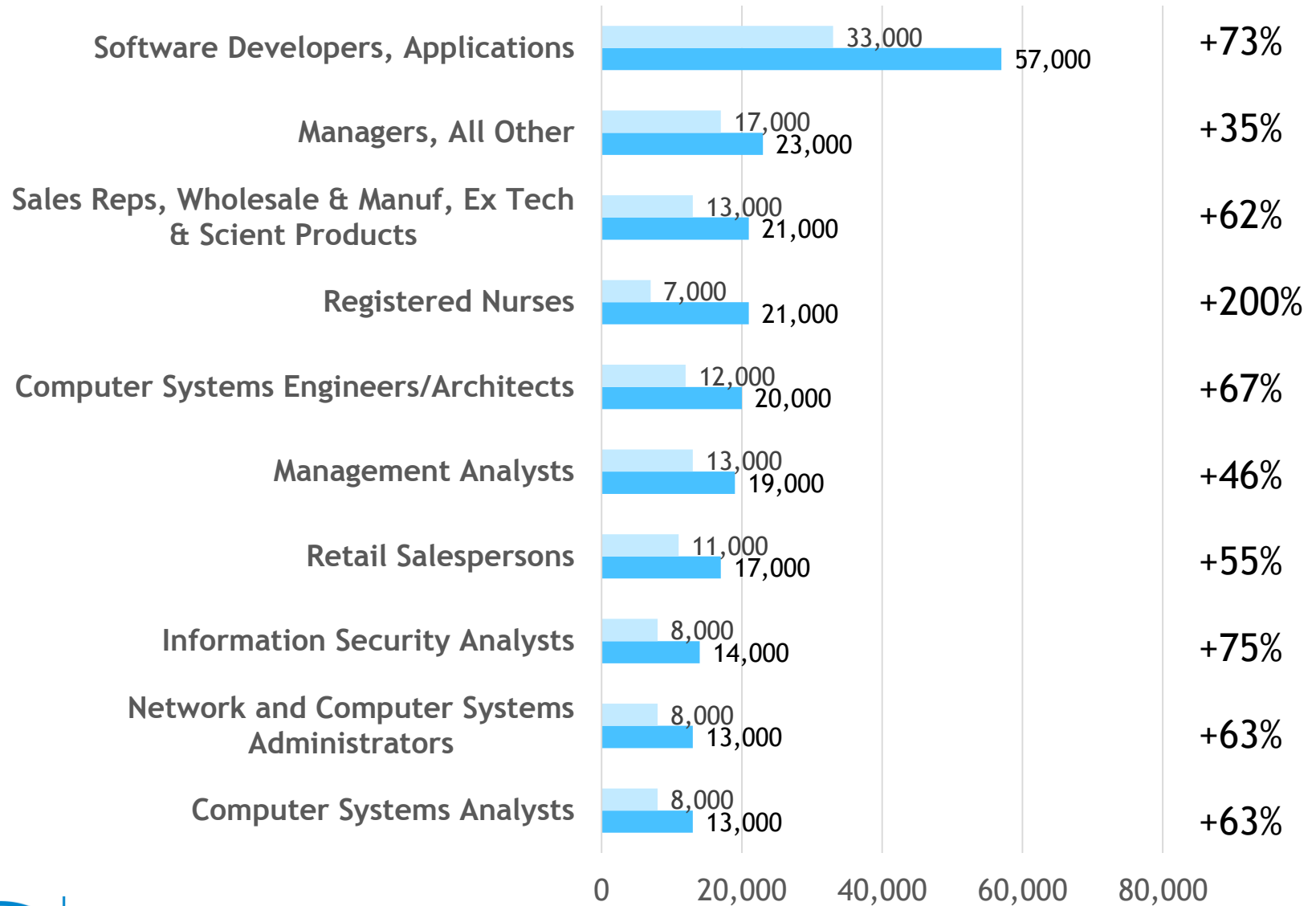
Job Postings by Industry Sector (2014, 2015)



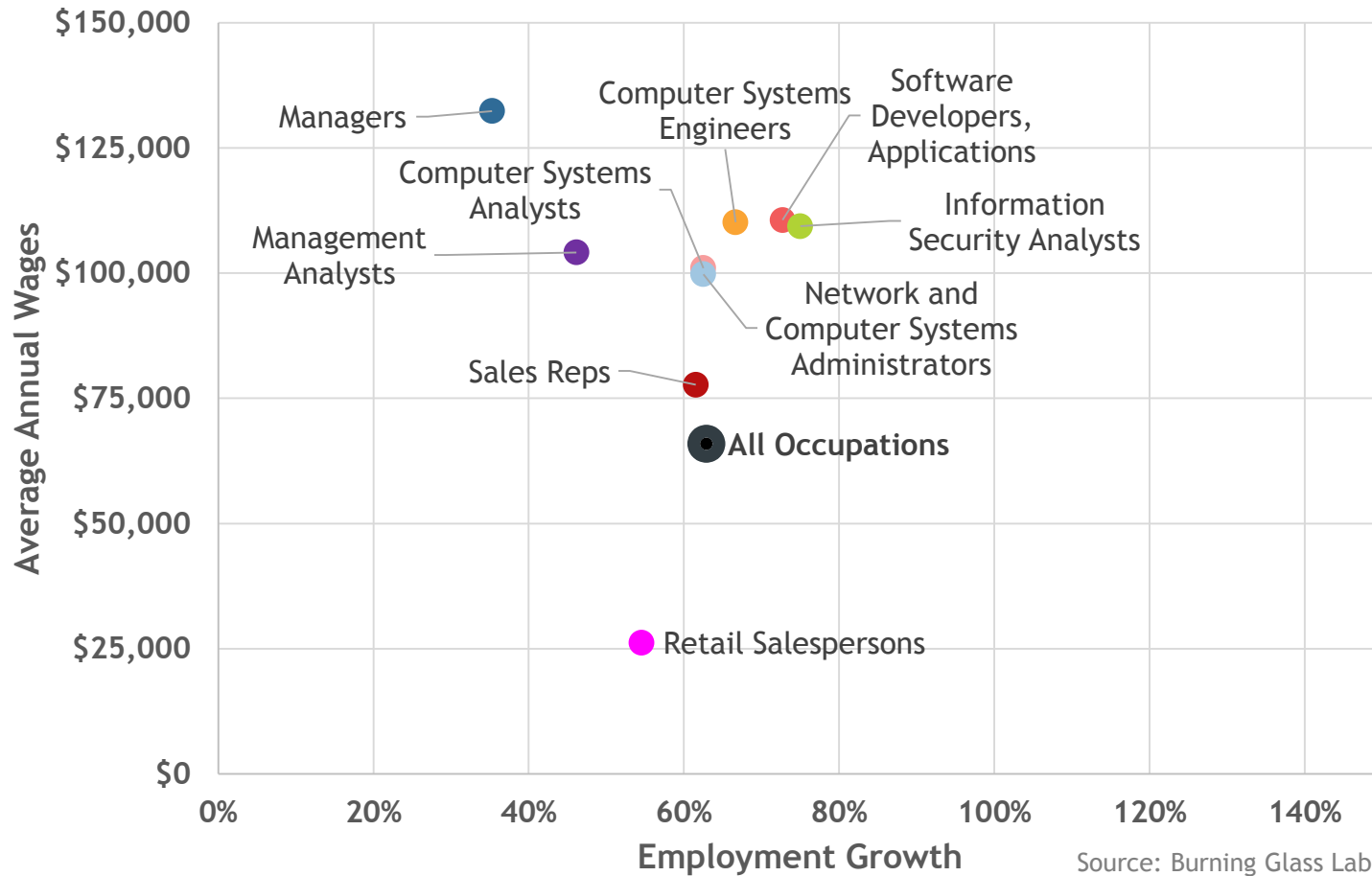
Source: Burning Glass Labor Insight



Top 10 Occupations in Greatest Demand



Job Posting Growth (2014-2015) and Annual Average Wages for Top Ten Occupations in Greatest Demand



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

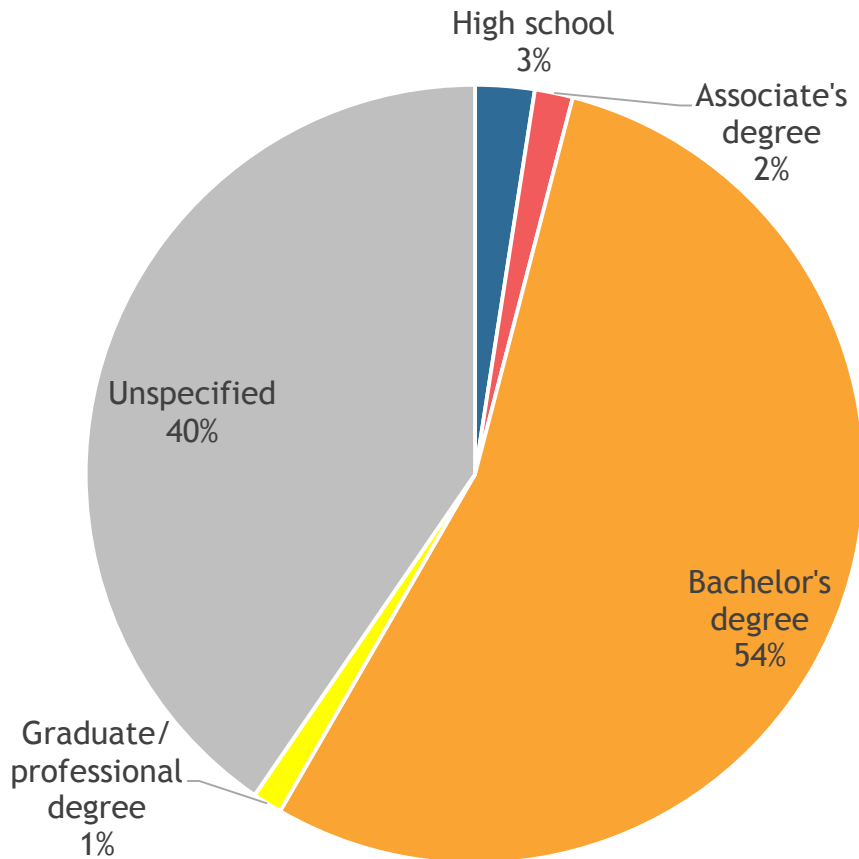
1. Software Developers, Applications,

\$110,600

Skills

1. JAVA
2. Software Devel.
3. SQL
4. Software Eng.
5. JavaScript
6. Oracle
7. XML
8. LINUX
9. Microsoft C#
10. .NET Programming

Education Requirements



Titles

1. Software Development Engineer
2. Java Software Developer
3. .Net Developer
4. Software Developer
5. Applications Developer

Industrie

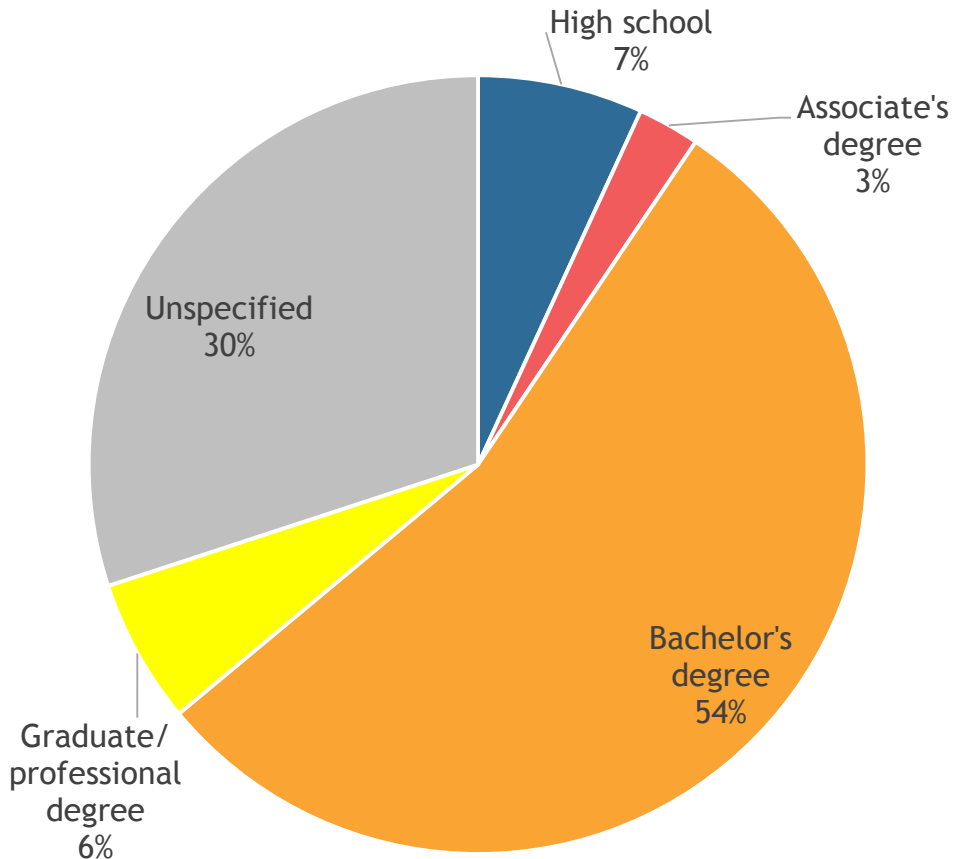
1. Management, Scientific, and Technical Consulting Services
2. Computer Systems Design and Related Services
3. Aerospace Product and Parts Manufacturing

Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics



2. Managers, All Other, \$132,380

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics



Skills

- | | |
|-----------------------|--------------------|
| 1. Project Mgmt | 6. Contract Mgmt |
| 2. Budgeting | 7. Staff Mgmt |
| 3. Scheduling | 8. Building Relat |
| 4. Program Mgmt | 9. Cust Service |
| 5. Supervisory Skills | 10. Business Devel |

Titles

1. Project Manager
2. Program Manager
3. Senior Project Manager
4. Project Coordinator
5. Manager

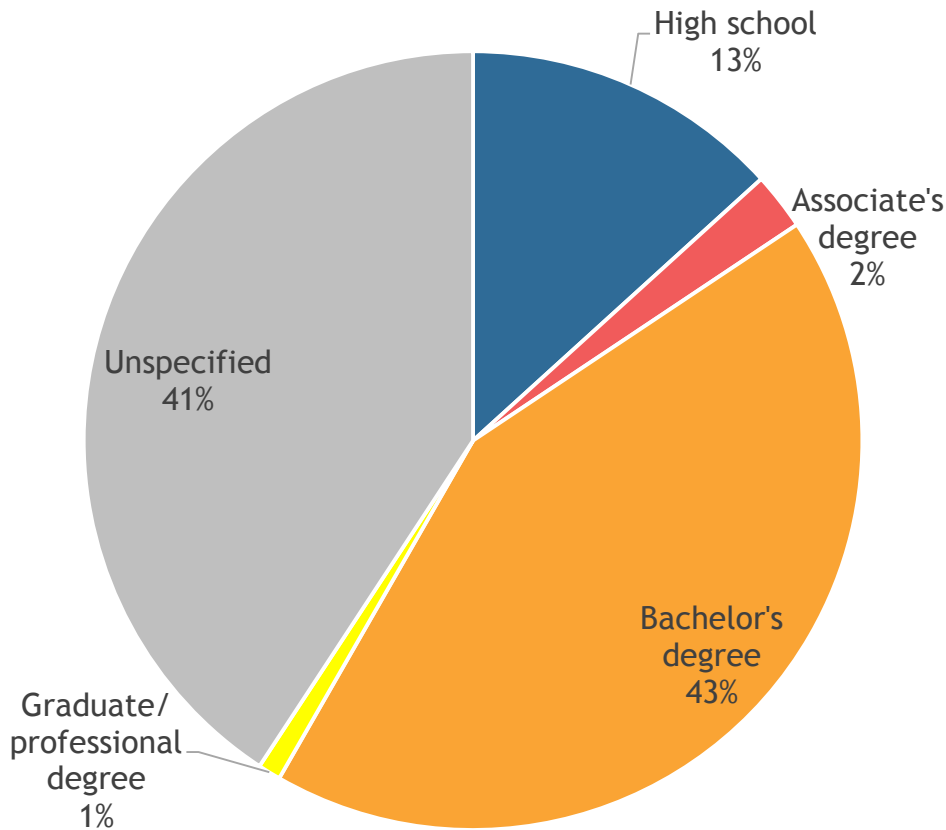
Industrie

1. Management, Scientific, and Technical Consulting Services
2. Computer Systems Design and Related Services
3. Architectural, Engineering, and Related Services

3. Sales Reps, \$77,700

(Wholesale and Manufacturing, Excluding Technical and Scientific Products)

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

Skills

- | | |
|---------------------|-------------------|
| 1. Sales | 6. Sales Mgmt |
| 2. Building Relat. | 7. Sales Goals |
| 3. Business Devel. | 8. Prosp. Clients |
| 4. Customer Service | 9. Cust. Contact |
| 5. Outside Sales | 10. Product Sales |

Titles

1. Sales Representative
2. Account Manager
3. Sales Consultant
4. Sales Specialist
5. Outside Sales Representative

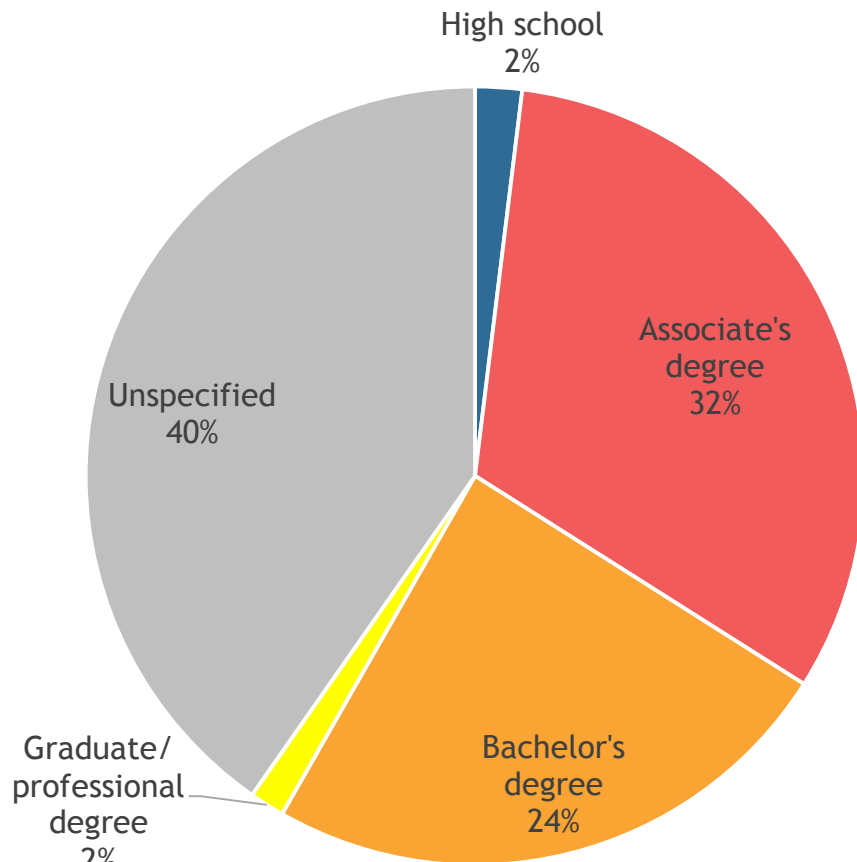
Industry

1. Business Support Services
2. Software Publishers
3. Management, Scientific, and Technical Consulting Services



4. Registered Nurses, \$77,490

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

Skills

1. Patient Care
2. CPR
3. Supervisory Skills
4. Advanced Cardiac Life Support (ACLS)
5. Case Management
6. Treatment Plng
7. Teaching
8. Patient Direction
9. Patient/Family Educ & Instruct
10. Acute Care

Titles

1. Registered Nurse
2. Travel Registered Nurse
3. Emergency Room Registered Nurse
4. Operating Room Registered Nurse
5. Clinical Nurse

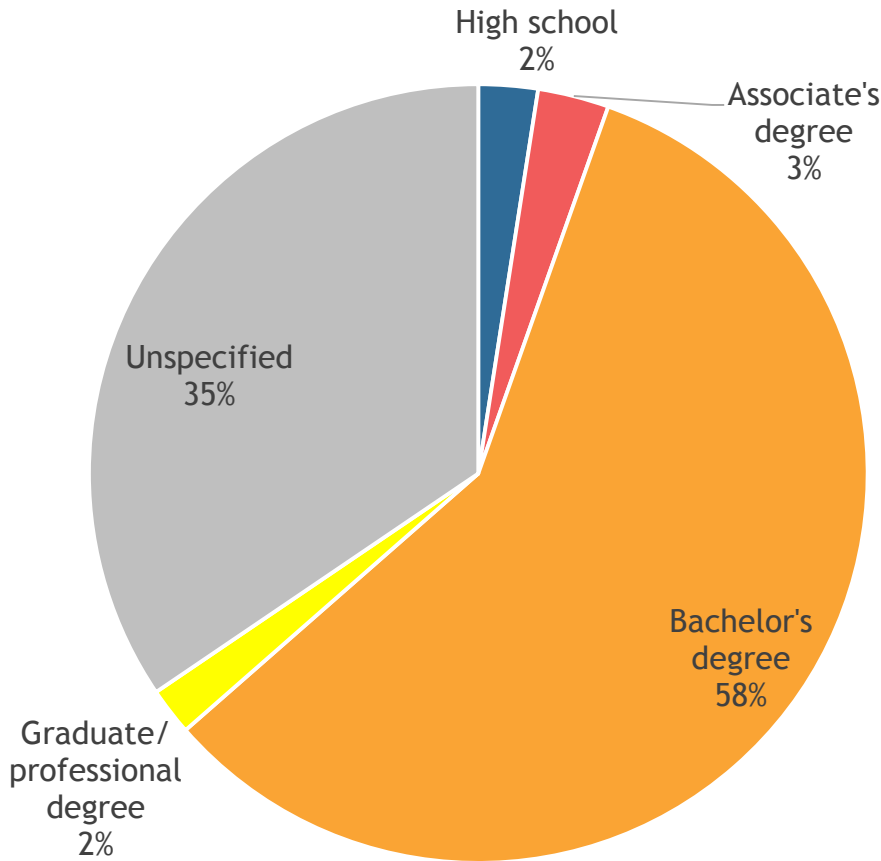
Industrie

1. General Medical and Surgical Hospitals
2. Insurance Carriers
3. Nursing Care Facilities (Skilled Nursing Facilities)



5. Computer Systems Engineers/Architects, \$110,180

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics



Metropolitan Washington
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Skills

1. Systems Engineer
2. LINUX
3. VMware
4. Software Devel.
5. SQL
6. Project Mgmt
7. System Architect
8. Oracle
9. UNIX
10. JAVA

Titles

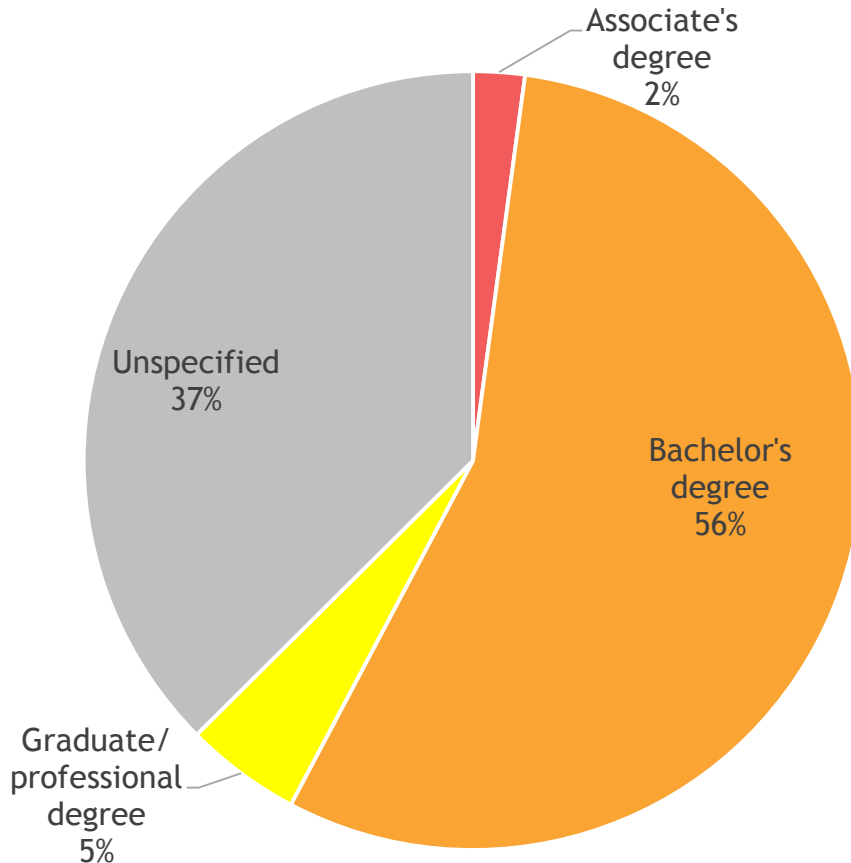
1. Systems Engineer
2. Solutions Architect
3. Senior Systems Engineer
4. Systems Architect
5. Enterprise Architect

Industrie

1. Computer Systems Design and Related Services
2. Management, Scientific, and Technical Consulting Services
3. Aerospace Product and Parts Manufacturing

6. Management Analysts, \$104,140

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

Skills

1. Business Analysis
2. Project Mgmt
3. Business Process
4. Budgeting
5. Scheduling
6. Cust Service
7. Building Relat
8. Business Devel
9. SQL
10. Inform Systems

Titles

1. Business Analyst
2. Program Analyst
3. Management Analyst
4. Management and Program Analyst
5. Business Process Analyst

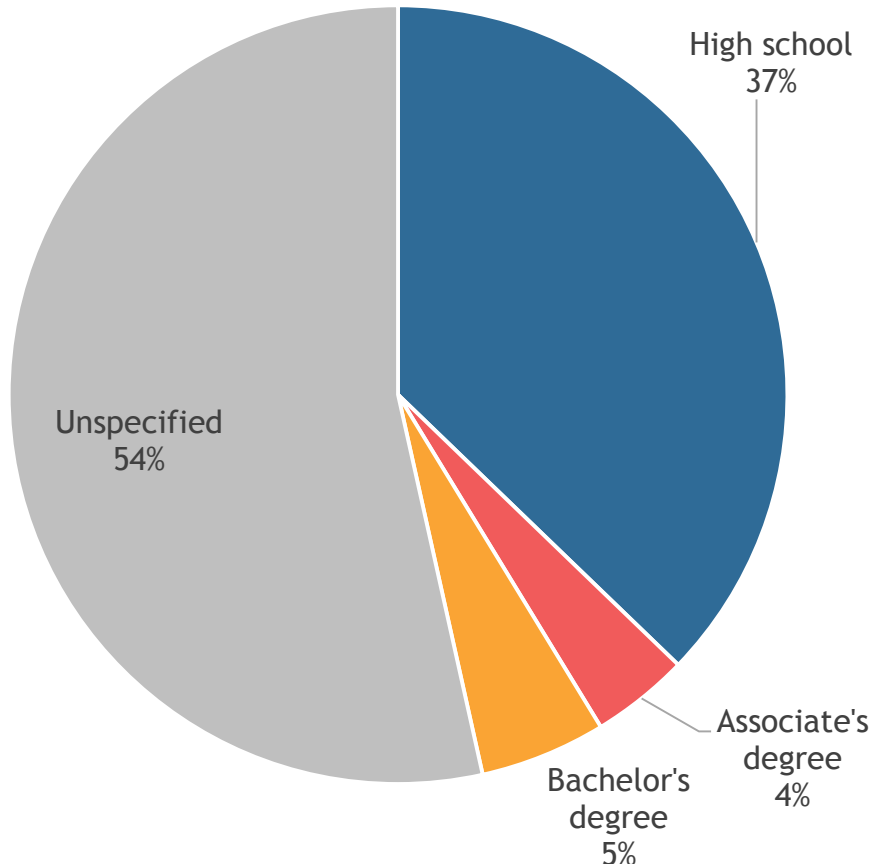
Industrie

1. Management, Scientific, and Technical Consulting Services
2. Computer Systems Design and Related Services
3. National Security and International Affairs



7. Retail Salespersons, \$26,200

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

Skills

- | | |
|-----------------------|--------------------|
| 1. Sales | 6. Prod. Knowledge |
| 2. Customer Service | 7. Merchandising |
| 3. Retail Setting | 8. Cust. Contact |
| 4. Retail Sales | 9. Mathematics |
| 5. Building Relations | 10. Sales Goals |

Titles

1. Sales Associate
2. Sales Consultant
3. Retail Sales Associate
4. Beauty Advisor
5. Store Associate

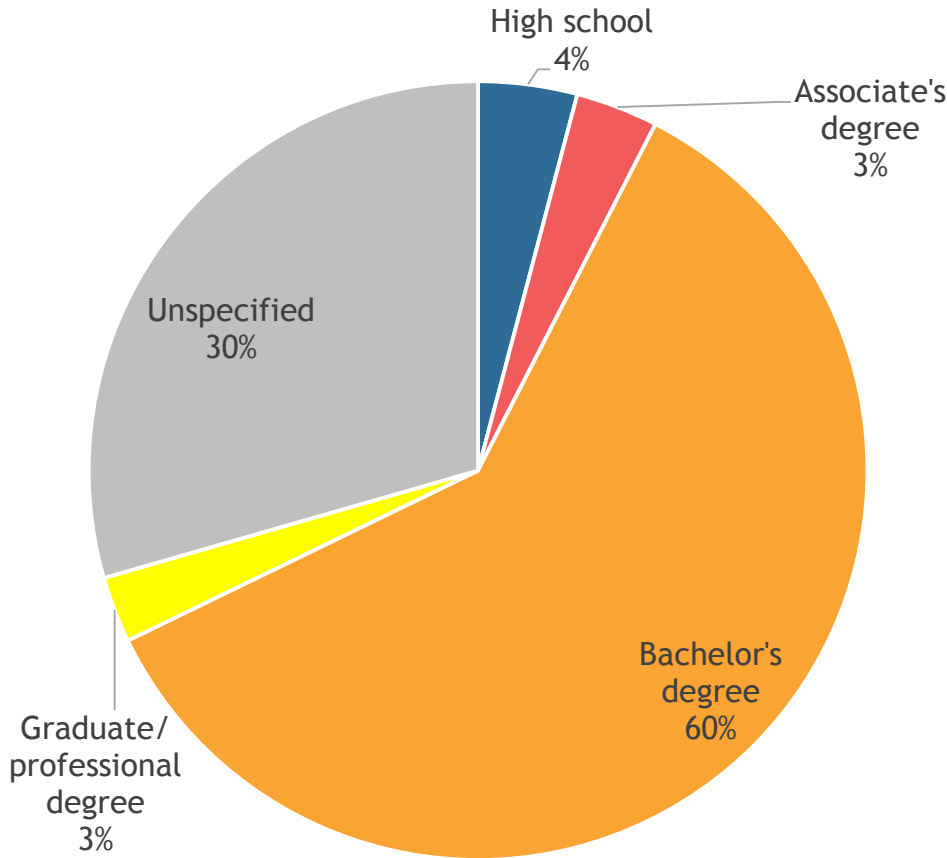
Industries

1. Department Stores
2. Wireless Telecommunications Carriers (except Satellite)
3. Building Material and Supplies Dealers



8. Information Security Analysts, \$109,390

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics



Skills

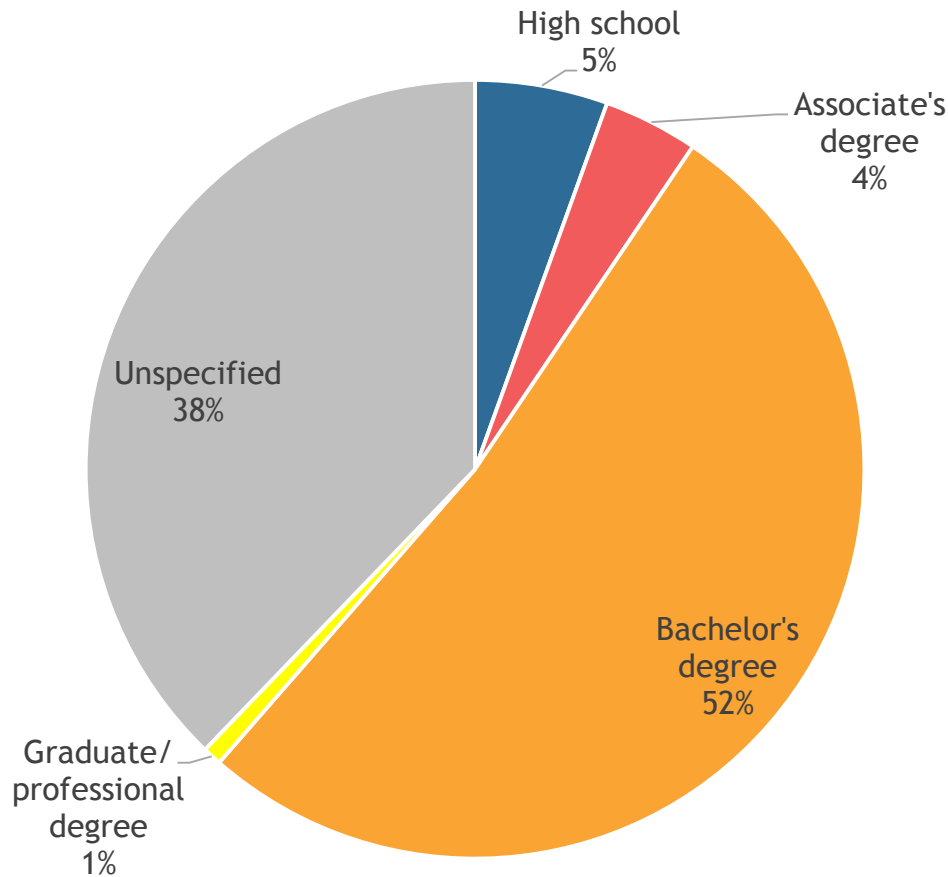
- | | |
|----------------------------------|---------------------|
| 1. Information Security | 6. Scanners |
| 2. Information Systems | 7. Customer Service |
| 3. Information Assur. | 8. UNIX |
| 4. Network Security | 9. Fed. Information |
| 5. LINUX | 10. Project Mgmt |
| 1. Security Engineer | |
| 2. Security Analyst | |
| 3. Security Specialist | |
| 4. Information Security Engineer | |
| 5. Information Security Analyst | |

Titles

1. Computer Systems Design and Related Services
2. Management, Scientific, and Technical Consulting Services
3. Architectural, Engineering, and Related Services

9. Network and Computer Systems Admin., \$99,790

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

Skills

1. System Admin
2. Linux
3. VMware
4. UNIX
5. Hardware and Software Installation
6. Windows Server
7. SQL
8. Technical Support
9. Domain Name System (DNS)
10. Red Hat Linux

Titles

1. Systems Administrator
2. Senior Systems Administrator
3. Network Administrator
4. Linux Systems Administrator
5. SharePoint Administrator

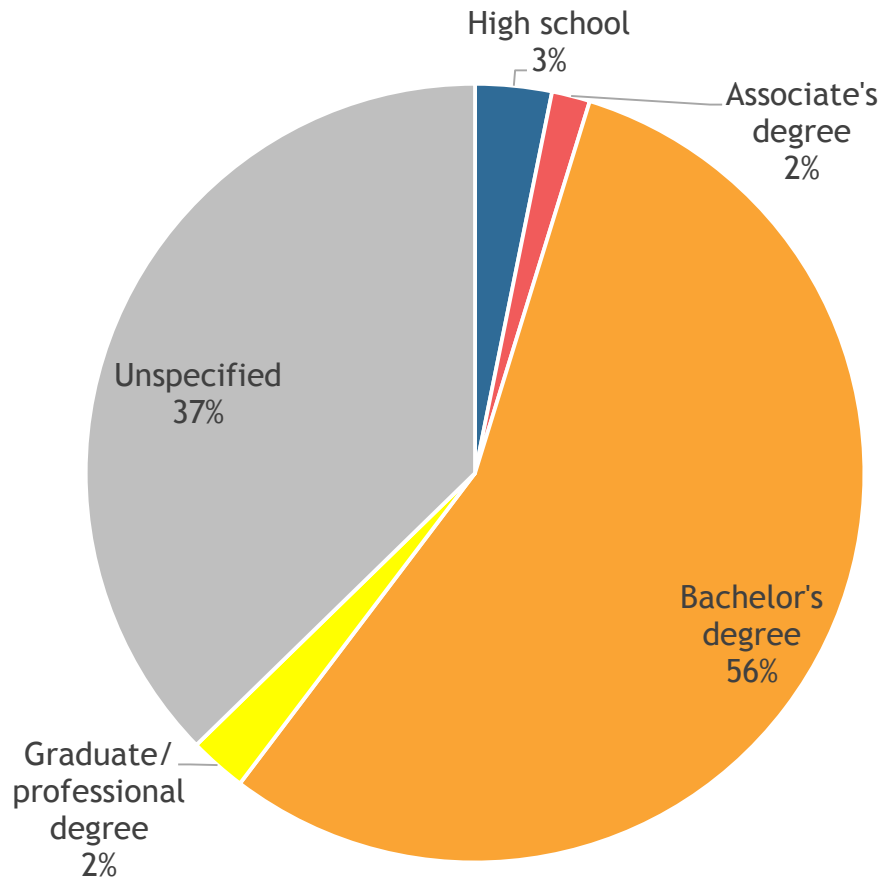
Industrie

1. Computer Systems Design and Related Services
2. Management, Scientific, and Technical Consulting Services
3. Architectural, Engineering, and Related Services



10. Computer Systems Analysts, \$101,010

Education Requirements



Source: Burning Glass Labor Insight and Bureau of Labor Statistics 2015 Occupational Employment Statistics

Skills

1. Systems Analysis
2. Project Mgmt
3. SQL
4. Business Process
5. Oracle
6. Software Devel.
7. Inform. Systems
8. JAVA
9. Customer Service
10. Budgeting

Titles

1. Systems Analyst
2. Business Systems Analyst
3. Systems Integrator
4. Technical Analyst
5. Technical Consultant

Industrie

1. Management, Scientific, and Technical Consulting Services
2. Computer Systems Design and Related Services
3. Software Publishers



Employers with Greatest Number of Job Postings

| Employer | Industry Group | 2014 | 2015 | Largest Employers ¹ |
|---------------------|--|------|------|--------------------------------|
| General Dynamics | 3369 - Other Transportation Equipment Manufacturing | 1 | 1 | * |
| Accenture | 5416 - Management, Scientific, and Technical Consulting Services | 6 | 2 | |
| Leidos | 5415 - Computer Systems Design and Related Services; 5417 - Scientific Research and Development Services | 2 | 3 | * |
| Booz Allen Hamilton | 5416 - Management, Scientific, and Technical Consulting Services | 3 | 4 | * |
| Capital One | 5222 - Nondepository Credit Intermediation | 4 | 5 | * |
| Deloitte | 5416 - Management, Scientific, and Technical Consulting Services | 12 | 6 | * |
| Oracle | 5112 - Software Publishers | 36 | 7 | |
| Mantech Intl Corp | 5415 - Computer Systems Design and Related Services | 14 | 8 | |
| Northrop Grumman | 3364 - Aerospace Product and Parts Manufacturing | 8 | 9 | * |
| Harris Teeter | 4451 - Grocery Stores | 11 | 10 | |

¹ Included in the Washington Business Journal's Book of List Largest Employers

Summary of Initial Findings

- The latest employment data indicates that metropolitan Washington's economy is beginning to expand at a greater rate than the rest of the nation.
- Job postings growth began to outpace the nation in late 2014 and job growth began to outpace the nation in late 2015. Job postings may be a leading indicator
- For the 10 occupations in greatest demand:
 - ½ are computer occupations
 - Except for Retail Salespersons, the annual average pay was higher than the metropolitan Washington's average
 - 50% or more of the job postings for each occupation required a Bachelors Degree or more, except for: Sales Reps, Nurses, and Retail
 - Skills varied from strong interpersonal to highly technical



Forthcoming Research

- **Demand Overview** - High level analysis of demand
- **Advanced Industry Clusters** - Utilize job postings data to identify the occupations, skills, certifications, and general education requirements included in job postings from the 7 industry clusters identified and highlighted by *The Roadmap for Washington Region's Future Economy*

Question For Region Forward Coalition

- How well is our region positioned to provide the workers most needed by the region's employers?

Thank you!



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Metropolitan Washington
Council of Governments

Methods and Limitations

- Job posting data for the Demand Overview section was extracted from Burning Glass' Labor Insight database between the following dates February 25 and March 8 and April 12-13, 2016.
- To produce the Labor Insight database, Burning Glass gathers millions of job openings daily from more than 40,000 websites, and mines the text. While real-time data are relevant and help provide up-to-date job information, there are intrinsic limitations to the data:
 - A job posting expresses an interest in applicants for a specific position but is not equal to a job opening. Job postings serve varied purposes beyond filling a new positions or replacing a departing worker in an existing position. Job postings are not a direct measure of labor demand as much as they are a search for talent, or a measure of interest in applicants for specific occupations and job skills.
 - Job postings are not standardized. Employers typically include job-specific details in job postings according to their needs and purpose. Information varies and may include: job title, location, employer, industry, level of education, certifications, skills, experience, compensation, and specific pre-hire conditions, such as background check.
 - Recruiters frequently place job postings on multiple websites to reach as many candidates as possible. As a result, when job postings are initially extracted from the internet, there are typically multiple iterations of any posting. Burning Glass has developed data deduplication practices to remove duplicate or redundant information. Due to the variety and volume of data produced on a daily basis, it is not possible to completely eliminate duplication.
 - Not all industries are equally represented in online postings. Businesses needing workers with specific skills, such as computer and information technology skills, are strongly represented among online job postings. Construction and retail jobs are not as well represented in online job postings.

