

# TRENDS IN WORKFORCE DEMAND IN THE NATIONAL CAPITAL REGION

---

## ANALYSIS OF SEVEN KEY ECONOMIC CLUSTERS

Nicole McCall  
Transportation Planner

Region Forward Coalition  
October 28, 2016

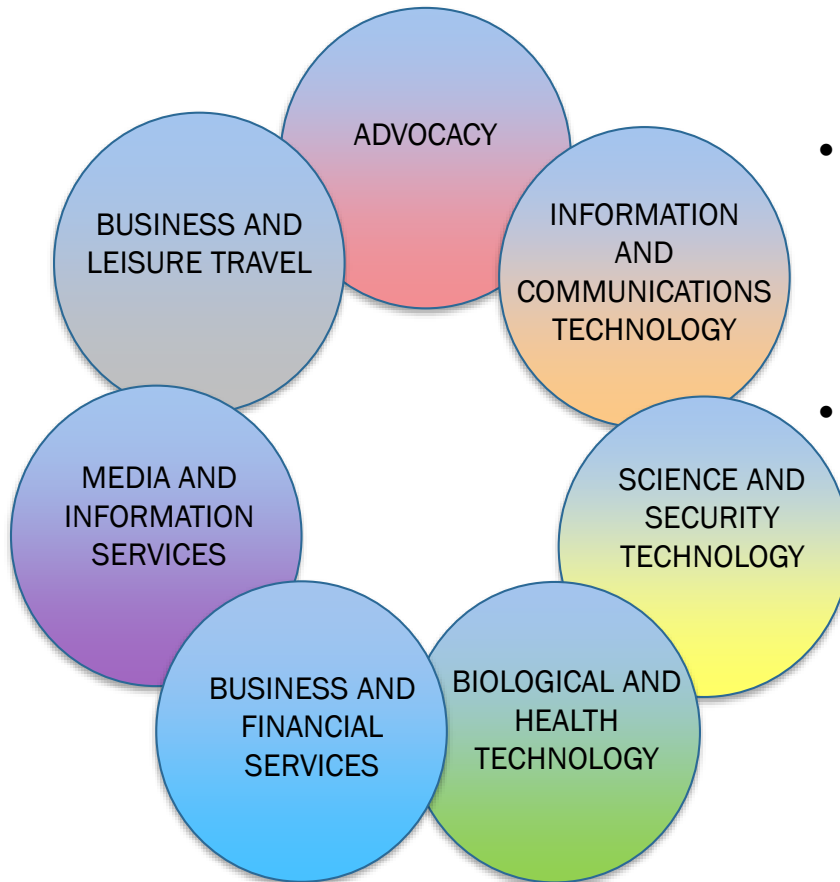


# Presentation Overview

---

- Importance of talent in fueling our region's economy
- Our Region's Jobs, A Mixed Story
- Identify occupations that can drive economic and wage growth

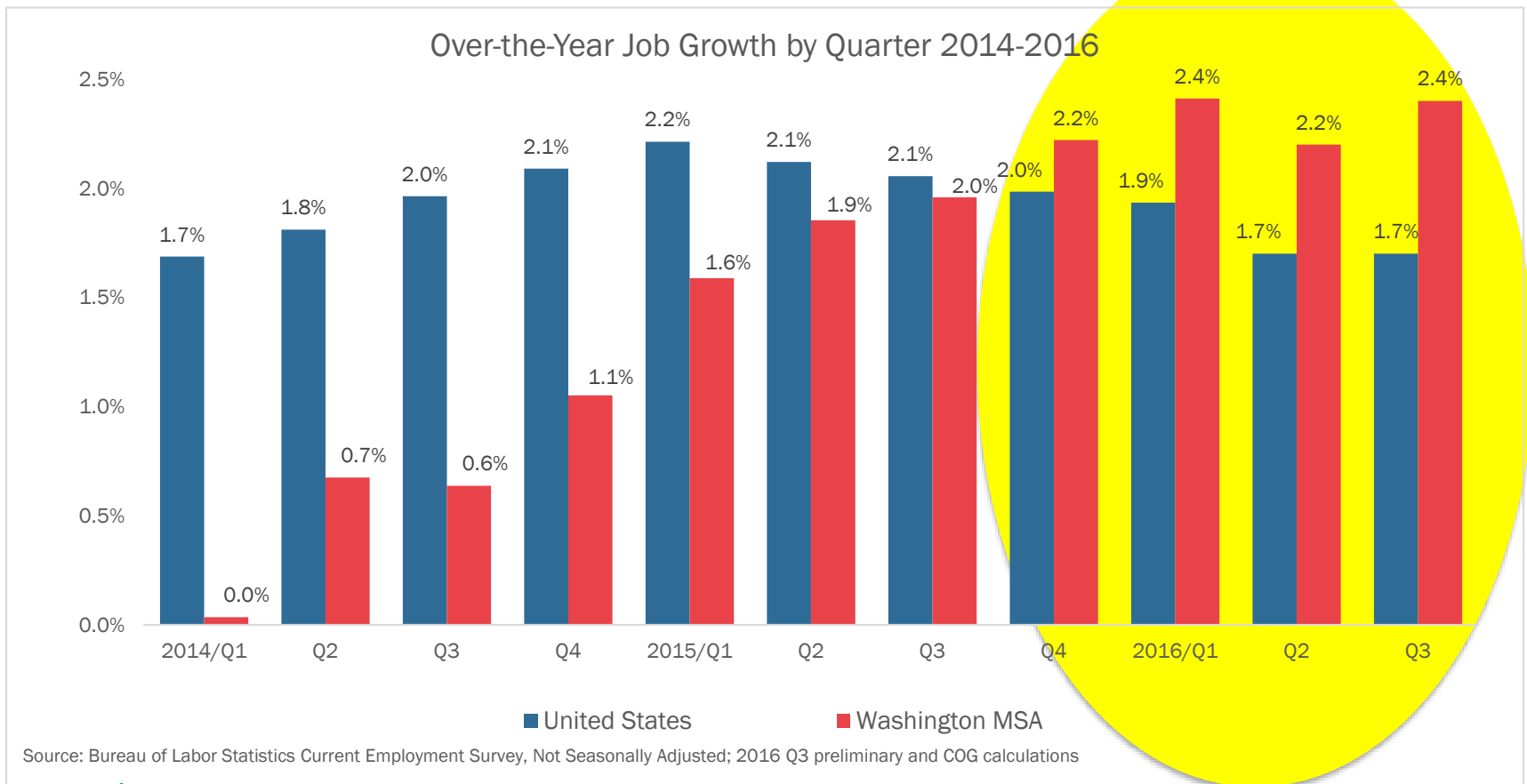
# Talent and Economic Competitiveness



- Interindustry Forecasting Project at the University of Maryland identified seven key economic clusters with the potential to drive economic growth
  - The Global Cities Initiative is using these to grow the region's export economy.
- Attracting and training a talented workforce is key to supporting businesses in these clusters

# Our Region's Jobs, A Mixed Story

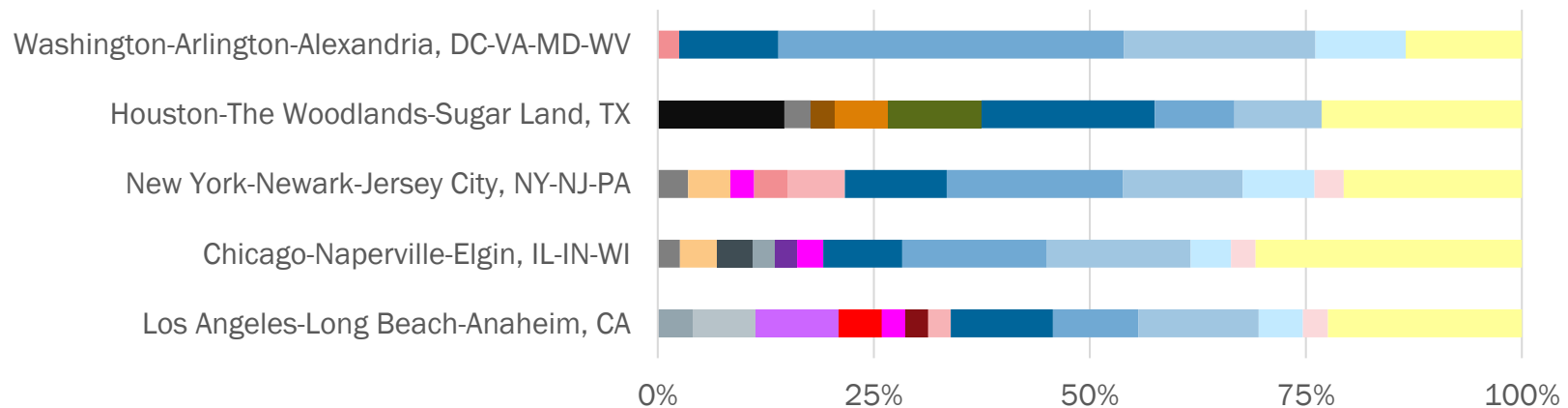
- Employment in metropolitan Washington grew faster than the nation's during the last four quarters, but...



# Our Advanced Industries, A Mixed Story

- Our MSA ranked third in advanced industries jobs, but:
  - 75% of those jobs are in three industries – Computer System Design, Management Consulting, and Engineering; we are specialized but vulnerable

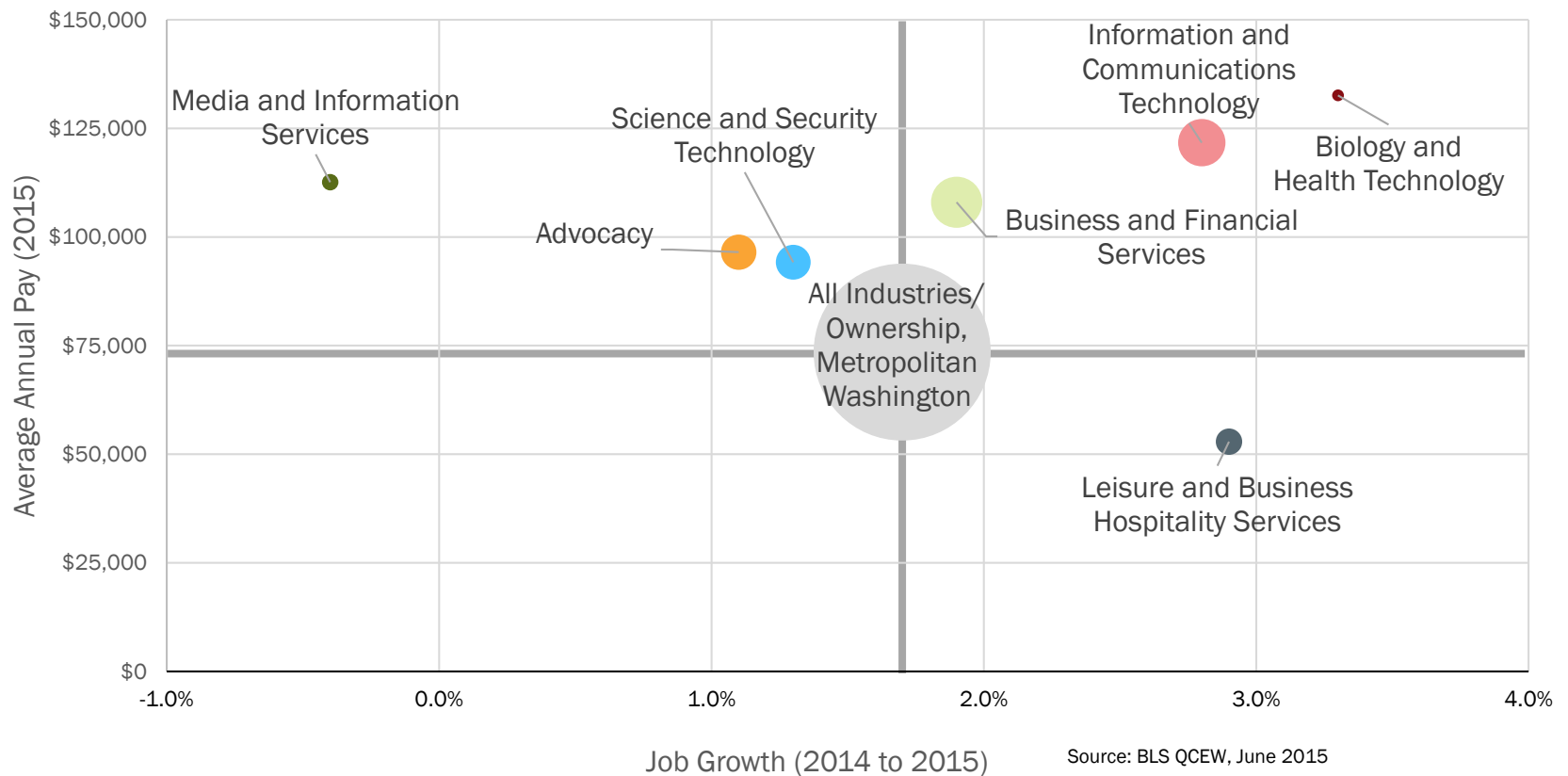
Diversity of advanced industries in the five metro areas with the greatest advanced industries employment, 2015



Note: Industries with 2.5% or more of metro area's advanced industries employment

# Performance of the Key Economic Clusters, 2014-2015

Job Growth and Average Annual Pay, Seven Key Economic Clusters (Private Sector), Metropolitan Washington



Source: BLS QCEW, June 2015

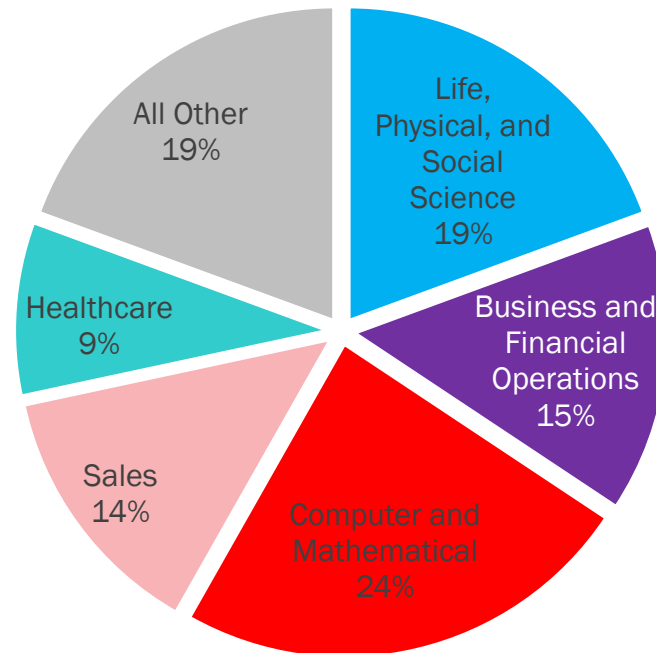
# Example, Biology and Health Technology

Job postings from January – June 2016

## Firms: Top Job Postings

- a) AstraZeneca/MedImmune
- b) Jackson Foundation for the Advancement of Military Medicine
- c) Advisory Board
- d) GlaxoSmithKline
- e) Novavax
- f) Covance

Occupational Structure by Job Postings,  
Metropolitan Washington



Note: Major occupational groups with 5% or more of the cluster's total job postings in metropolitan Washington between January 1 and June 30, 2016.

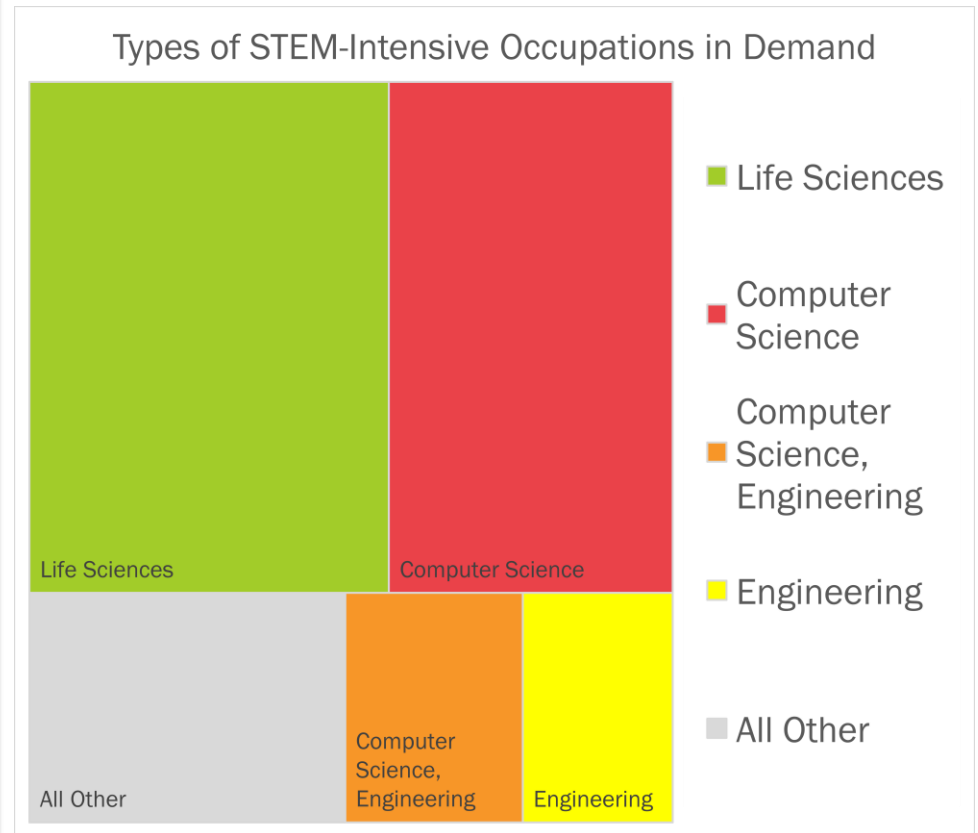


# Example, Biology and Health Technology

January – June 2016

## Occupations Most In-Demand

- 1) Sales Reps, \$66,900
- 2) Managers, \$128,800
- 3) **Medical Scientists, \$106,000**
- 4) **Medical Managers, \$108,000**
- 5) Sales Managers, \$144,400
- 6) Administrative Managers, \$99,000
- 7) Marketing Managers, \$148,300
- 8) **Software Developers, \$110,100**
- 9) HR Specialists, \$80,300
- 10) **Quality Control Analysts, \$55,700**





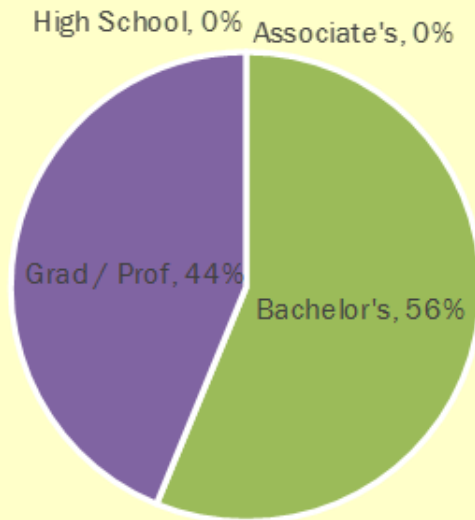
# Example, Biology and Health Technology

January – June 2016

## 3. Medical Scientists, Except Epidemiologists, \$106,000

Biology and Health Technology Cluster: Wage Premium: +22%; Job Postings= 200

### Education Requirements



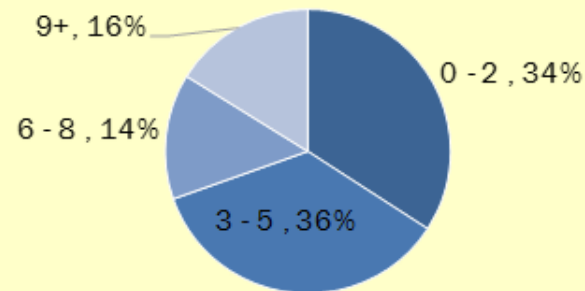
### Titles

1. Clinical Research Associate

### Skills

1. Clinical Research
2. Clinical Trials
3. Good Clinical Practices (GCP)
4. Drug Development
5. Immunology
6. Project Management
7. Data Management
8. Oncology
9. Clinical Development
10. Biotechnology

### Years of Experience



Notes: 1) Education Requirements not specified in 6% of job postings; 2) Years of experience not specified in 24% of job postings; 3) Only those skills and titles which were included in at least 5% of job postings are reported above.



# STEM-Intensive Talent Needs

January to June 2016

10 Occupations	Seven Key Economic Clusters							Total Job Postings, Key Economic Clusters	Total Job Postings and Rank, All Industries
	Advocacy	Information & Comm. Technology	Science and Security Technology	Biology & Health Technology	Business & Financial Services	Media & Information Services	Leisure & Business Hospitality Services		
Software Developers, Applications	X	X	X	X	X	X	X	5,400	24,000 Rank = 1
Information Security Analysts	X	X	X		X	X	X	2,200	7,400 Rank = 2
Computer Systems Analysts	X	X	X	X	X	X	X	1,600	5,300 Rank = 3
Database Administrators	X	X	X		X	X		900	3,900 Rank = 6
Computer Network Architects	X	X	X		X	X		800	3,300 Rank=7
Business Intelligence Analysts	X	X	X	X	X	X	X	700	2,400 Rank = 9
Computer User Support Specialists	X	X		X	X	X		700	4,200 Rank = 4
Accountants	X				X	X	X	600	4,000 Rank = 5
Auditors					X			500	1,500 Rank = 10
Architectural and Engineering Managers						X	X	400	1,000 Rank = 12

Note: Only those occupations included on O\*NET's list of STEM occupations are included; additional occupations may require STEM training

# Occupations that can Drive Economic Growth

## Stem-Intensive Occupations

1. Software Developers, Applications
2. Information Security Analysts
3. Computer Systems Analysts
4. Database Administrators
5. Computer Network Architects

## All Other Occupations

1. Sales Representatives
2. Managers, All Other
3. Management Analysts
4. Sales Managers
5. Marketing Managers



# Report Findings

---

- Our economy is growing but we need to focus on workforce development while diversifying away from the federal government
- Overall, the key economic clusters performed well between 2014 and 2015
- The key economic clusters are recruiting the same kind of talent, for stem-intensive and all other occupations
- There is an opportunity to support the key economic clusters with targeted workforce development

## Nicole McCall

Transportation Planner

(202) 962-3341

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

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

---

777 North Capitol Street NE, Suite 300  
Washington, DC 20002

Thank you!



**INVESTING** *for* **Good**<sup>SM</sup>



Metropolitan Washington  
**Council of Governments**

# Extra Slides

---



# Top Ten Occupations Most in Demand

(National Capital Region)

---

1. Software Developers, Applications
2. Sales Representatives
3. Computer Systems Engineers/Architects
4. Managers, All Other
5. Management Analysts
6. Information Security Analysts
7. Computer Systems Analysts
8. Sales Managers
9. Information Technology Project Managers
10. Security Guards

# Top STEM-Intensive Occupations Across All Seven Economic Clusters

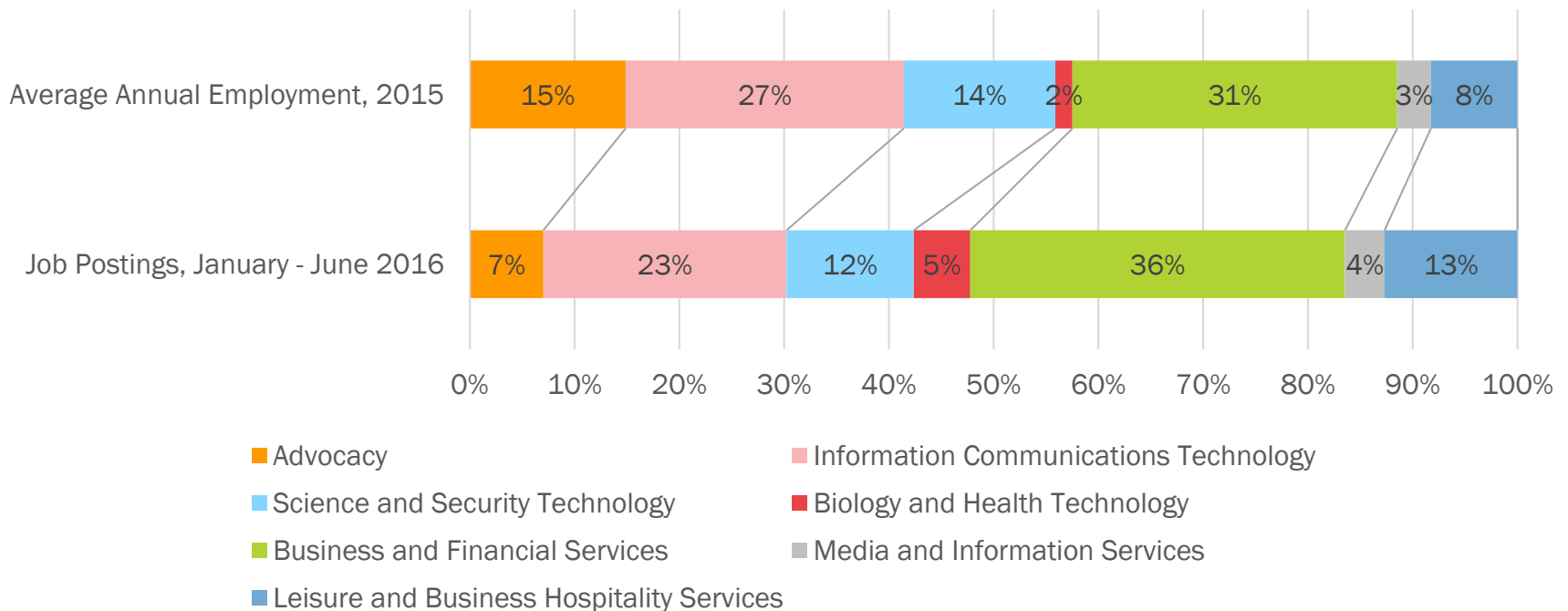
---

1. Software Developers, Applications
2. Information Security Analysts
3. Computer Systems Analysts
4. Database Administrators
5. Computer Network Architects

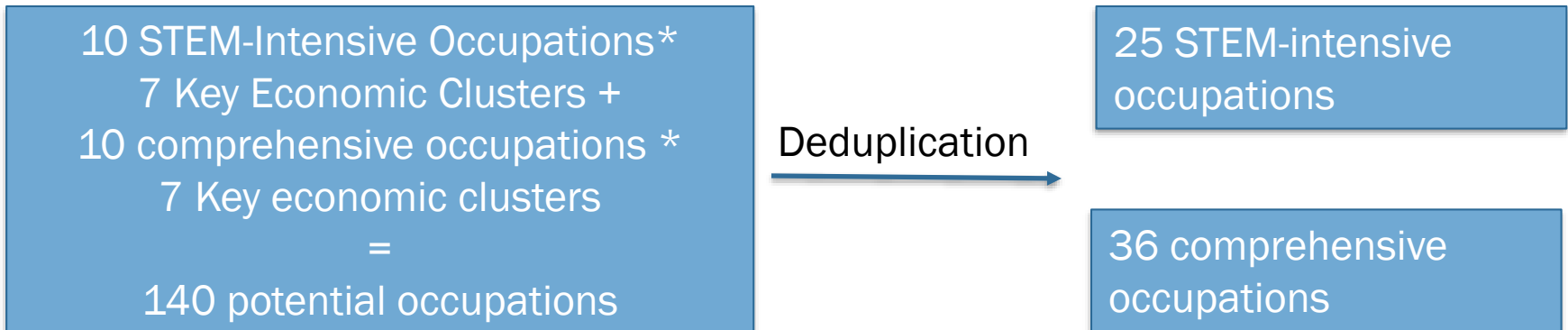


# What Can Job Postings Data tell us?

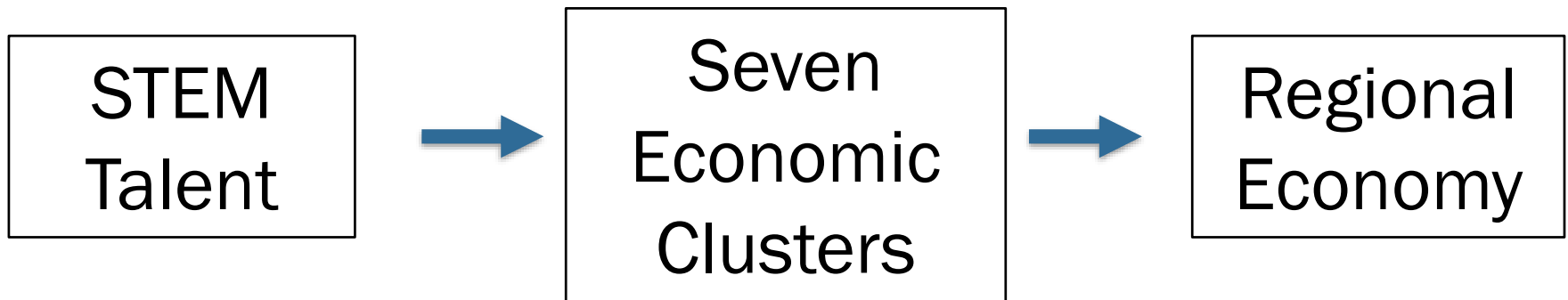
Distribution of Private Employment Versus Job Postings, Key Economic Clusters, metropolitan Washington



# More about Occupations in High Demand



- Computer occupations are in high demand by the key economic clusters:
  - 7 of the top 10 STEM-intensive occupations
  - Comprehensively, 5 of the top 10 occupations
- For the comprehensive occupations
  - 60 of the 70 occupations are paid wage rates above the region's average
  - 73 percent or more of the job postings for 60 of the 70 occupations requested a Bachelor's degree or higher
  - Most occupations with lower educational barriers were within the Leisure and Business Hospitality Services cluster.



# New Tool / Data Source

---

- Burning Glass' Labor Insight searches millions of job postings from over 40 thousand websites on a daily basis
- Using a 60-day time frame, 80% of the postings are flagged as duplicates and removed
- Clients include state governments, higher education, and the private sector

