NCI Supervisory and Leadership Development Programs:
A Workforce Analytics Evaluation
Final Report: 14-5715 NCI

HUMAN CAPITAL
MANAGEMENT INSTITUTE

NCI Supervisory and Leadership Development Programs:
A Workforce Analytics Evaluation

Prepared for:

Office of Workforce Planning and Development
National Cancer Institute

About Human Capital Management Institute

- **HCMI Background:**
  - Specialized in HR analysis and measurement
  - Deep expertise in Workforce Analytics and Planning
  - Board made up of CFOs and HR heads

- **What We Do:**
  - Measure the immeasurable in human capital
  - Transform workforce data into business intelligence
  - Provide support, tools and training so HR can partner with Finance

- The **Human Capital Management Institute** (HCMI) was founded on the belief that organizations can and must, find better ways of measuring their investments in human capital. Our vision of the future is one in which human capital measurement and data is as integral to business decision making as financial information is today.

Presentation Summary

1. Executive Summary

2. NCI Data Model

3. OWPD Training Academy Overview

   • Executive Coaching (Coaching)
   • Senior Executive Enrichment and Development (SEED)
   • Leadership Education and Action Program (LEAP)
   • The Empowered Supervisor (TES)
   • Knowledge Management (KM) Mentoring Program

4. Key Findings

   a) Turnover and Retention
   b) Performance Ratings
   c) Awards
   d) Promotions
   e) Training Participation
   f) Retirement Projections
   g) Financial Impact and ROI

5. Recommendations and Next Steps

Executive Summary

Executive Summary

- **Project Background:**
  - HCMI was engaged by NCI to complete a detailed training analysis on employee outcomes, and answer the questions: Does training matter, if so how much, and what is the impact or ROI of training?
    - This project primarily focused on evaluating the impact of longer-term OWPD training programs including: TES, KM, Coaching, LEAP, and SEED and will be referred to in this report as "Academy Training."

- Workforce Analytics Methodology:
  - HCMI integrated Academy training data with overall NCI workforce data from 2009 through 2014 to build a comprehensive data model for analysis. Comparing Academy Alumni to Non-Alumni, as well as the overall NCI population, *post-training impact* was evaluated primarily on the following workforce measures:
  - Turnover and Retention, Promotions, Performance Ratings, Awards

- Project Deliverables:
  - Key project deliverables include a comprehensive data model and documentation, financial linkage and ROI modeling, final onsite presentation to NCI stakeholders, HCMI recommendations and project opportunities and an onsite workforce analytics training for NCI staff.

Executive Summary

Key Findings:

- OWPD Academy training has a significant positive impact across all workforce measures evaluated.

- Academy Alumni have lower turnover, higher performance, more frequent monetary and non-monetary awards, and higher promotion rates than Non-Alumni.

- Most of these trends are not limited to Academy Alumni, but also extend to employees they manage.

- Projected ROI of Academy training is between $2.1 and 2.4 Million annually over the next 5 years.
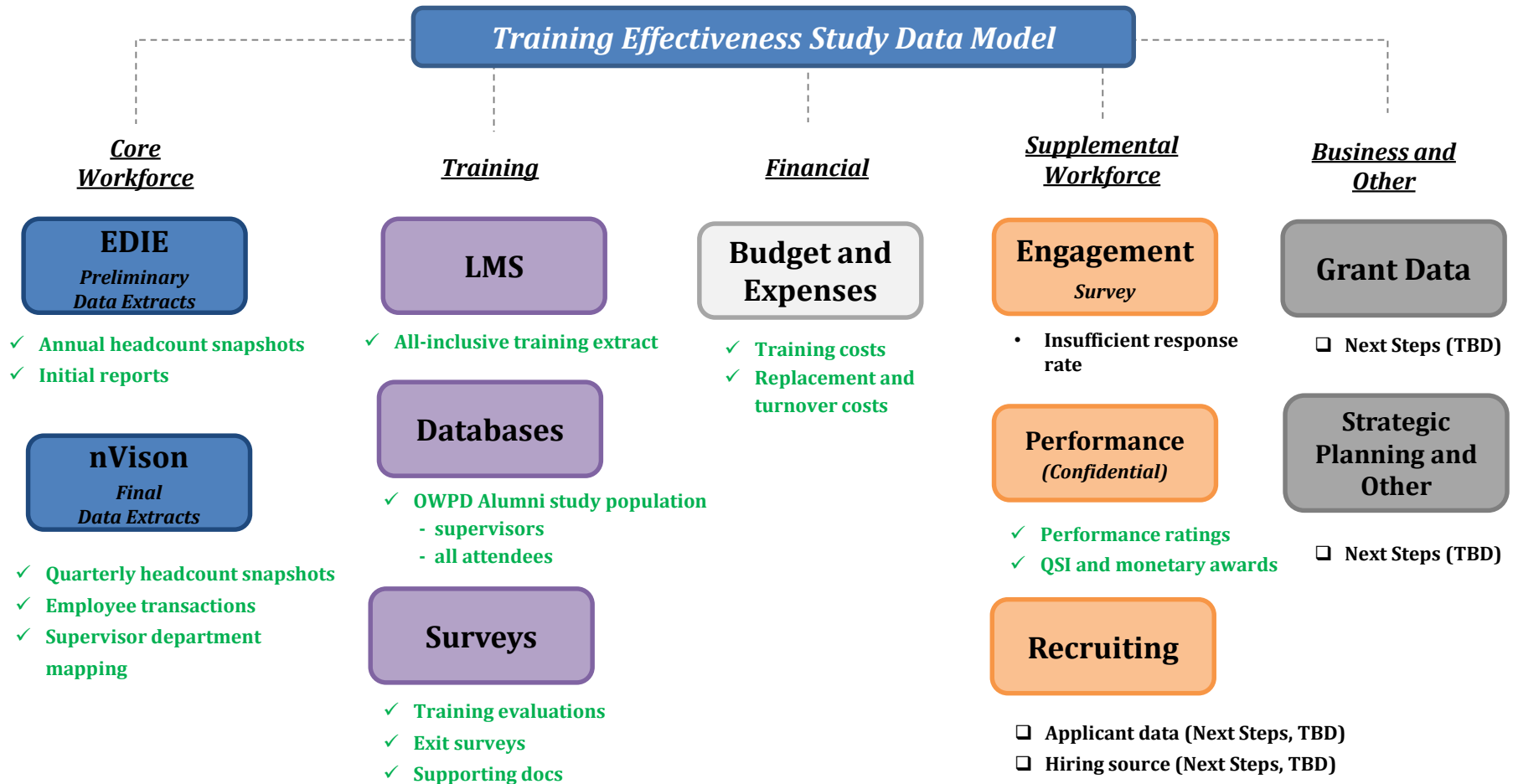
Executive Summary

Analysis Highlights

- Academy Alumni are more than twice as likely to be retained as Non-Alumni, and Alumni high performers are almost half as likely to turnover.

- Academy Alumni are more successful at developing and retaining talent. The employees they manage are more than twice as likely to be promoted, and approximately 35% less likely to turnover.

- Academy Alumni are 35% more likely to be high performers than Non-Alumni, and also receive almost 40% more value in monetary awards than Non-Alumni.

- TES Alumni have the lowest turnover rate of any Academy course, and KM Alumni have the highest promotion rate of any Academy course.

NCI Data Model

NCI Data Model Overview

Training Effectiveness Study Data Model

Core Workforce

EDIE
Preliminary Data Extracts

- ✓ Annual headcount snapshots
- ✓ Initial reports

nVison
Final Data Extracts

- ✓ Quarterly headcount snapshots
- ✓ Employee transactions
- ✓ Supervisor department mapping

Training

LMS

- ✓ All-inclusive training extract

Databases

- ✓ OWPD Alumni study population
  - supervisors
  - all attendees

Surveys

- ✓ Training evaluations
- ✓ Exit surveys
- ✓ Supporting docs

Financial

Budget and Expenses

- ✓ Training costs
- ✓ Replacement and turnover costs

Supplemental Workforce

Engagement
Survey

- • Insufficient response rate

Performance
(Confidential)

- ✓ Performance ratings
- ✓ QSI and monetary awards

Recruiting

- ❑ Applicant data (Next Steps, TBD)
- ❑ Hiring source (Next Steps, TBD)

Business and Other

Grant Data

- ❑ Next Steps (TBD)

Strategic Planning and Other

- ❑ Next Steps (TBD)

Legend: ✓ **Provided / Complete**   ❑ **Not Applicable / Next Steps**

Data Integration and Positioning

Data Integrated:

- ✓ OWPD Training Academy Alumni Data
- ✓ Workforce Headcount Snapshots
- ✓ Workforce Transactions
- ✓ Performance Ratings
- ✓ Monetary Awards and QSI
- ✓ LMS Training Data
- ✓ Supervisor Data
- ✓ Training Academy Expenses
- ✓ Replacement and Turnover Costs
- ✓ NCI and NIH Director Awards

Data Positioning Completed:

- ✓ Workforce Categories and Critical Job Groups
- ✓ Workforce Transaction Categories
- ✓ Tenure, Age and Retirement Categories
- ✓ Monetary Awards and QSI Categories
- ✓ OWPD Training Academy Courses and Dates
- ✓ Training Academy Cohorts and Classes
- ✓ Managed Alumni Department Categories
- ✓ LMS Training Data Categories
- ✓ Part-Time Salary Reconciliation

Data Limitations

- Employee Supervisor Data *(Proxy, Linked by Department)*

- Engagement Data *(Insufficient Response Rate, Potential Next Steps)*

- Applicant and Hiring Source Data *(Not Available, Potential Next Steps)*

- Grant and Strategic Planning Data *(Not Available, Potential Next Steps)*

# *OWPD Training Academy Overview*

Academy Alumni Job Distribution

Alumni make up a higher percentage of Professional Staff, and a lower percentage of Scientific and Technical Staff Alumni, than the Overall NCI population.
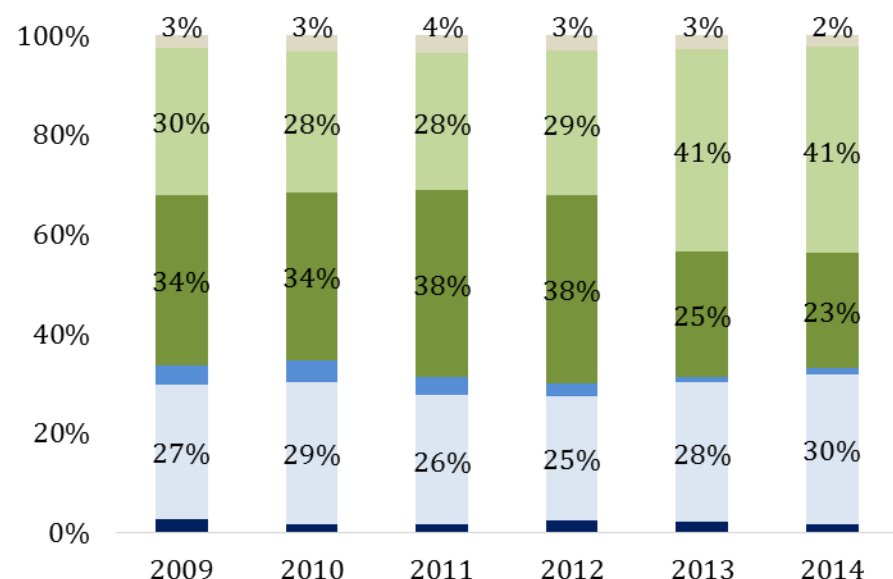
Academy Alumni — stacked bar chart (2009–2014) with categories: Senior Leadership, Management, Specialists and Technicians, Scientific and Tech Staff, Professional Staff, Admin Support Staff.
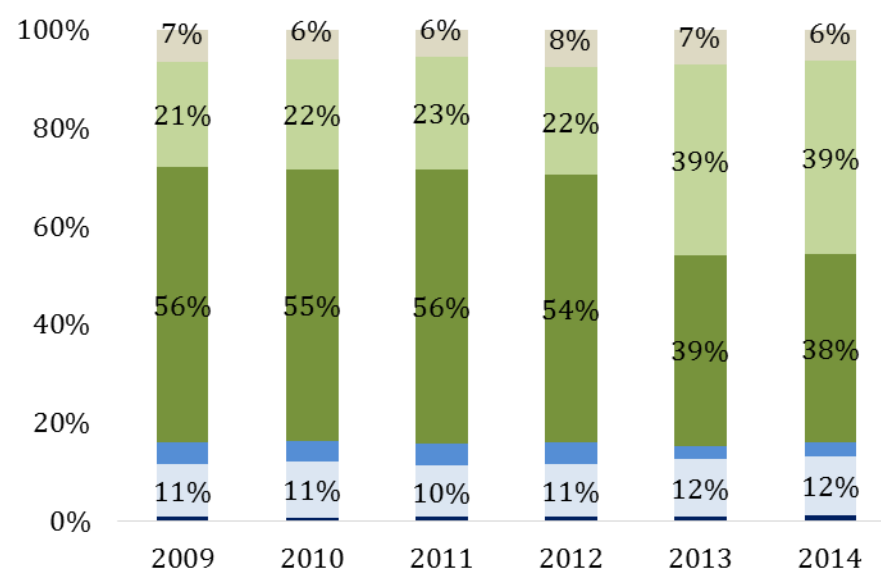
Overall NCI — stacked bar chart (2009–2014) with categories: Senior Leadership, Management, Specialists and Technicians, Scientific and Tech Staff, Professional Staff, Admin Support Staff.

Academy Alumni Course Distribution

Among Academy Alumni, the largest percent of Alumni have completed Coaching (25.0%), followed by TES (23.9%) and KM (19.8%).
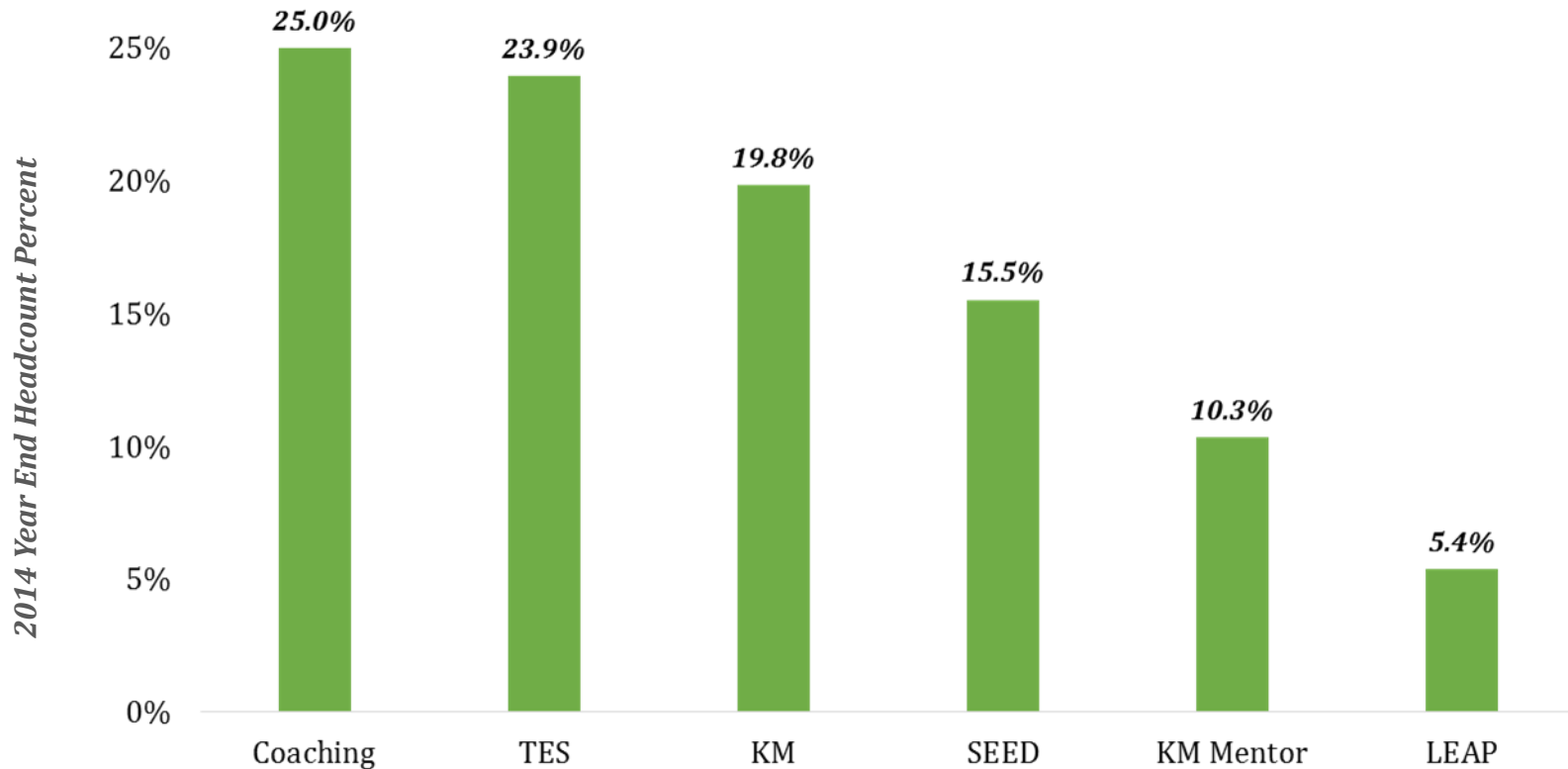
Key Findings:
Turnover and Retention

Overall Turnover Rate

**Academy Alumni are more than twice as likely to be retained than Non-Alumni.**

Additional Detail:	Alumni Multiple Courses Turnover Rate Comparison	LEAP Turnover Rate Comparison	SEED Turnover Rate Comparison	TES Turnover Rate vs. Comparison Group	Supervisor vs Non-Supervisor Comparison	Statistical Confirmatory Analysis
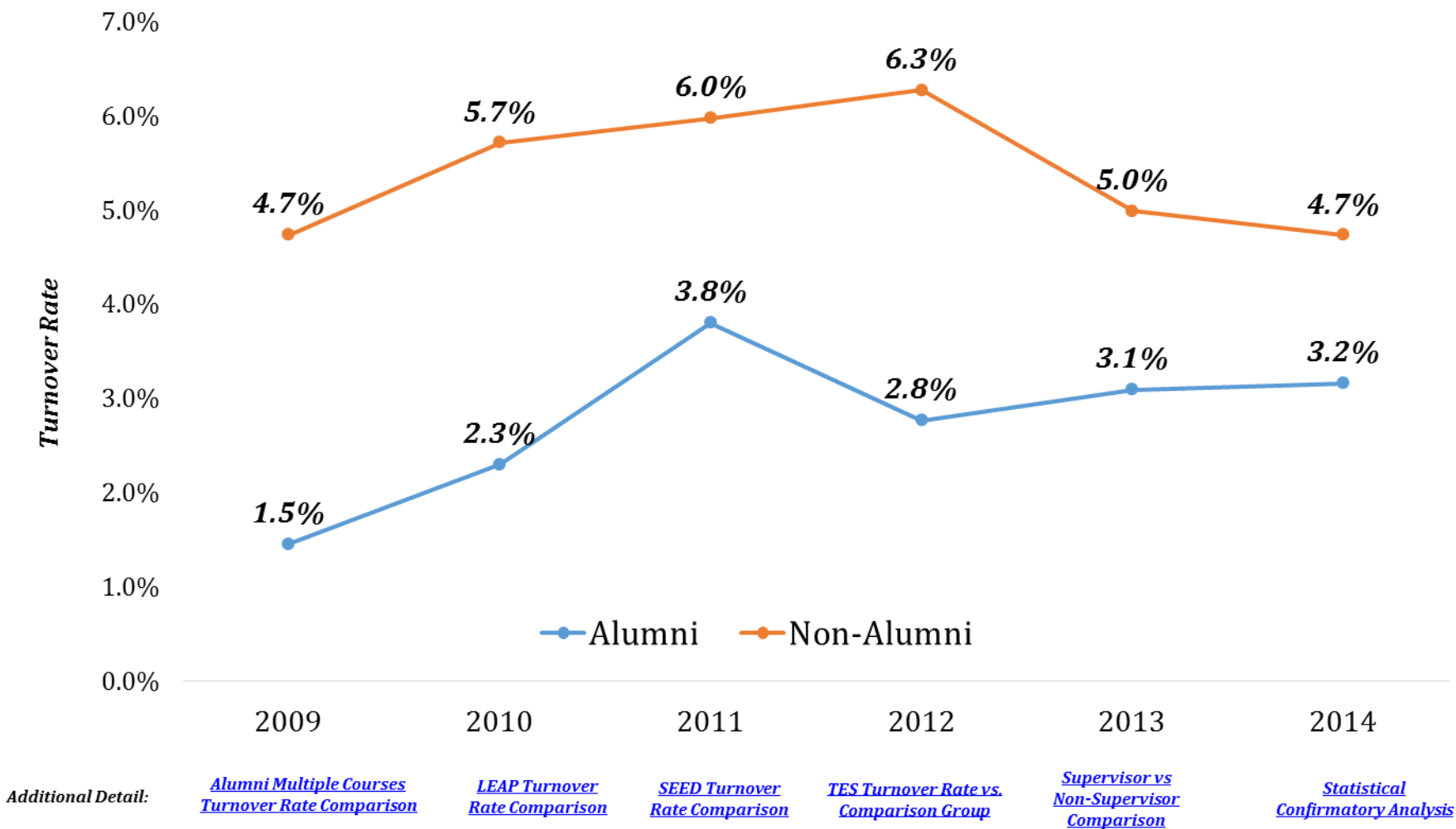
High Performer Turnover Rate

Academy Alumni with a performance rating of 5 are approximately half as likely to turnover than Non-Academy Alumni.
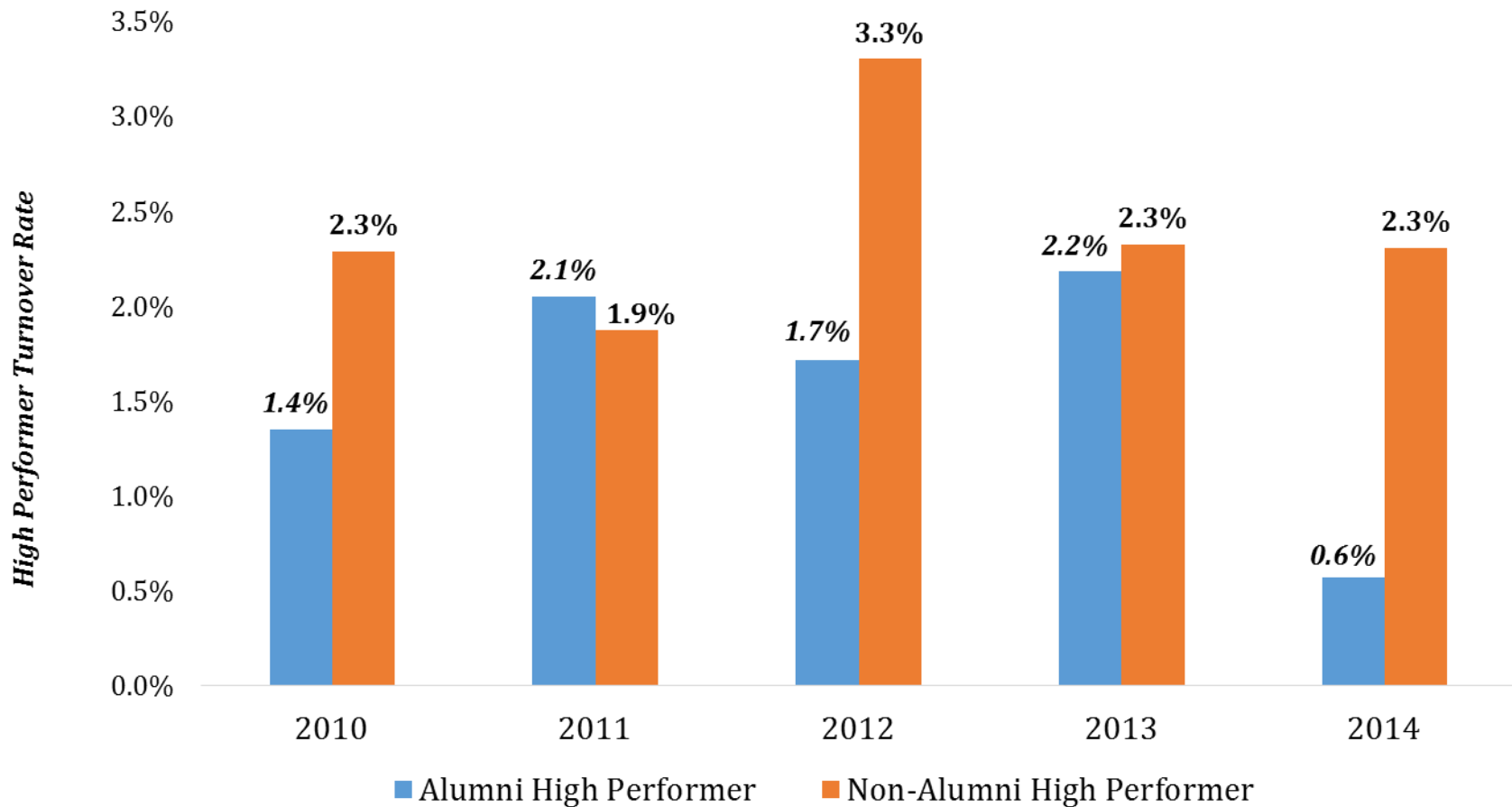
Managed Turnover Rate

HNC's with Alumni Supervisors are responsible for approximately 35% less employee turnover than HNC's without Alumni Supervisors, on average.
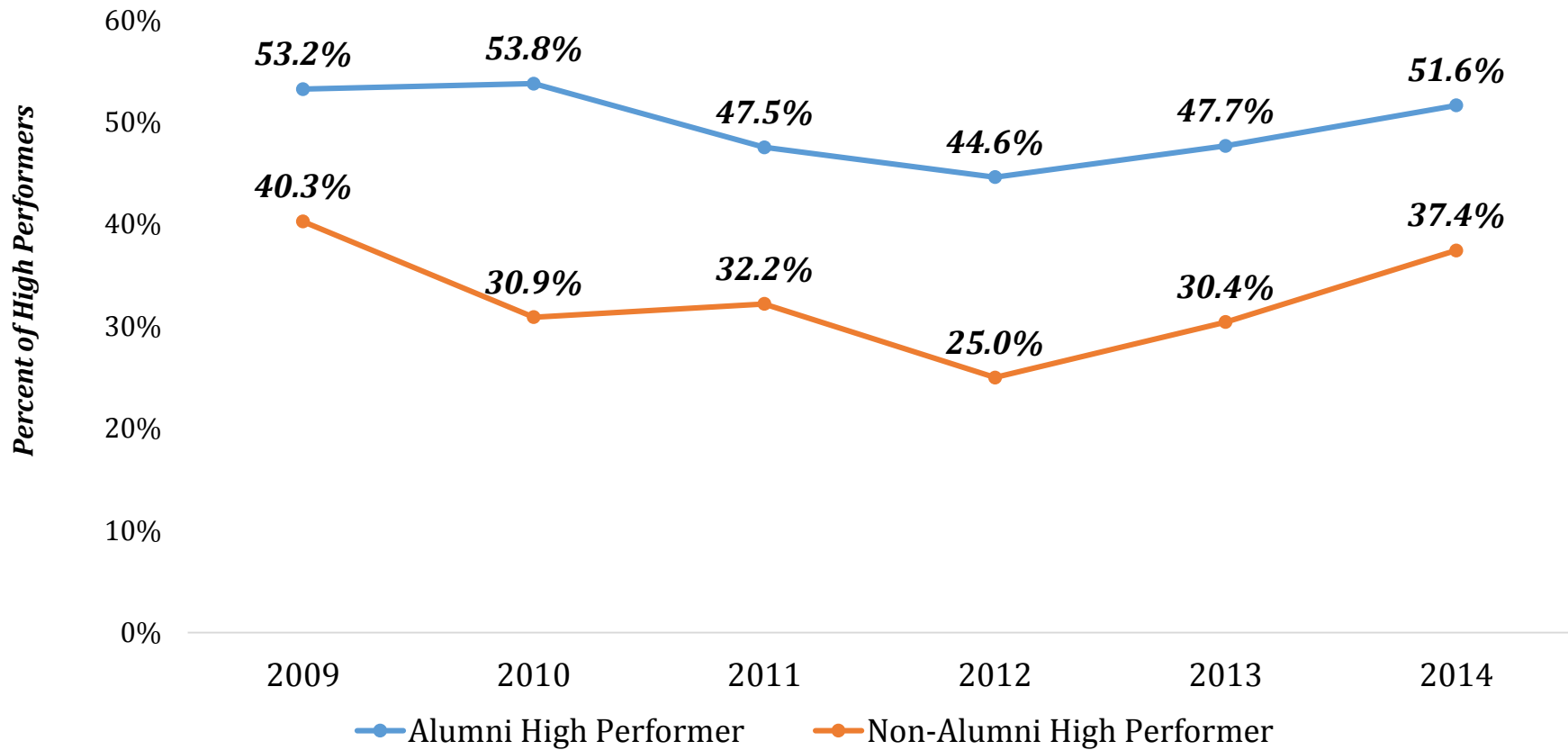
That amounts to approximately 400 fewer terminations across the analysis period.
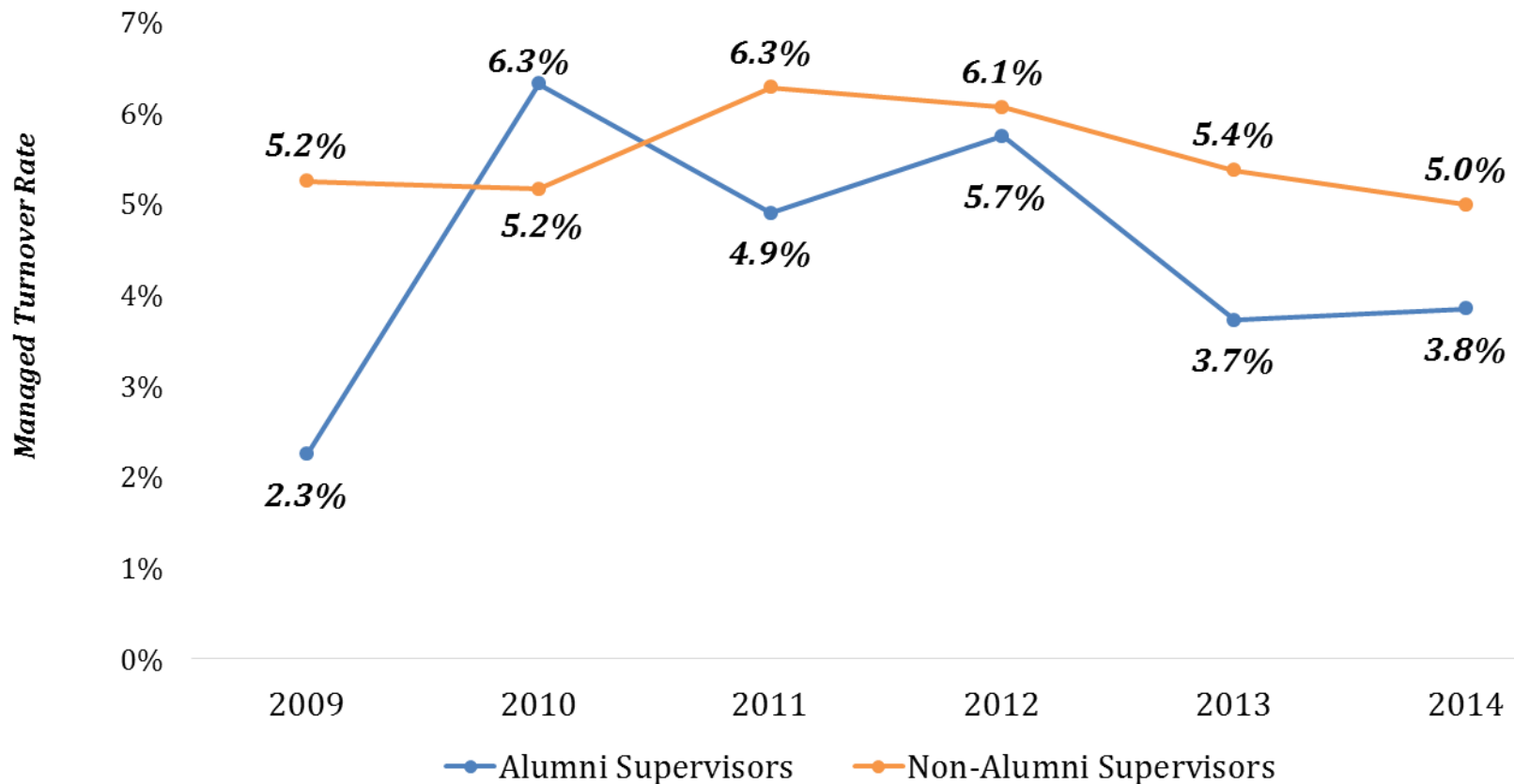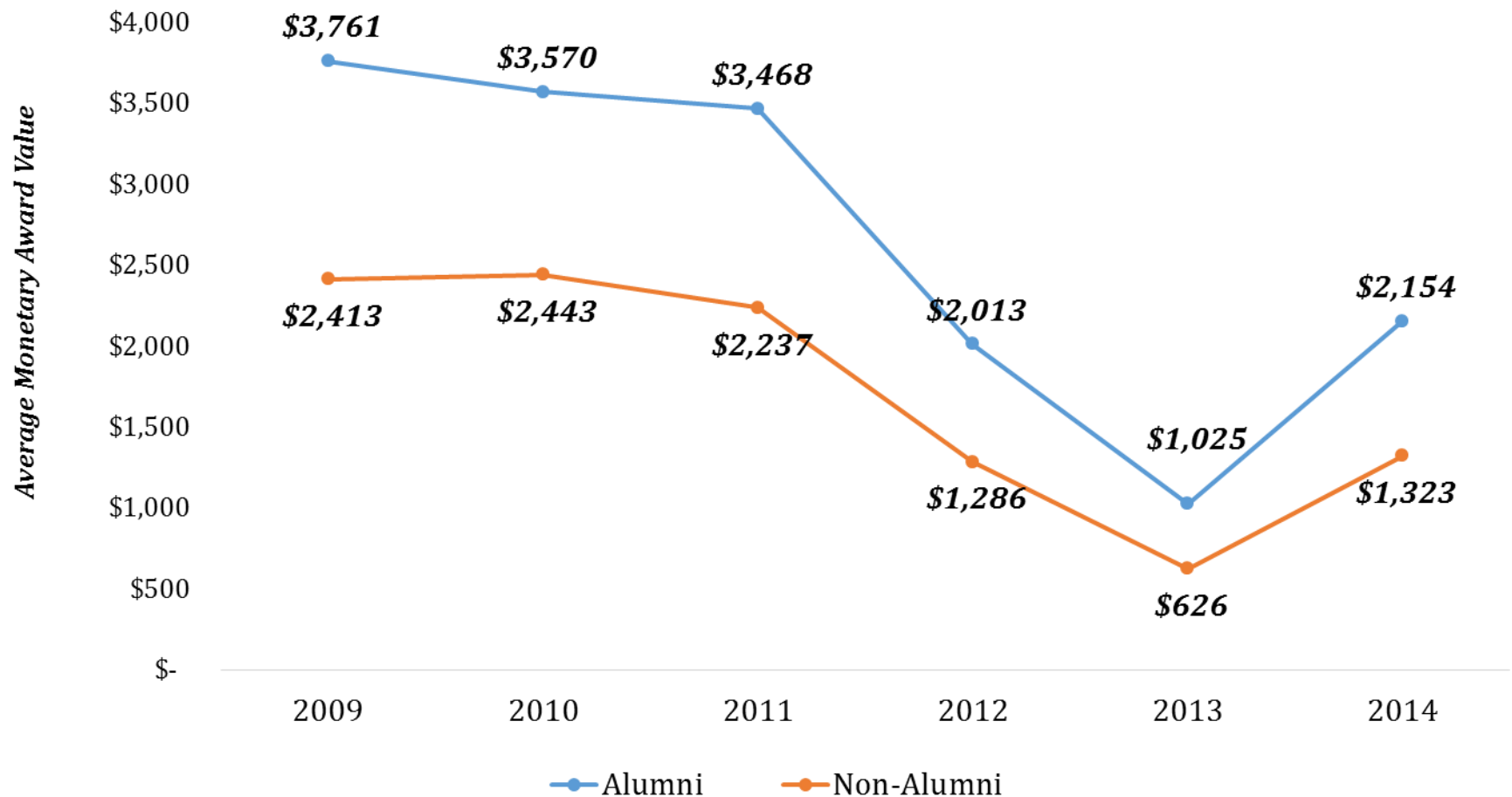
Key Findings:
Performance Ratings

Overall High Performer Rate

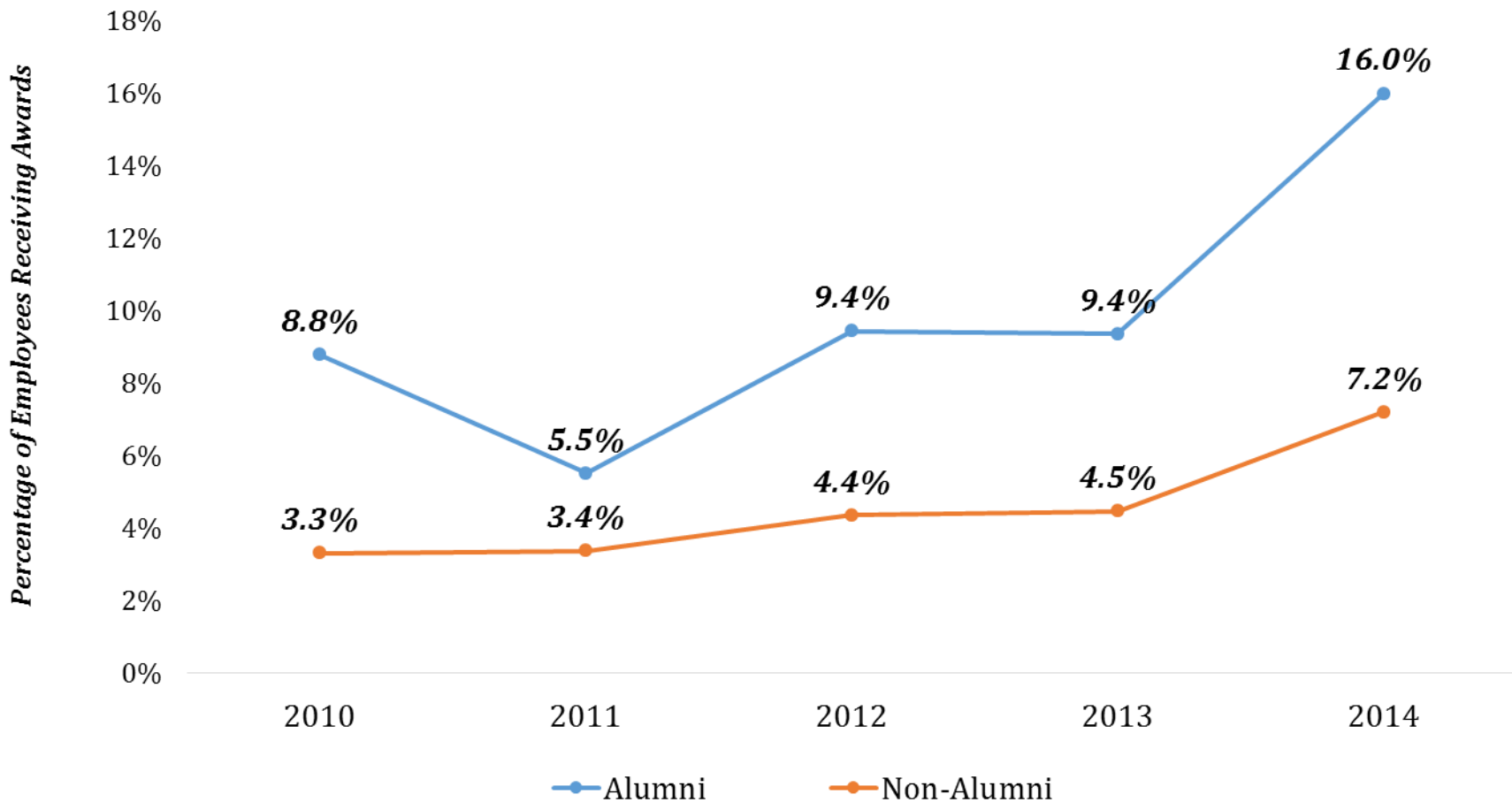**Academy Alumni are 35% more likely to receive a performance rating of 5 than Non-Academy Alumni.**

Percent of High Performers

Alumni High Performer (blue):
- 2009: *53.2%*
- 2010: *53.8%*
- 2011: *47.5%*
- 2012: *44.6%*
- 2013: *47.7%*
- 2014: *51.6%*

Non-Alumni High Performer (orange):
- 2009: *40.3%*
- 2010: *30.9%*
- 2011: *32.2%*
- 2012: *25.0%*
- 2013: *30.4%*
- 2014: *37.4%*

Legend: Alumni High Performer   Non-Alumni High Performer

Additional Detail: *Statistical Confirmatory Analysis*

Key Findings:
Awards

Monetary Awards

Academy Alumni received almost 40% more monetary awards than non-participants.

Additional Detail: *Statistical Confirmatory Analysis*

Directors Awards

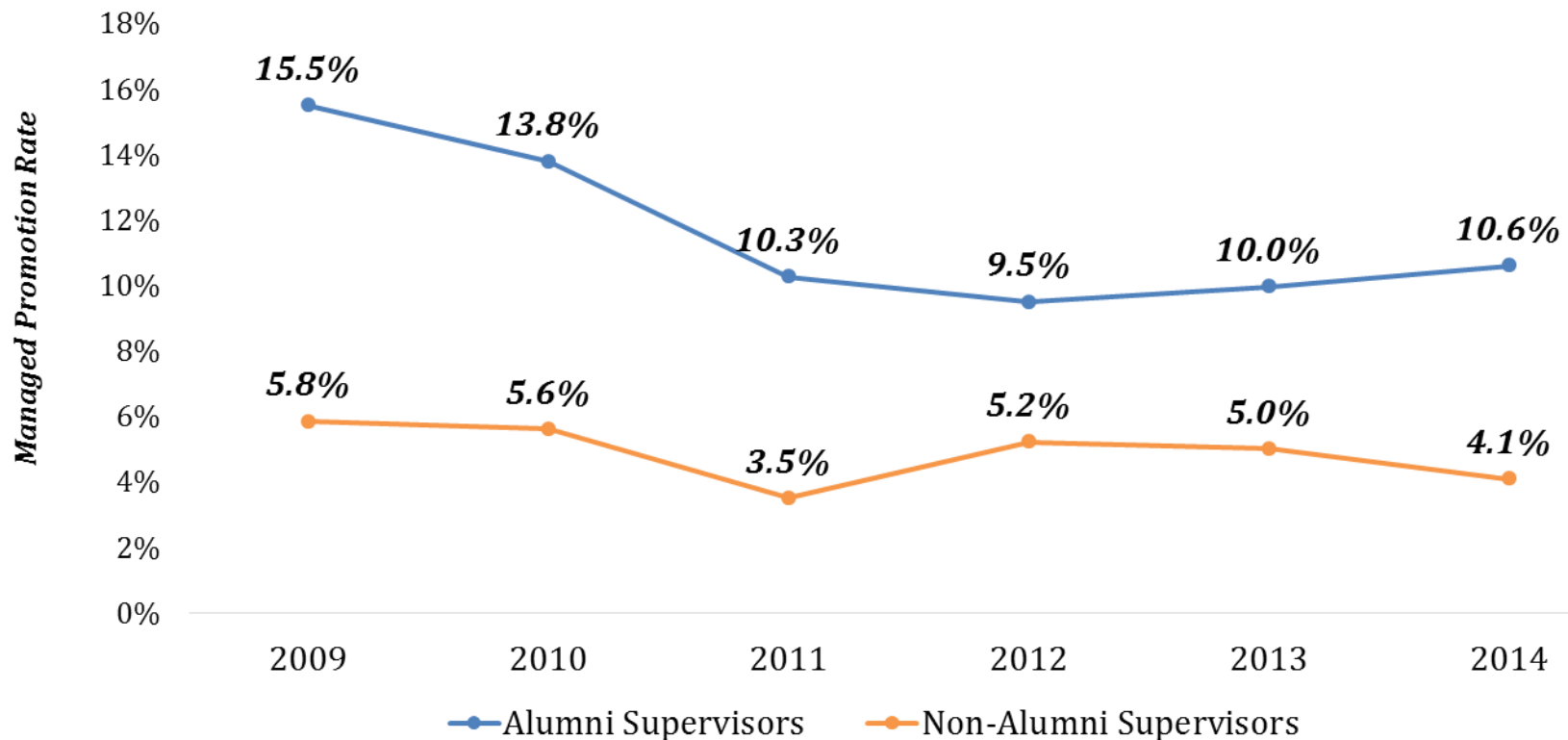Academy Alumni received more director awards than non-participants.

Key Findings:
Promotions

Managed Promotion Rate

Alumni Supervisors are more successful at creating opportunities for career growth than Non-Alumni Supervisors, having more than double the rate of managed promotions.

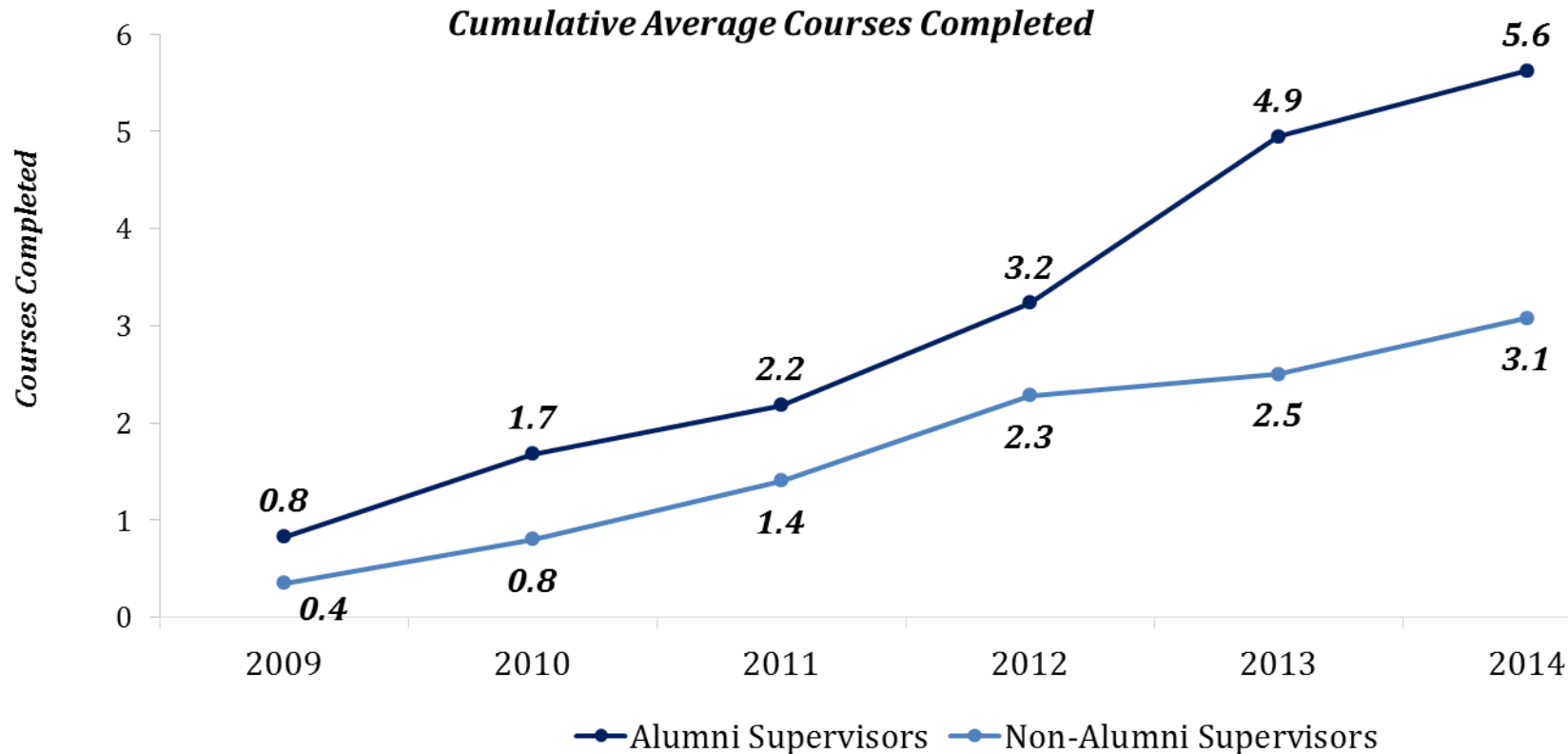**Additional Detail:**   *Statistical Confirmatory Analysis*   *Promotion Rates by Training Course*   *KM Promotion Rate vs. Comparison Group*

Key Findings:
Training Participation

Managed Training Participation

All employees have steadily increased training participation, but employees with Alumni supervisors completed almost twice the courses as employees with Non Alumni supervisors.


Cumulative Average Courses Completed

Year	Alumni Supervisors	Non-Alumni Supervisors
2009	0.8	0.4
2010	1.7	0.8
2011	2.2	1.4
2012	3.2	2.3
2013	4.9	2.5
2014	5.6	3.1

Key Findings:
Retirement Projections

Retirement Eligible Projections

NCI's retirement eligible population is projected to significantly increase over the next five years.

NCI's average retirement age is 65. By 2019, 40% of supervisors will be 65 or over. As retirements increase, OWPD Academy training is critical to build skills, mitigate knowledge loss and grow NCI's future leaders.
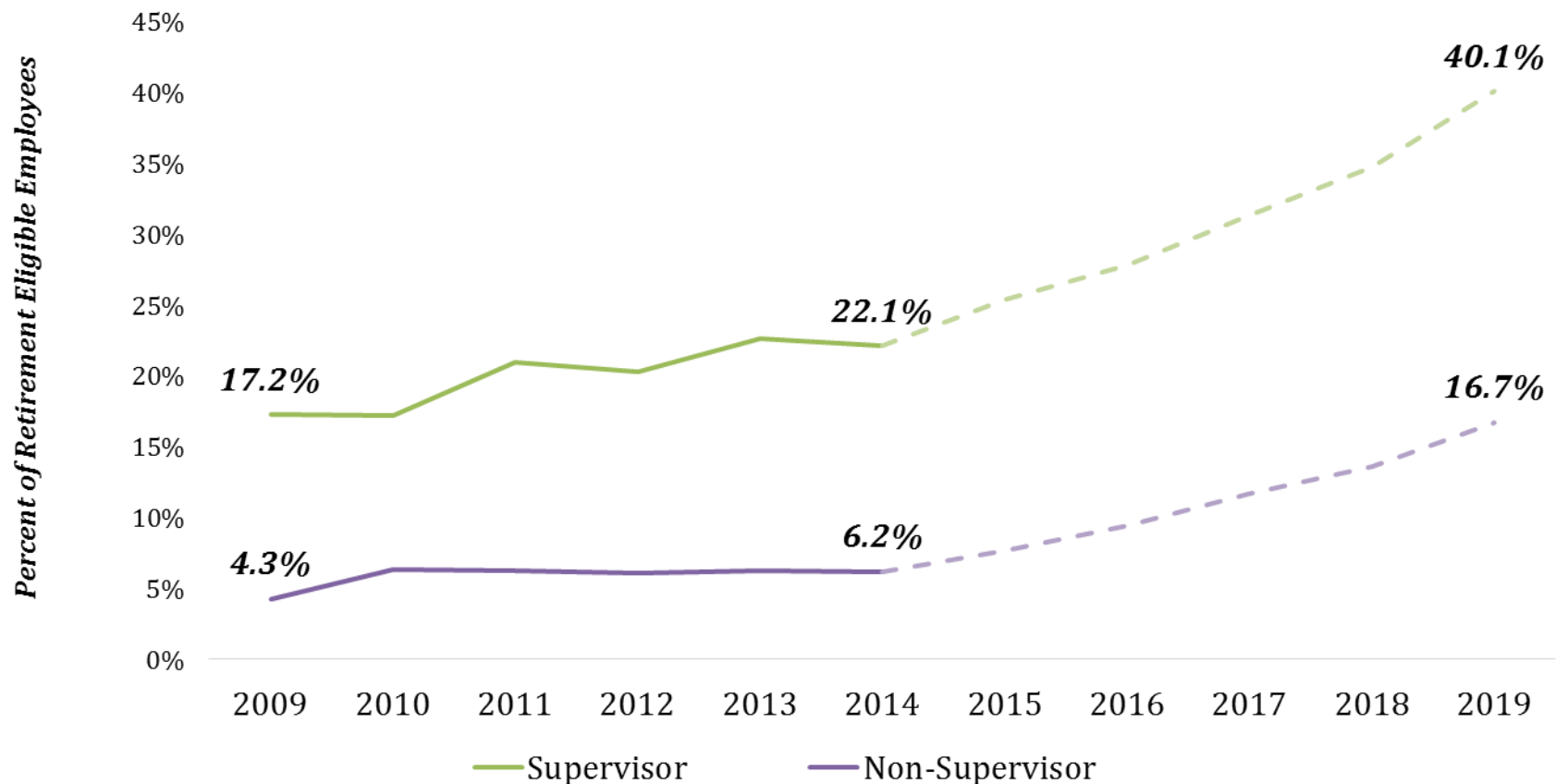
Actual Retirement Rate and Projections

NCI's Retirement Rate is projected to significantly increase over the next five years.

NCI's average retirement age is 65, and the projected increase in retirements is a result of growth in the retirement eligible population, and an increasing percentage of eligible employees taking retirement.
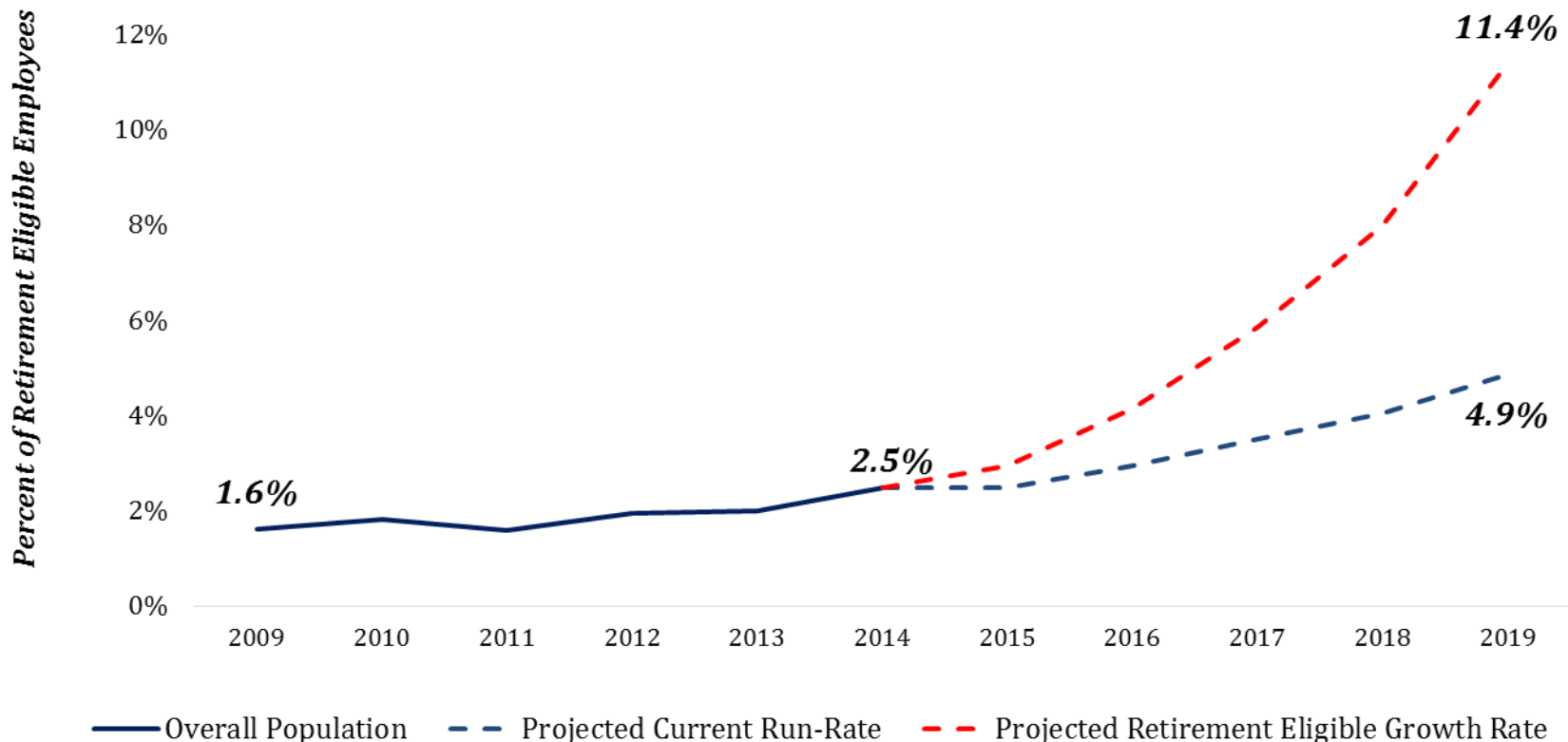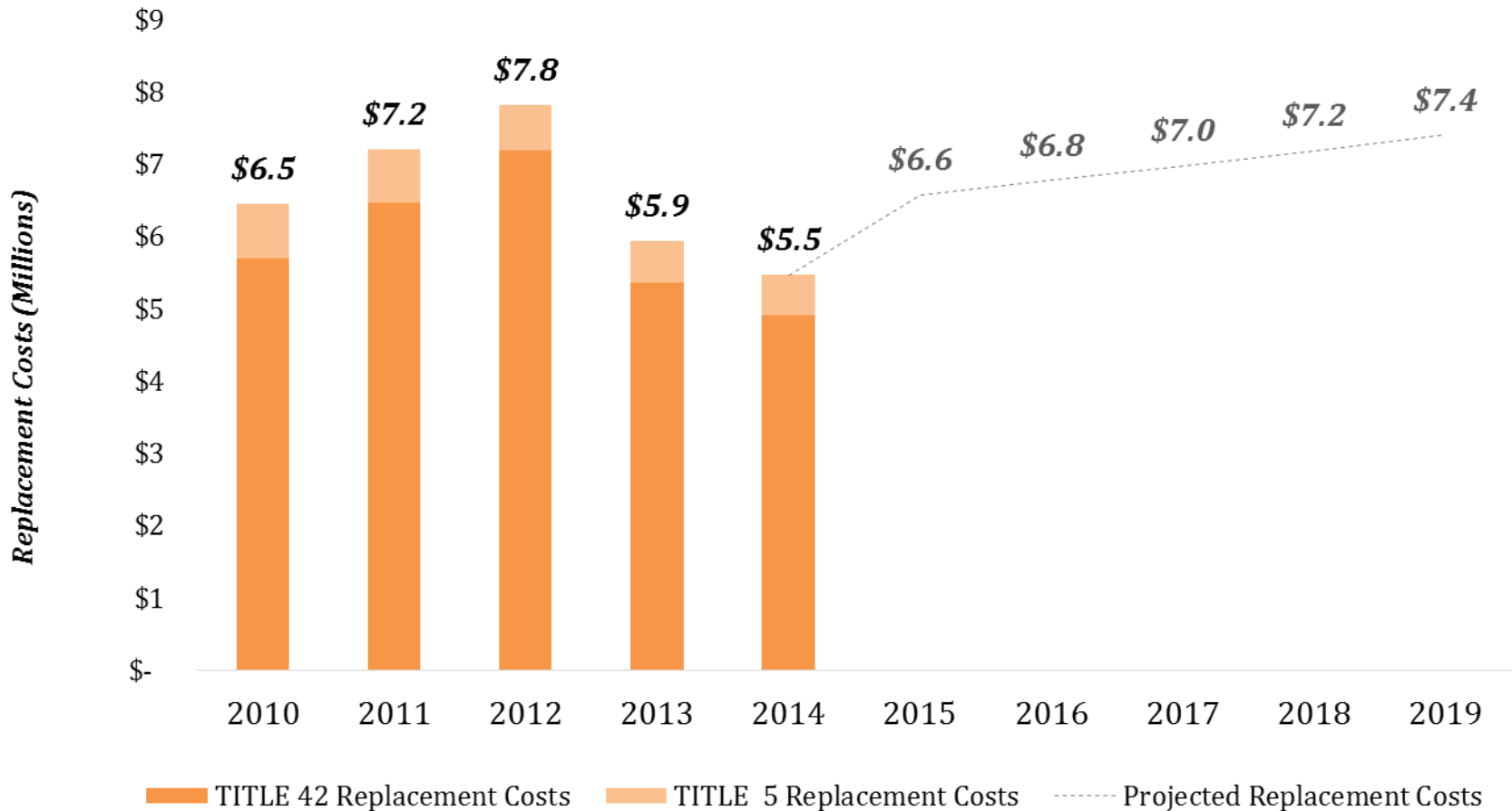
Key Findings:
Financial Impact and ROI

NCI Projected Replacement Costs

Replacement costs peaked in 2012, but are projected to increase over the next 5 years.

Academy Program Projected ROI

Academy Program ROI is estimated between $2.1 and 2.4 Million annually over the next 5 years.

Projected ROI of Internal Hires

Projected ROI of doubling the number of positions filled with internal hires over the next five years is approximately $5.7 Million, between $0.7 and $1.3 Million per year.

Between 2009 and 2014, roughly 10% of positions were filled with internal hires, costing $3,700 less per position than their external hire counterparts.
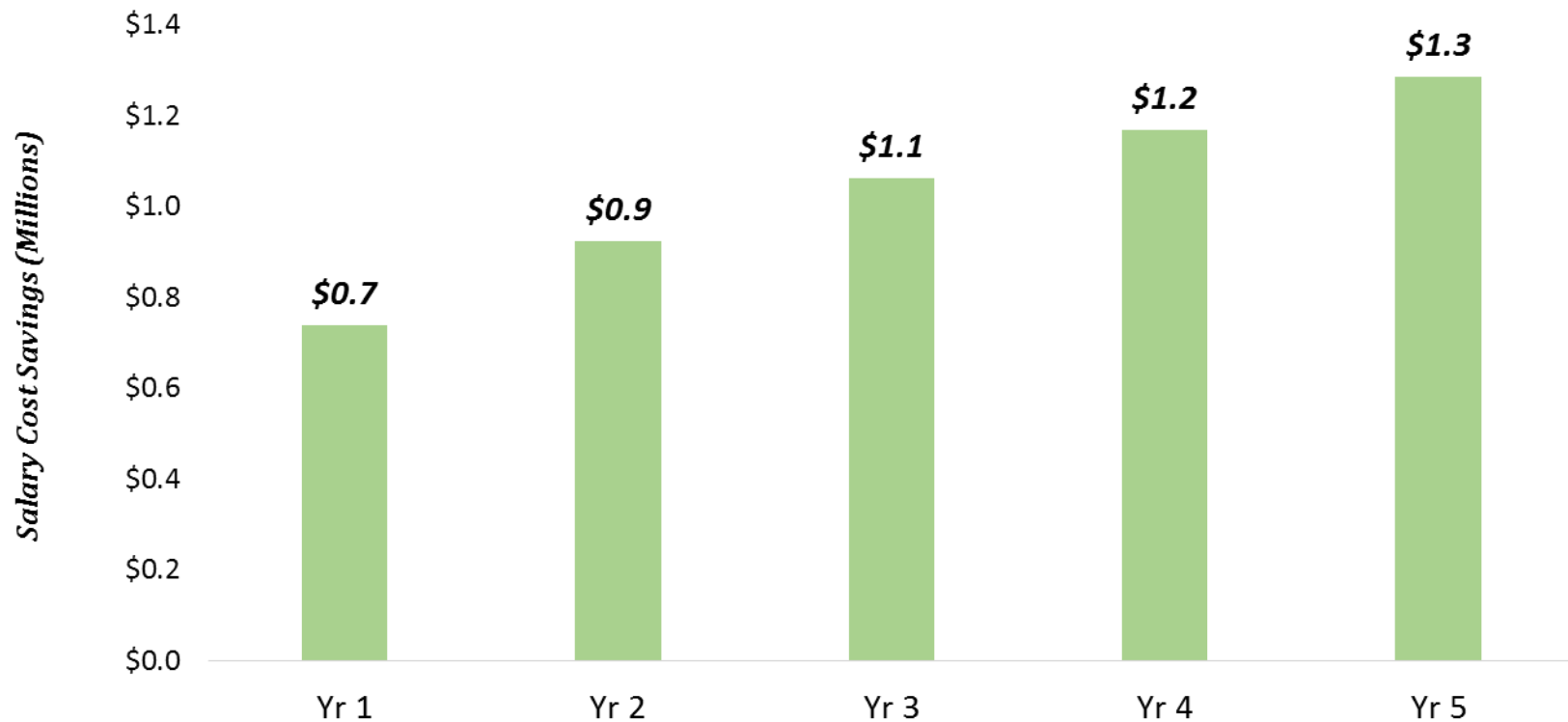
Recommendations and Next Steps

Project Recommendations

Opportunities and Recommendations

- Expand the OWPD Training Academy, with an emphasis on high potentials, NCI mission critical roles and Scientific and Technical Staff.

- Focus on building career paths to grow talent internally and develop future leaders as part of a comprehensive workforce planning strategy.

- Dedicate internal or external resources for ongoing workforce analytics and planning projects, and expand scope to include operational metrics and organization-wide opportunities.

- Leverage workforce standards, such as a framework to classify and group jobs and standard definitions for workforce transactions, to improve data quality, and focus on expanding the scope of data currently tracked in nVision, EDIE and other workforce systems. *See appendix for specific examples.*

Project Recommendations

Interventions

- Increase training availability for job groups and departments with the highest retirement risk.

- Provide more opportunities for academy training for high potential employees to build management bench strength. Target entry level management roles and senior professional roles for increased internal promotions, with a goal of 20% of open positions filled by internal hires by the year 2020.

- Identify best practices of Academy Alumni in Supervisory roles to increase retention, particularly for groups that historically have had fewer opportunities to participate in Academy training.

- Implement a training effectiveness dashboard or internal scorecard to monitor performance and track the effectiveness of interventions.

Next Steps: How HCMI Can Assist

1) Learning Effectiveness Dashboard

- Included as an addition to project scope (6 months at no cost to NCI)
- Advanced forecasting and modeling capabilities
- Data refresh available as part of the implementation process

2) Workforce Planning Support

- Actionable workforce plan for NCI, with critical job group and HNC level forecasting
- Address critical headcount, skills, costs, talent and productivity gaps
- Forecast retirements and implement strategies to develop talent internally

3) Workforce Data Blueprint

- Drive transaction, metric, reporting and job standards
- Rapid data cleansing and identification of critical data gaps
- Optimize value, integration and power of existing workforce systems

4) SOLVE Workforce Intelligence Software

- Out of the Box Workforce Analytics and Planning
- Rapid Data Integration, Workforce Standards and Metrics
- Advanced Reports and Dashboards Across the Talent Management Lifecycle
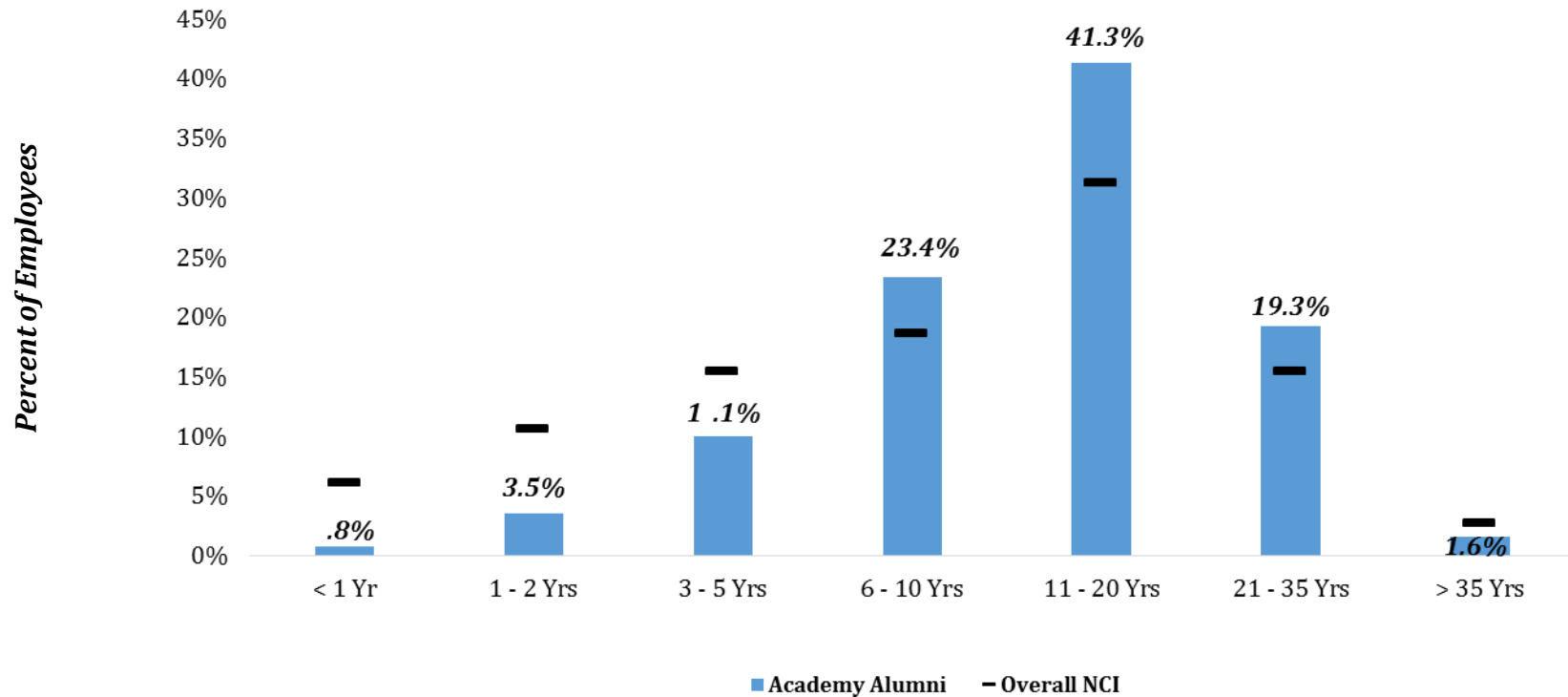- Real-Time Scenario Modeling, Workforce Financial Linkage and ROI

*Questions*

Appendix

Academy Alumni Tenure Distribution

More than 85% of Academy Alumni have 6 or more years of tenure, a higher tenure profile than that of NCI overall.

2014 Year End Headcount	<1 Yr	1-2 Yrs	3-5 Yrs	6-10 Yrs	11-20 Yrs	21-35 Yrs	>35 Yrs	Total
Academy Alumni	3	13	37	86	153	71	6	369
Overall NCI	186	287	467	564	946	466	83	2,999

Academy Alumni Job Distribution

On average, there are more than twice as many Academy Alumni in Supervisory or Management roles than the overall NCI population.
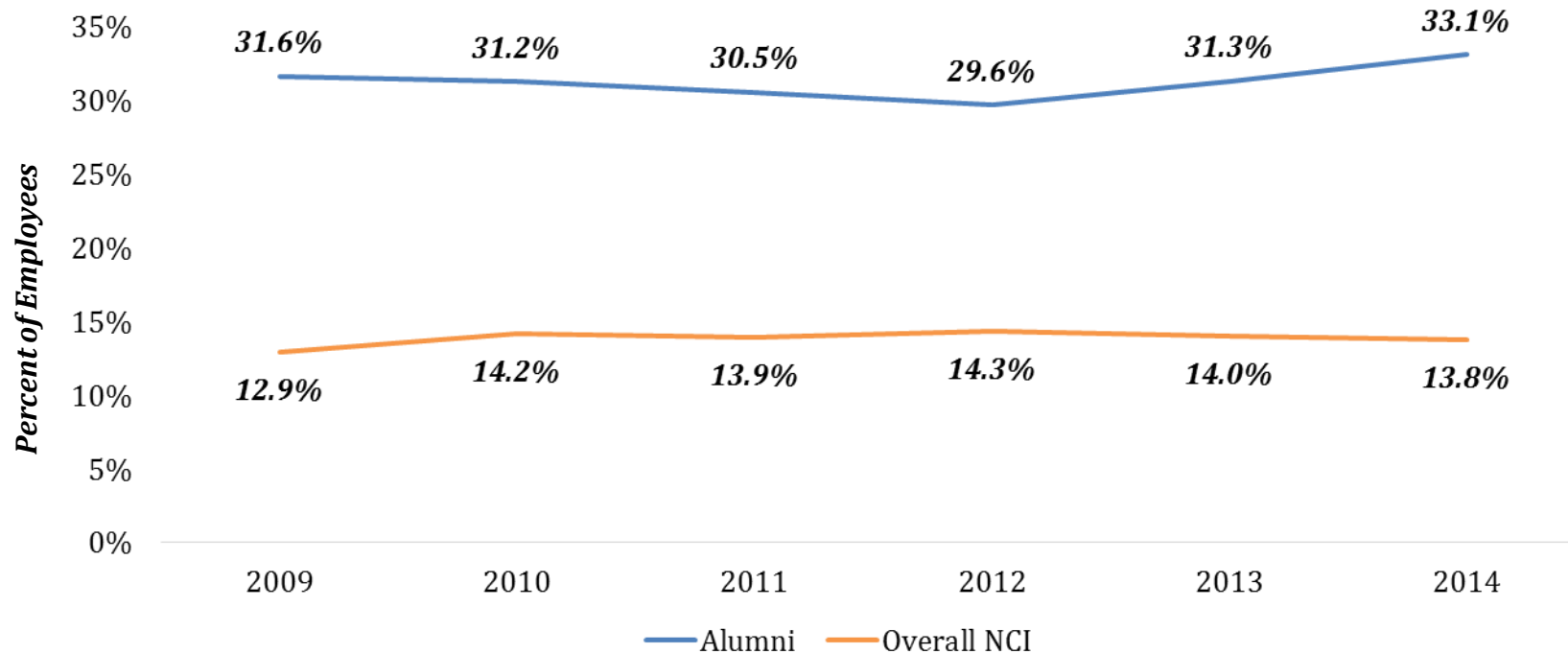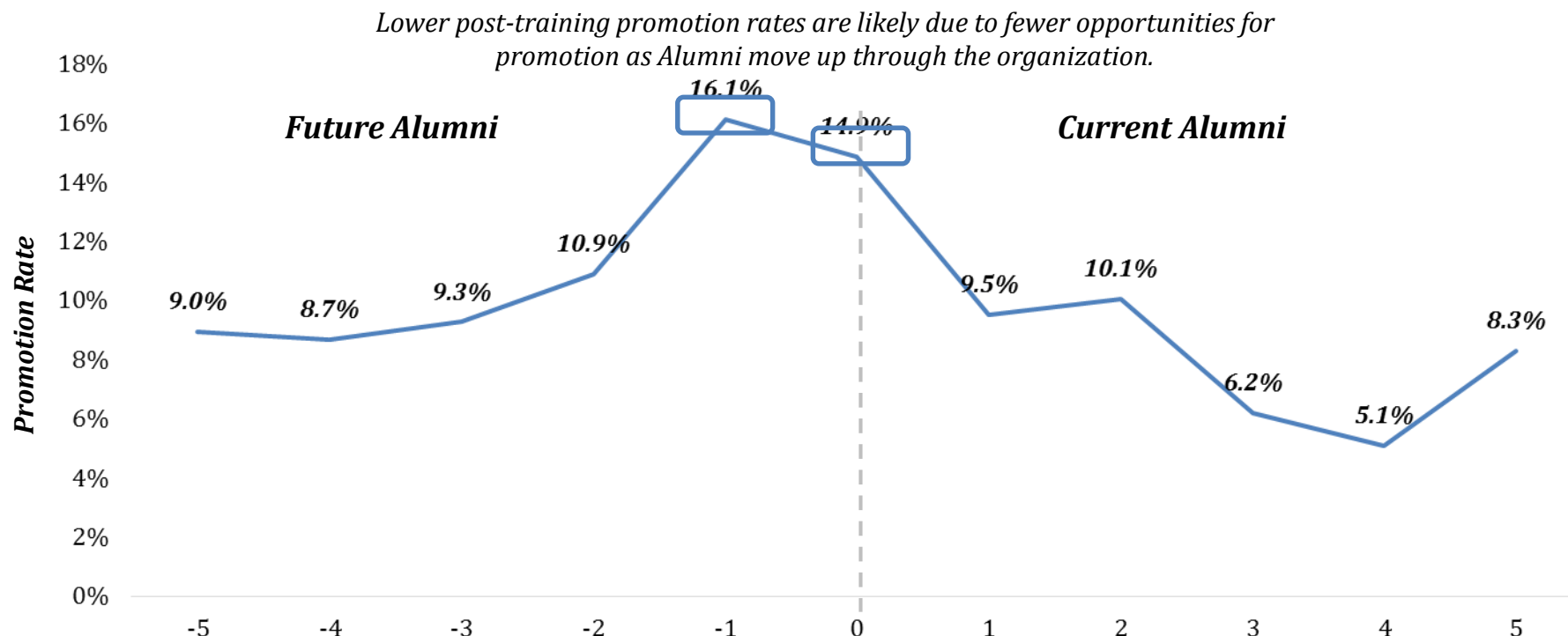

End of Year Headcount	2009	2010	2011	2012	2013	2014
Academy Alumni	155	205	272	307	342	369
Overall NCI	3,046	3,107	3,100	3,108	3,049	2,999

- *Workforce Categories are based on HCMI job classification.*
- *Supervisory groups based on NCI Supervisor/Non-Supervisor Description codes and population identified by NCI.*

Alumni Promotion Rate Profile

Promotion rate spikes in the years before and year during Academy training, indicating that some future Alumni receive training as a result of recent promotions.


Lower post-training promotion rates are likely due to fewer opportunities for promotion as Alumni move up through the organization.

	Years before/after training										
Average Headcount	**-5**	**-4**	**-3**	**-2**	**-1**	**0**	**1**	**2**	**3**	**4**	**5**
Future/Current Alumni	34	81	130	230	323	357	346	298	242	158	121

- *Promotions classified based on NOAC action type.*
- *"Future Alumni" are included as part of the Non-Alumni analysis group until they have **completed** training.*

Alumni Retention

Retention Rate by Training Course

While retention for all courses has been high, TES Alumni have had the highest retention, with Coaching Alumni experiencing the lowest retention.
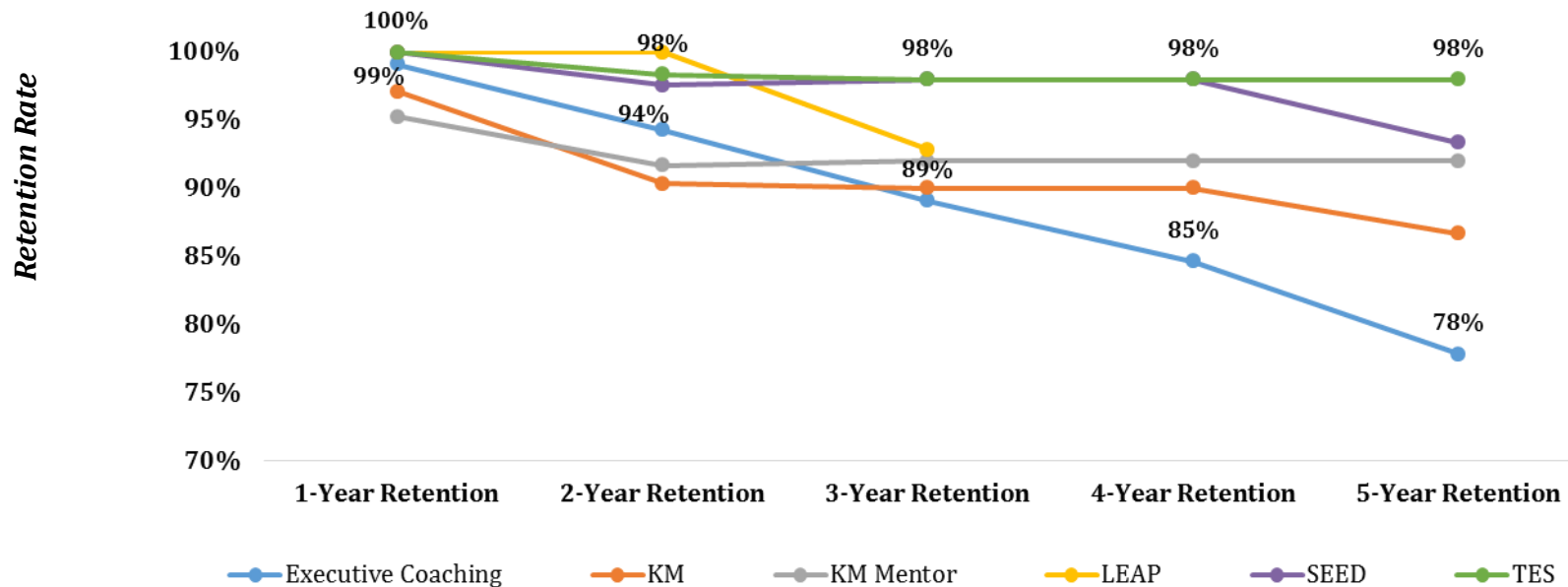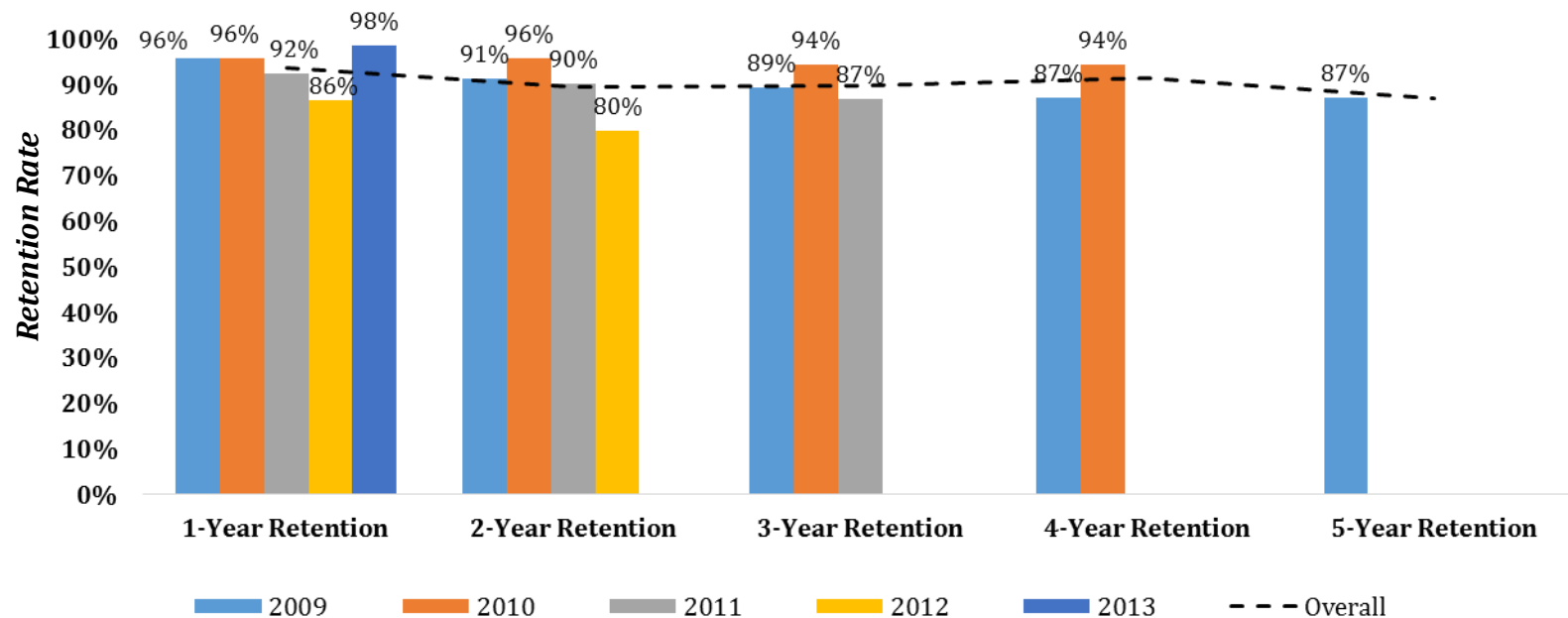

End of Year Headcount	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
EC	109	87	64	39	18
KM	69	62	48	32	15
KM Mentor	42	36	24	17	6
LEAP	29	14	14	0	0
SEED	41	41	27	27	15
TES	90	61	51	15	1

- Turnover excludes retirements and IC transfers..

Retention Rate by Training Class Year

Retention over the first five years has been very high, and there has been little differentiation across training classes in different years.

| End of Year Headcount	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
2009	55	55	55	55	55
2010	75	75	75	75	0
2011	98	98	98	0	0
2012	73	73	0	0	0
2013	79	0	0	0	0

- Turnover excludes retirements and IC transfers.

Managed Turnover Rate v Benchmark

Alumni Supervisors appear to be the primary driver for lower employee turnover.

Turnover was below benchmark in HNC's with Alumni Supervisors in all years but 2010 and 2012,
but above benchmark in all years but 2012 for HNC's with no Alumni Supervisors.

Departments With Alumni Supervisors
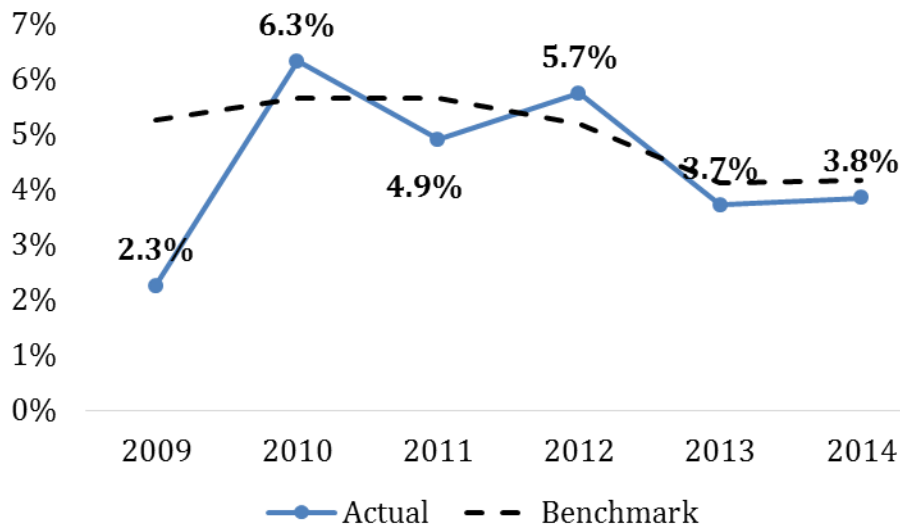

Departments With No Alumni Supervisors
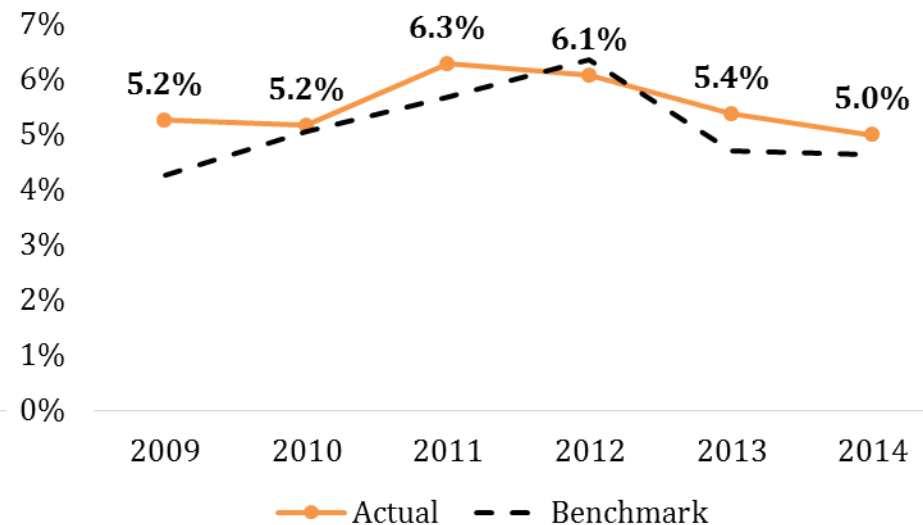
Average Headcount	2009	2010	2011	2012	2013	2014
HNCs with Alumni Supervisors	711	871	1,082	1,201	1,155	1,170
HNCs without Alumni Supervisors	2,343	2,247	2,087	1,914	1,957	1,885

- *Managed turnover based on department level (HNC) turnover, segmented by departments with and without Alumni Supervisors.*
- *Turnover benchmarks are based on NCI internal position-adjusted average turnover rates by workforce category, and are specific to each department.*
- *Turnover excludes retirements and IC transfers.*

IC Transfers

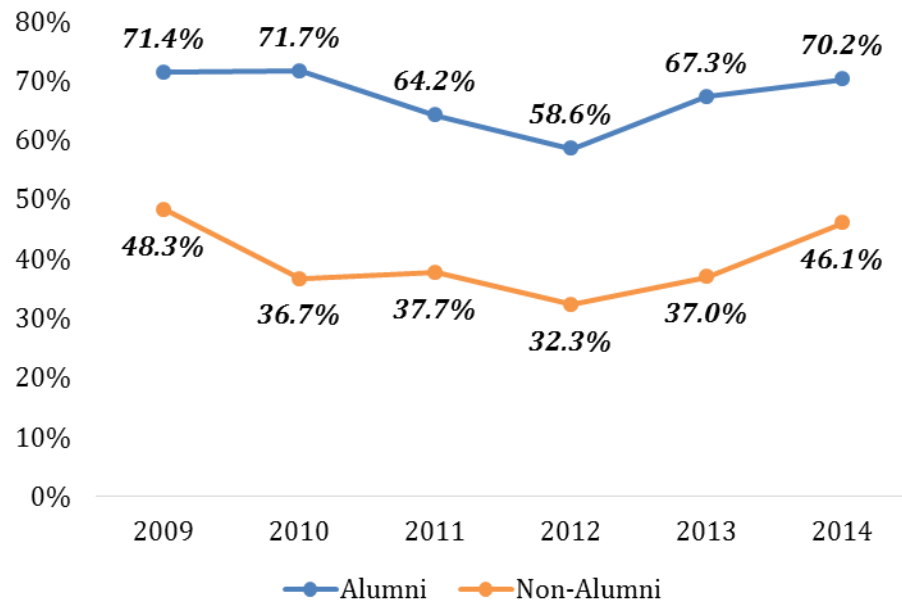**Alumni are more likely to transfer into other opportunities across NIH.**
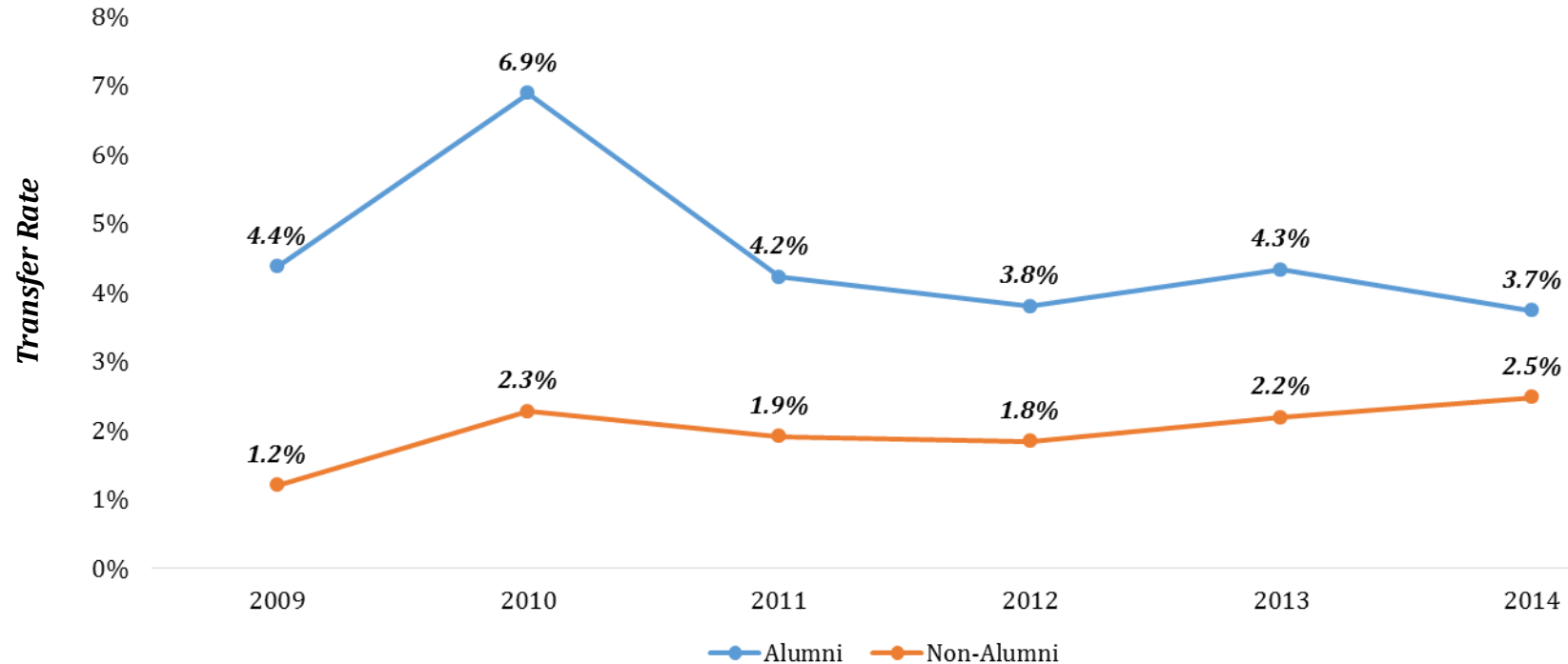
Average Headcount	2009	2010	2011	2012	2013	2014
Alumni	137	174	237	289	324	348
Non-Alumni	2,917	2,944	2,932	2,826	2,788	2,706

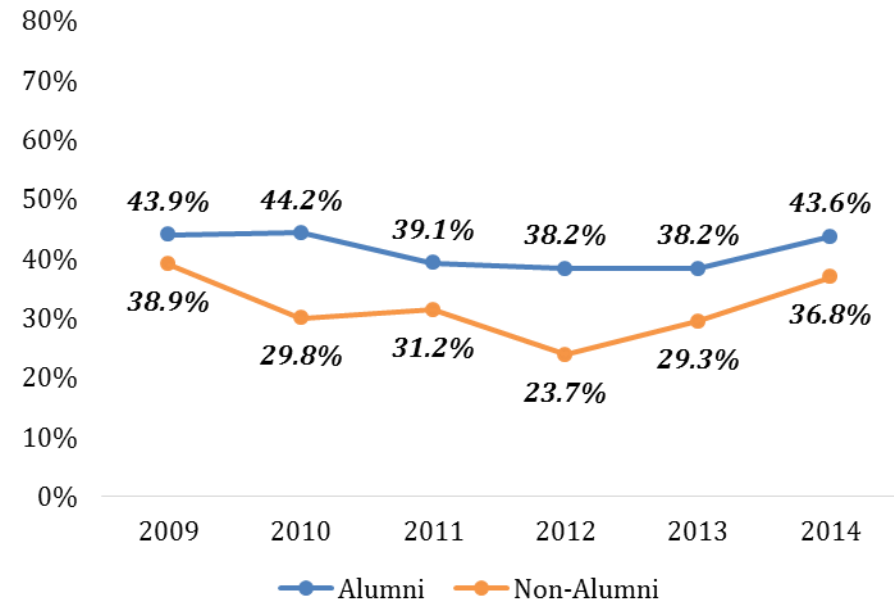- *Transfers includes all moves to other IC's, primarily promotions, realignments, conversions and reassignments.*

Performance and Monetary Awards

# High Performer Rate Detail

Supervisor High Performer Rate

(Alumni line: 71.4%, 71.7%, 64.2%, 58.6%, 67.3%, 70.2%)
(Non-Alumni line: 48.3%, 36.7%, 37.7%, 32.3%, 37.0%, 46.1%)

Non-Supervisor High Performer Rate

(Alumni line: 43.9%, 44.2%, 39.1%, 38.2%, 38.2%, 43.6%)
(Non-Alumni line: 38.9%, 29.8%, 31.2%, 23.7%, 29.3%, 36.8%)

End of Year Headcount	2009	2010	2011	2012	2013	2014
Alumni High Performers	66	93	115	124	153	191
Non-Alumni High Performers	1,039	821	848	660	791	996

- *High performers classified as employees with a performance rating of "5". Excludes employees that did not receive a performance rating.*

Additional Detail: **Overall High Performer Rate** **Statistical Confirmatory Analysis**

Managed High Performer Rate
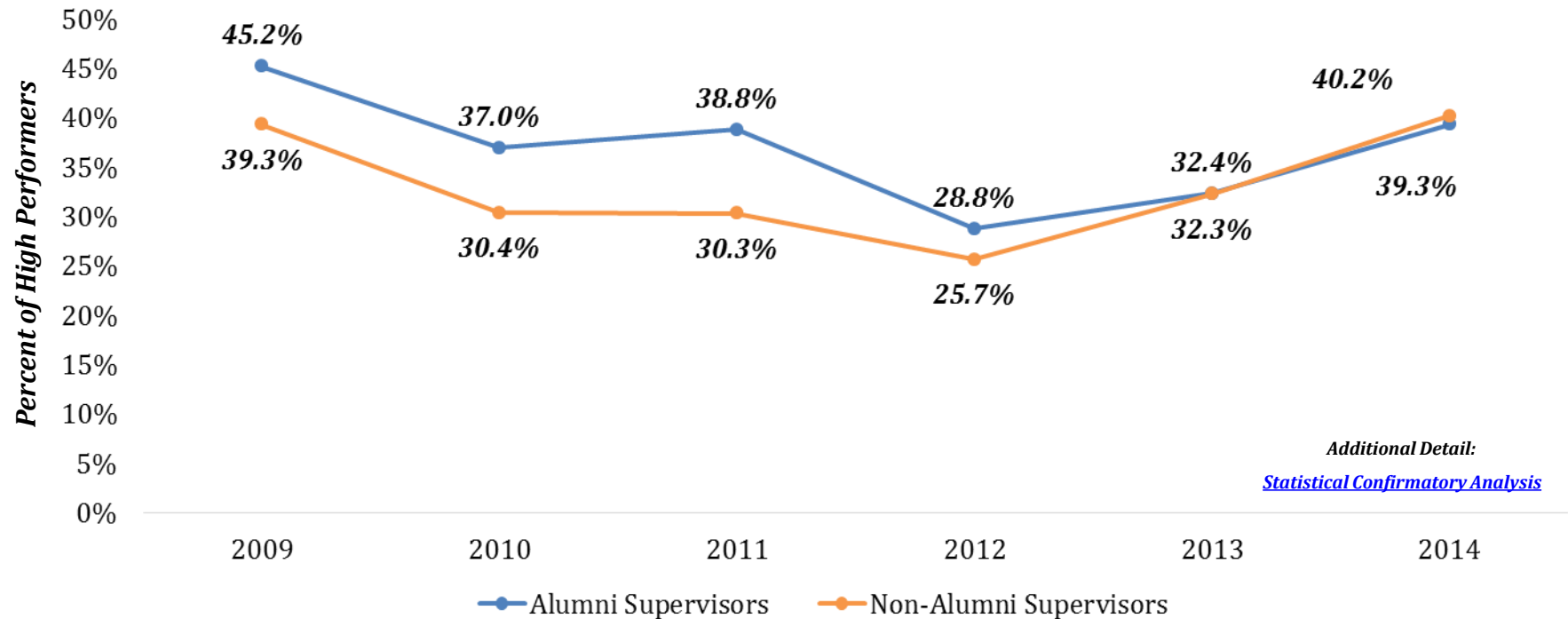
End of Year High Performers	2009	2010	2011	2012	2013	2014
HNCs with Alumni Supervisors	318	306	416	322	341	508
HNCs without Alumni Supervisors	787	608	547	462	603	679

- *High performers classified as employees with a performance rating of "5". Excludes employees that did not receive a performance rating.*
- *Managed high performers based on department level (HNC) turnover, segmented by departments with and without Alumni Supervisors.*
- *Supervisory and Non-Supervisory groups based on NCI Supervisor/Non-Supervisor Description codes and population identified by NCI.*

Monetary Awards – Supervisory Employees

## Academy Alumni supervisors received more monetary awards than Non-Alumni supervisors.
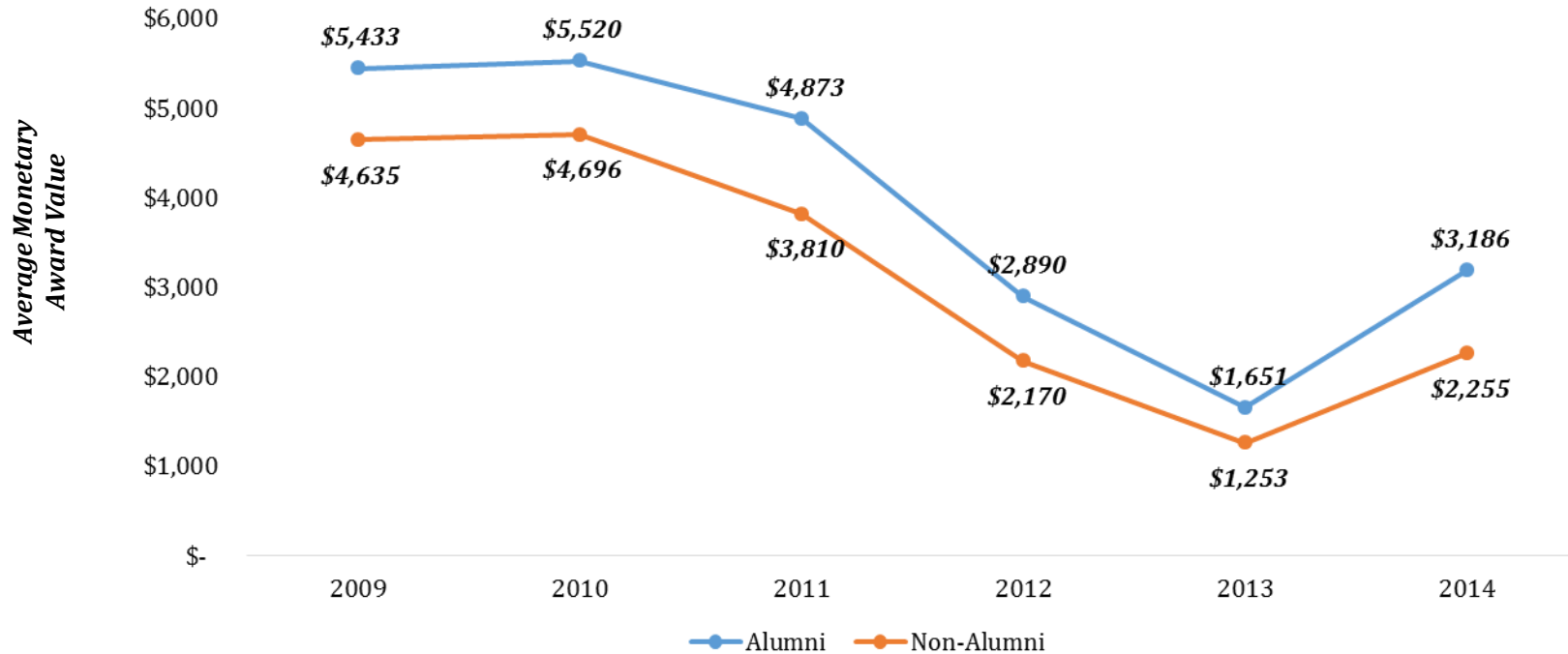
Average Headcount	2009	2010	2011	2012	2013	2014
Alumni Supervisors	84	100	145	189	205	231
Non-Alumni Supervisors	708	824	999	1,198	1,124	1,161

- Includes cash value for monetary awards and QSI awards, and cash equivalent for time-off awards.
- In addition to larger monetary awards, alumni received more frequent total awards as well across all years.
- Average Headcount displayed for sample size data (transactional data over time).

Training Participation

Turnover by Tenure and Training Participation

Employees taking training had significantly lower turnover rates, particularly for employees with 5 or less years of tenure.
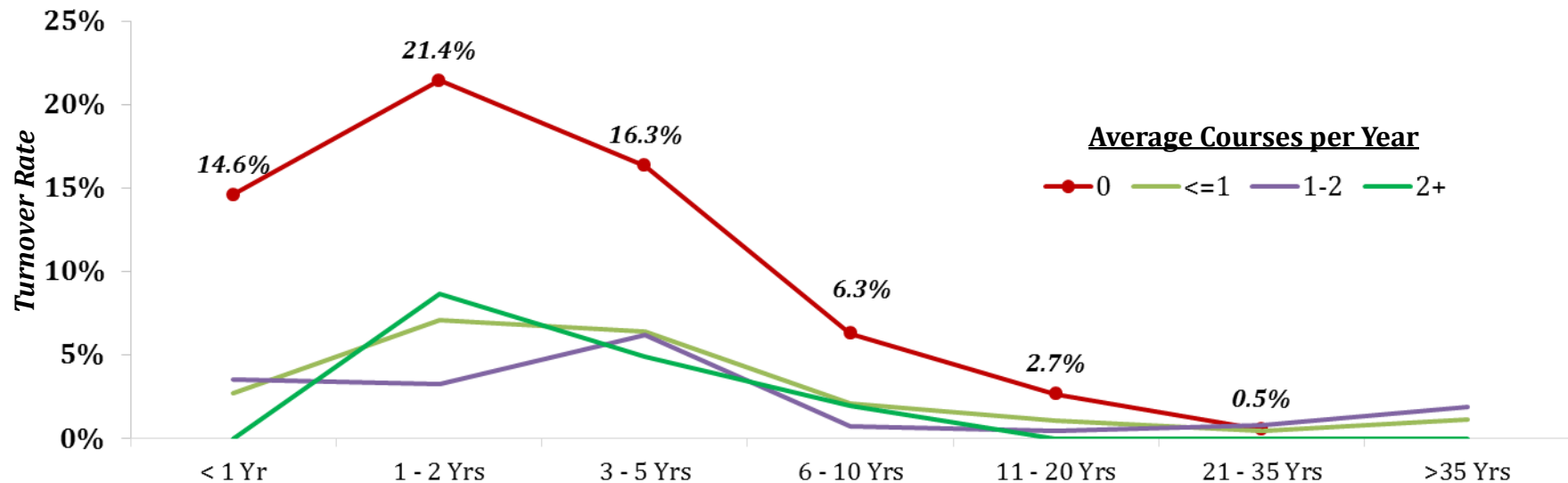

Average Headcount (Courses per Year)	< 1 Yr	1-2 Yrs	3-5 Yrs	6-10 Yrs	11-20 Yrs	21-35 Yrs	> 35 Yrs
0	631	1,055	974	1,560	1,504	735	179
<= 1	480	1,012	1,159	1,917	2,618	1,424	261
1-2	141	307	389	404	418	252	53
2+	80	162	246	208	266	142	20

- *Turnover excludes retirements and IC transfers.*

Return to LMS Training

Performance and Training Participation

**Employees with no training were the least likely to be rated as high performers.**

Percent of High Performers

27.8%
21.1%
23.5%
19.4%
27.0%
37.4%

Average Courses per Year

0 — <=1 — 1-2 — 2+
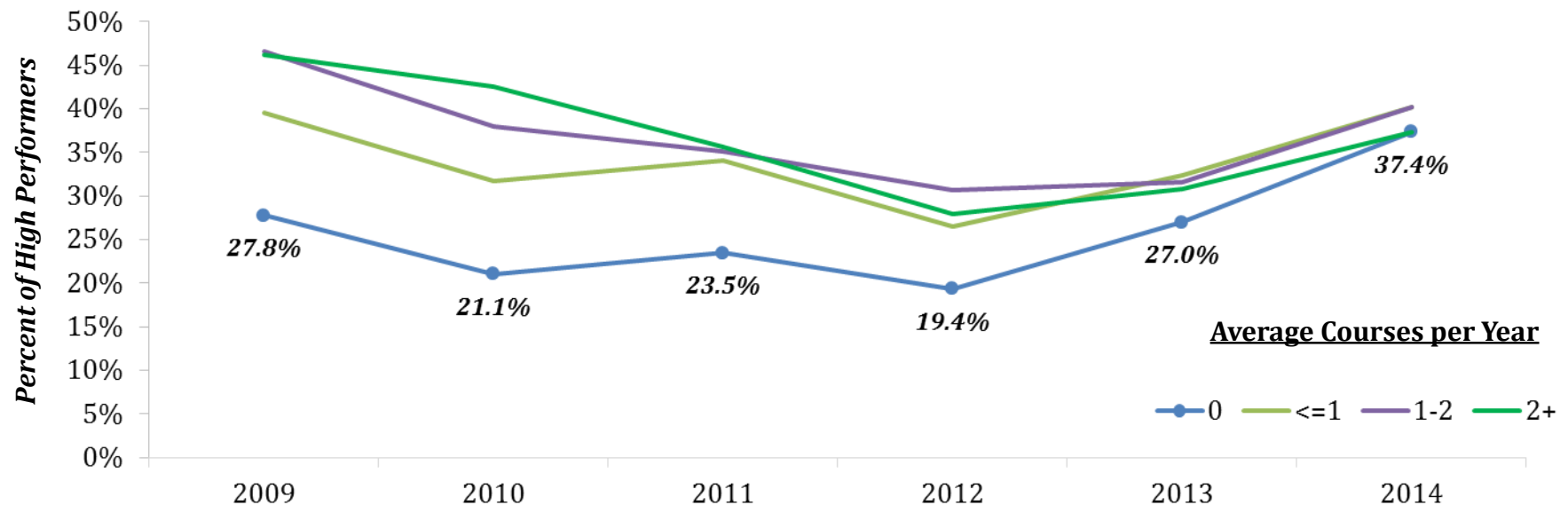
End of Period Headcount (Courses per Year)	2009	2010	2011	2012	2013	2014
0	1,274	1,182	1,081	990	907	861
<= 1	1,411	1,497	1,543	1,551	1,529	1,494
1-2	268	311	342	374	393	393
2+	147	167	177	236	259	284

- *Turnover excludes retirements and IC transfers.*

Turnover and Training Participation

Employees that complete any LMS training having significantly lower turnover than those not taking courses.
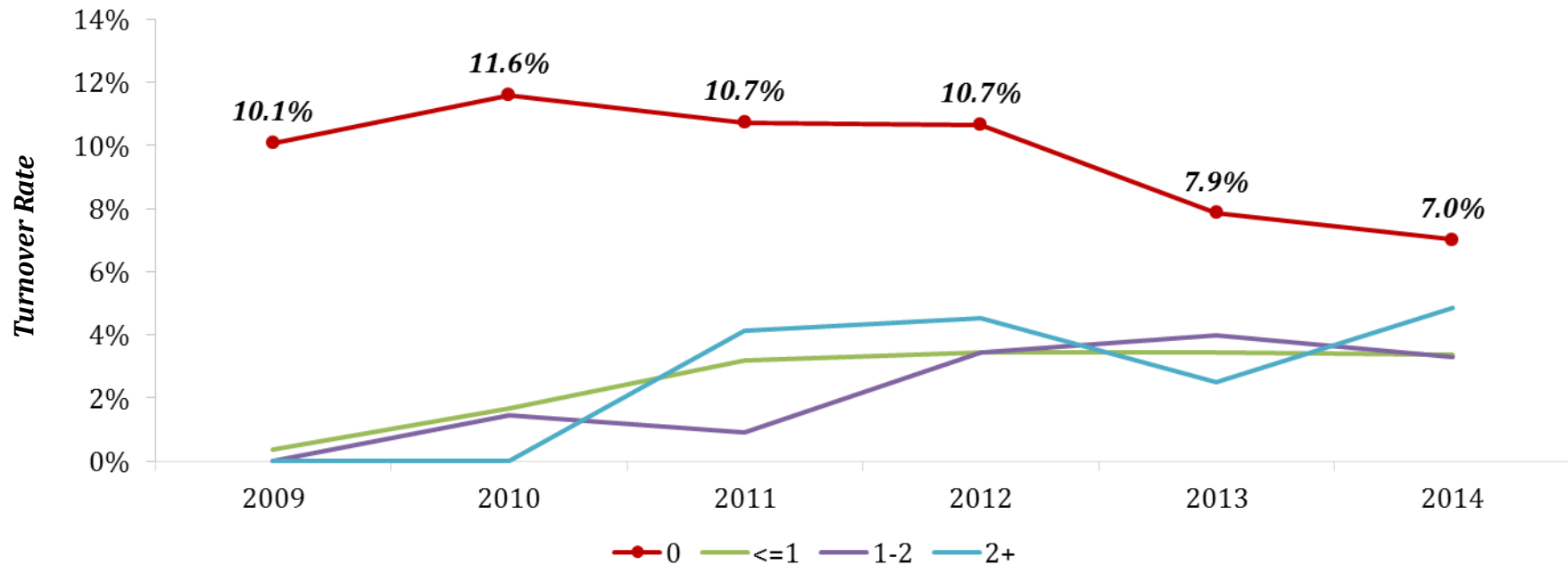
Average Headcount (Courses per Year)	2009	2010	2011	2012	2013	2014
0	1,341	1,242	1,166	1,051	954	884
<= 1	1,313	1,432	1,534	1,541	1,544	1,507
1-2	244	275	328	347	377	393
2+	120	151	169	177	240	267

- *Turnover excludes retirements and IC transfers.*   **Return to LMS Training**

Managed Training Participation

**Employees with Alumni supervisors completed almost twice the courses as employees with Non Alumni supervisors.**

Average Courses per Year

Courses Completed

| Alumni Supervisors | 0.72 | 0.76 | 0.73 | 0.84 | 1.06 | 1.07 |
| Non-Alumni Supervisors | 0.39 | 0.43 | 0.47 | 0.56 | 0.54 | 0.59 |

— Alumni Supervisors   — Non-Alumni Supervisors
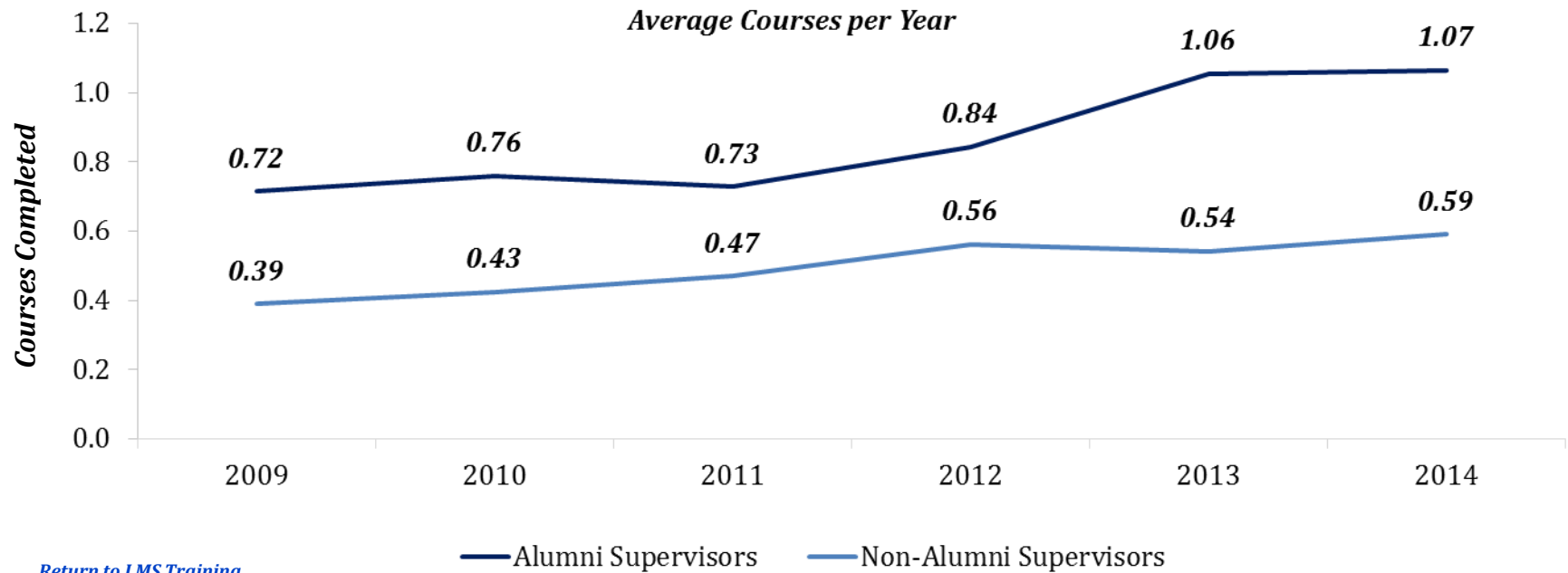
Return to LMS Training

End of Year Headcount	2009	2010	2011	2012	2013	2014
HNCs with Alumni Supervisors	842	959	1,205	1,221	1,132	1,313
HNCs without Alumni Supervisors	2,258	2,198	1,938	1,930	1,956	1,719

Alumni Comparison Groups

Promotion Rates by Training Course

While the overall differential between Alumni and Non-Alumni is less clear, Knowledge Management Alumni are promoted at more than twice the rate of the other Alumni and the overall NCI average.
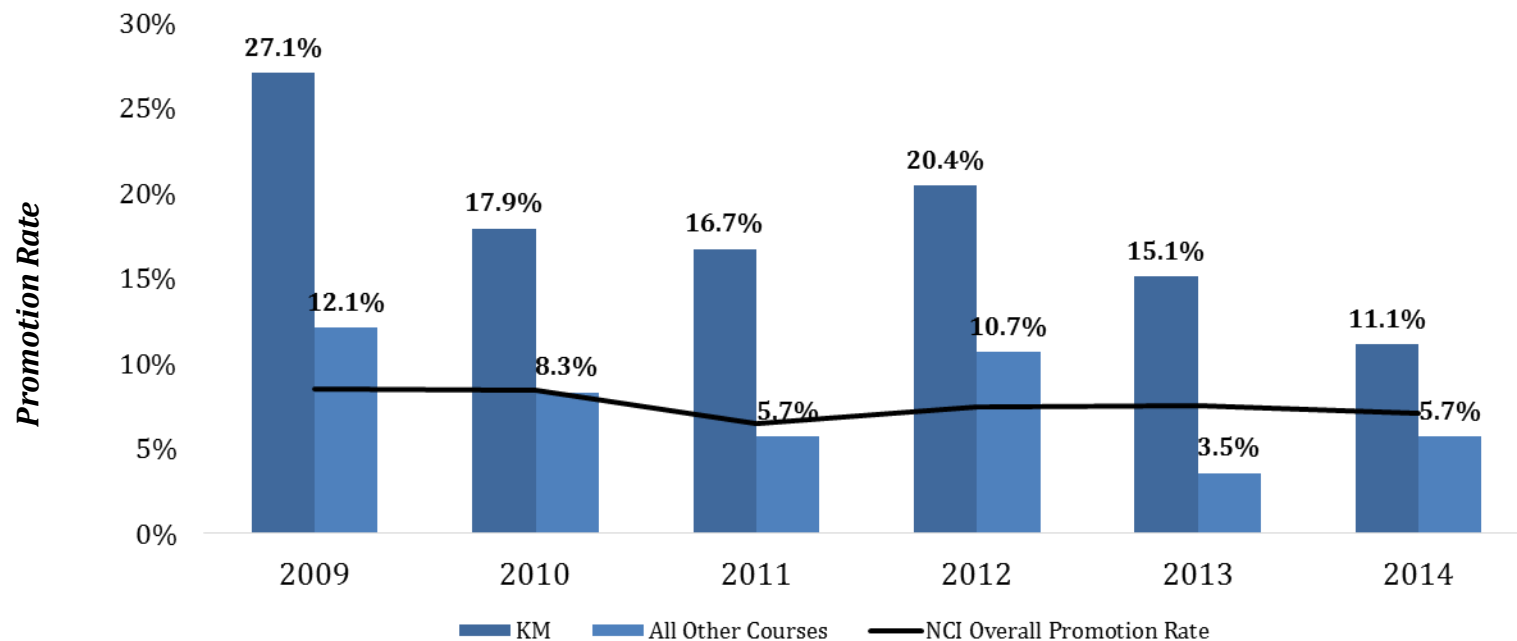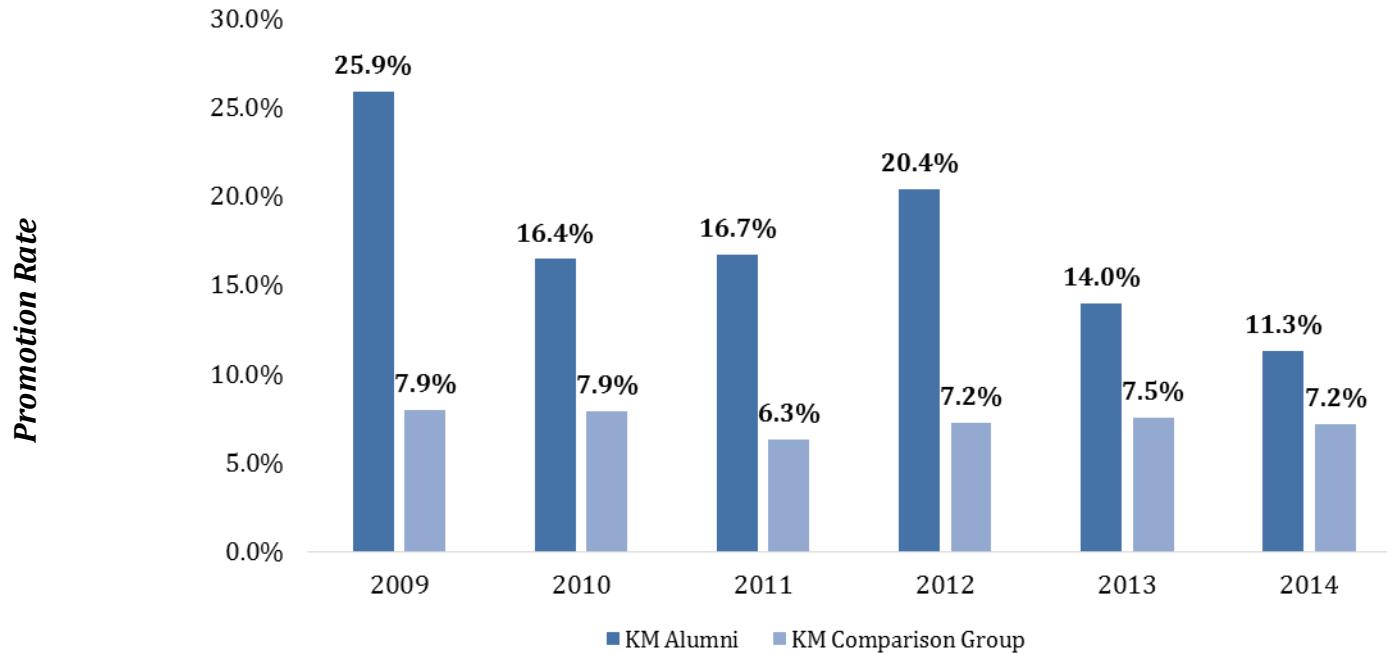

Average Headcount	2009	2010	2011	2012	2013	2014
KM	52	61	72	78	80	81
Executive Coaching	57	67	83	100	112	119
KM Mentor	21	26	32	39	46	47
LEAP			14	14	17	27
SEED	38	47	52	52	62	61
TES	1	5	30	58	74	99

- *Promotions classified based on NOAC action type.*
- *All Other Courses include: Coaching, LEAP, SEED, KM Mentor and TES.*

KM Promotion Rate vs Comparison Group

Knowledge Management Alumni are promoted at almost twice the rate of Non Alumni in the same grades.
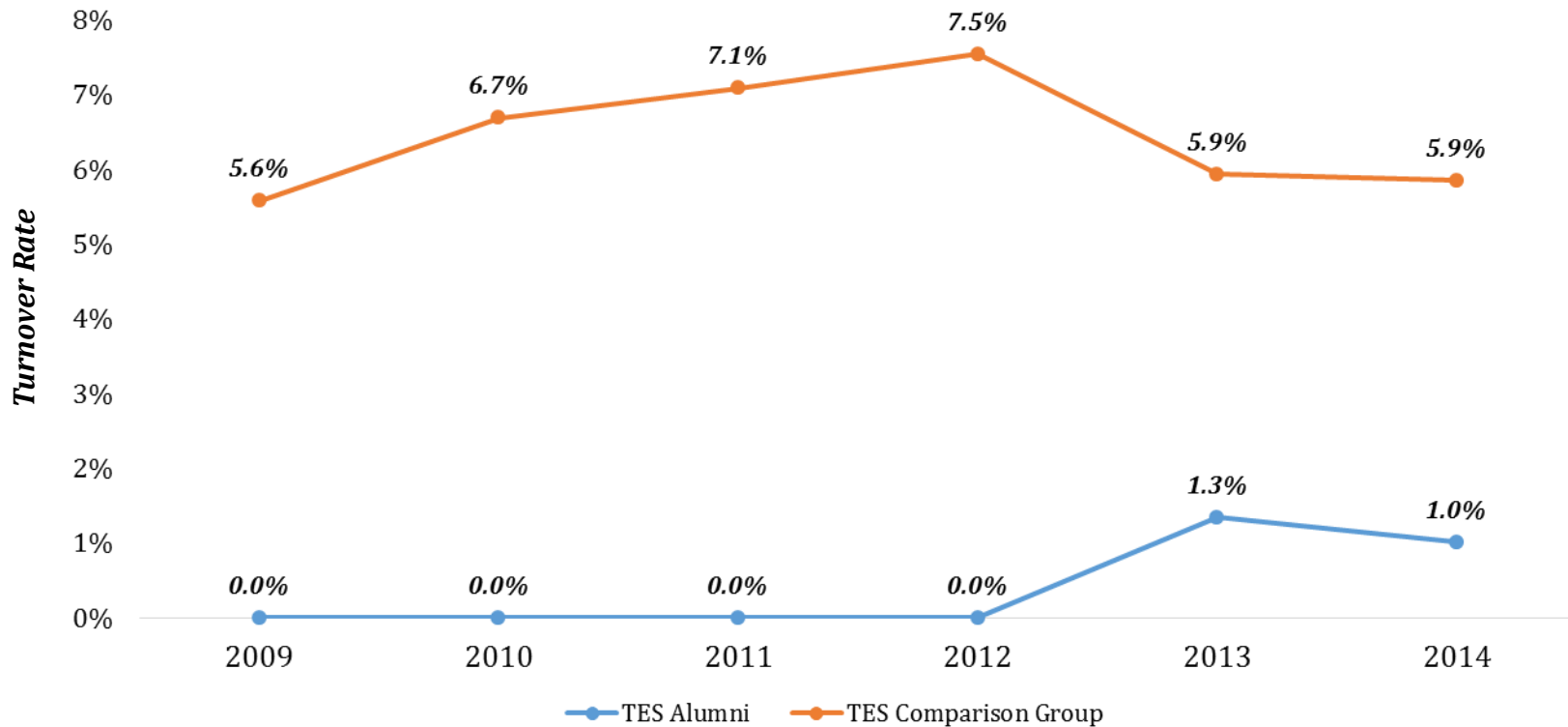

Average Headcount	2009	2010	2011	2012	2013	2014
KM Alumni	52	61	72	78	80	81
KM Comparison Group	2,846	2,883	2,879	2,774	2,722	2,645

- *Promotions classified based on NOAC action type.*
- *Non-Alumni comparison group only includes non-supervisors in the same grade levels as the KM Alumni population.*

Return to Overall Promotion Rate
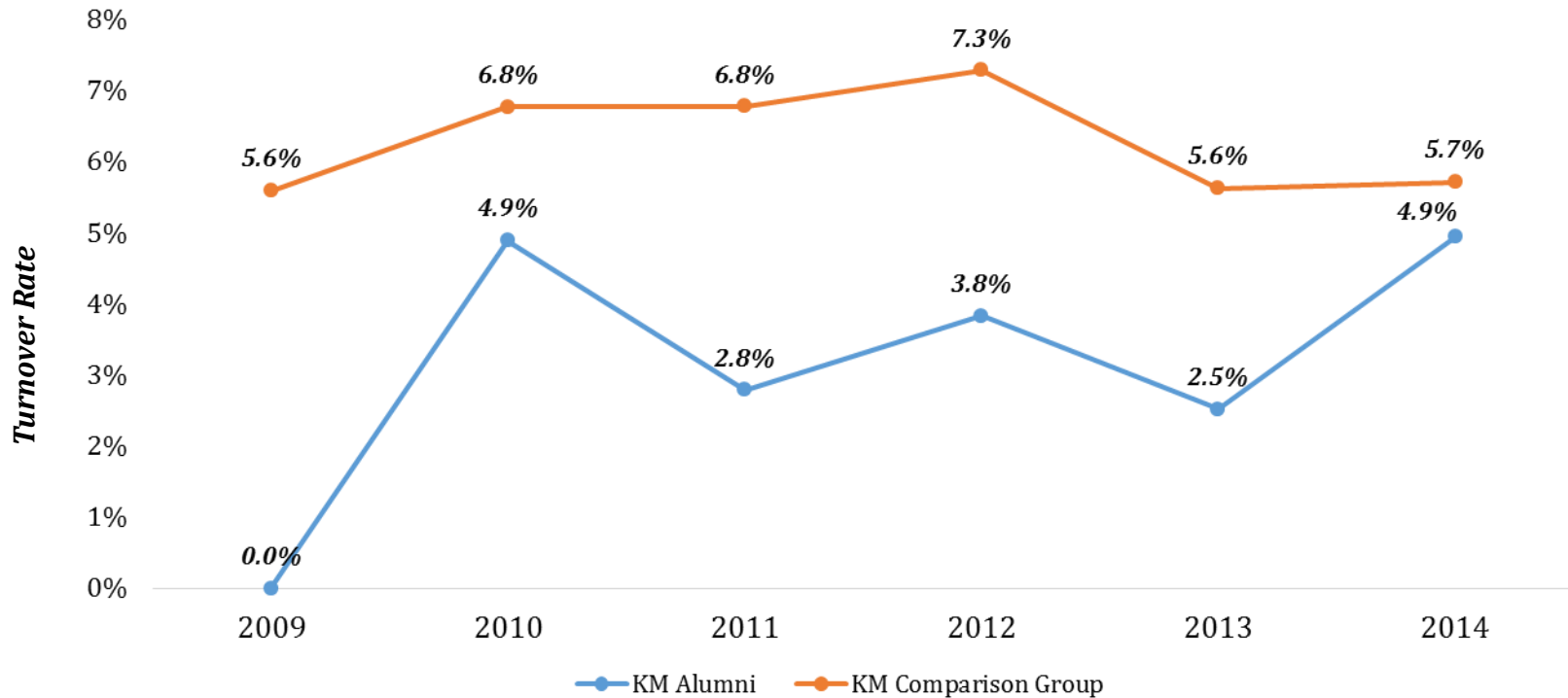
TES Turnover Rate v Comparison Group

No TES Alumni have terminated from 2009 through 2012. Non-Alumni in the same grades average above 6% turnover rate annually.

Average Headcount	2009	2010	2011	2012	2013	2014
TES Alumni	1	5	30	58	74	99
TES Comparison Group	2,489	2,526	2,538	2,464	2,393	2,339

- *Non-Alumni comparison group only includes employees in the same grade levels as the TES Alumni population.*

Return to Overall Turnover Rate

KM Turnover Rate v Comparison Group

Average Headcount	2009	2010	2011	2012	2013	2014
KM Alumni	52	61	72	78	80	81
KM Comparison Group	2,846	2,883	2,879	2,774	2,722	2,645

- Turnover excludes retirements and IC transfers.

SEED Turnover Rate Comparison

SEED alumni have had significantly lower turnover than their comparison group.
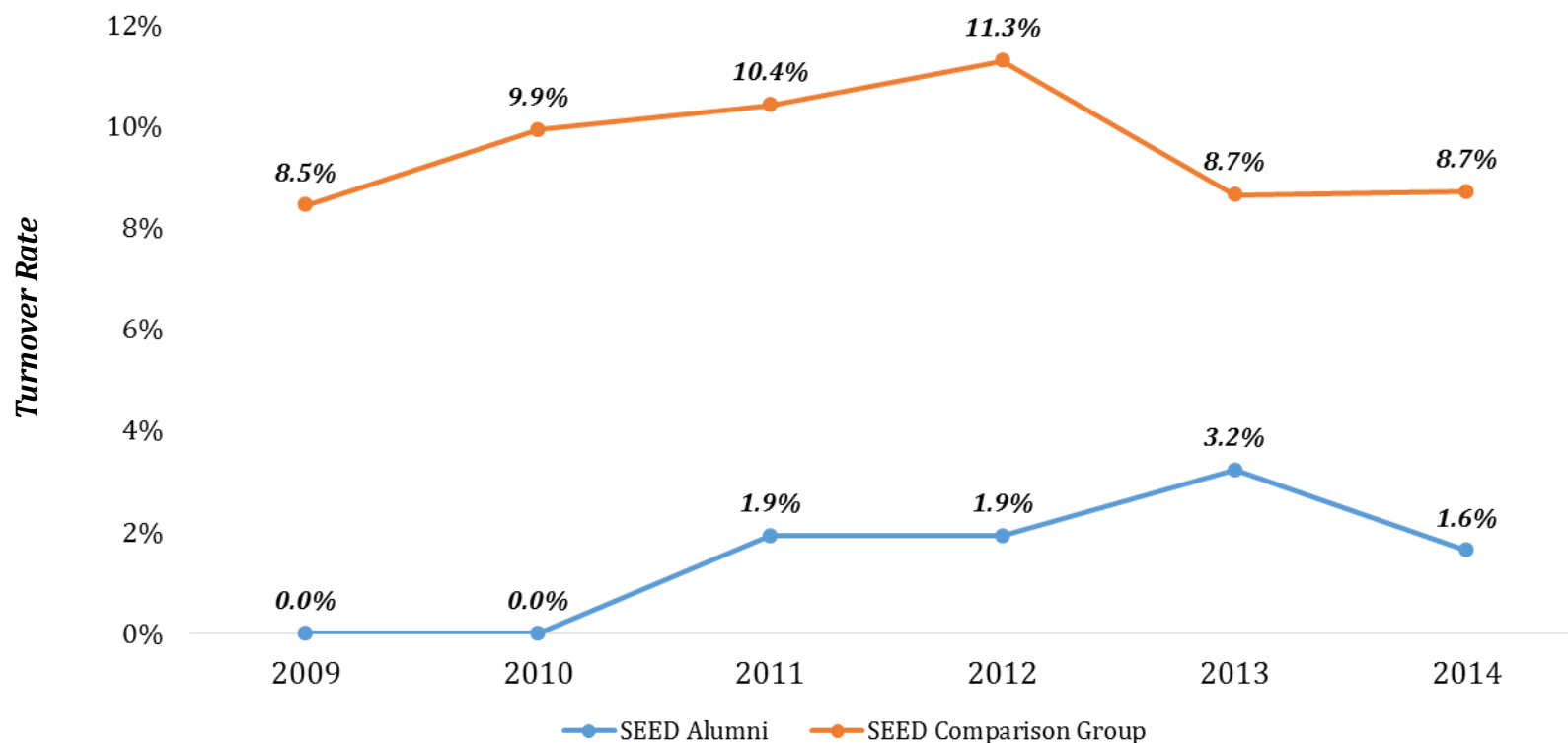
Average Headcount	2009	2010	2011	2012	2013	2014
SEED Alumni	38	47	52	52	62	61
SEED Comparison Group	1,467	1,488	1,486	1,433	1,386	1,343

- *Turnover excludes retirements and IC transfers.*

Coaching Turnover Rate v Comparison Group
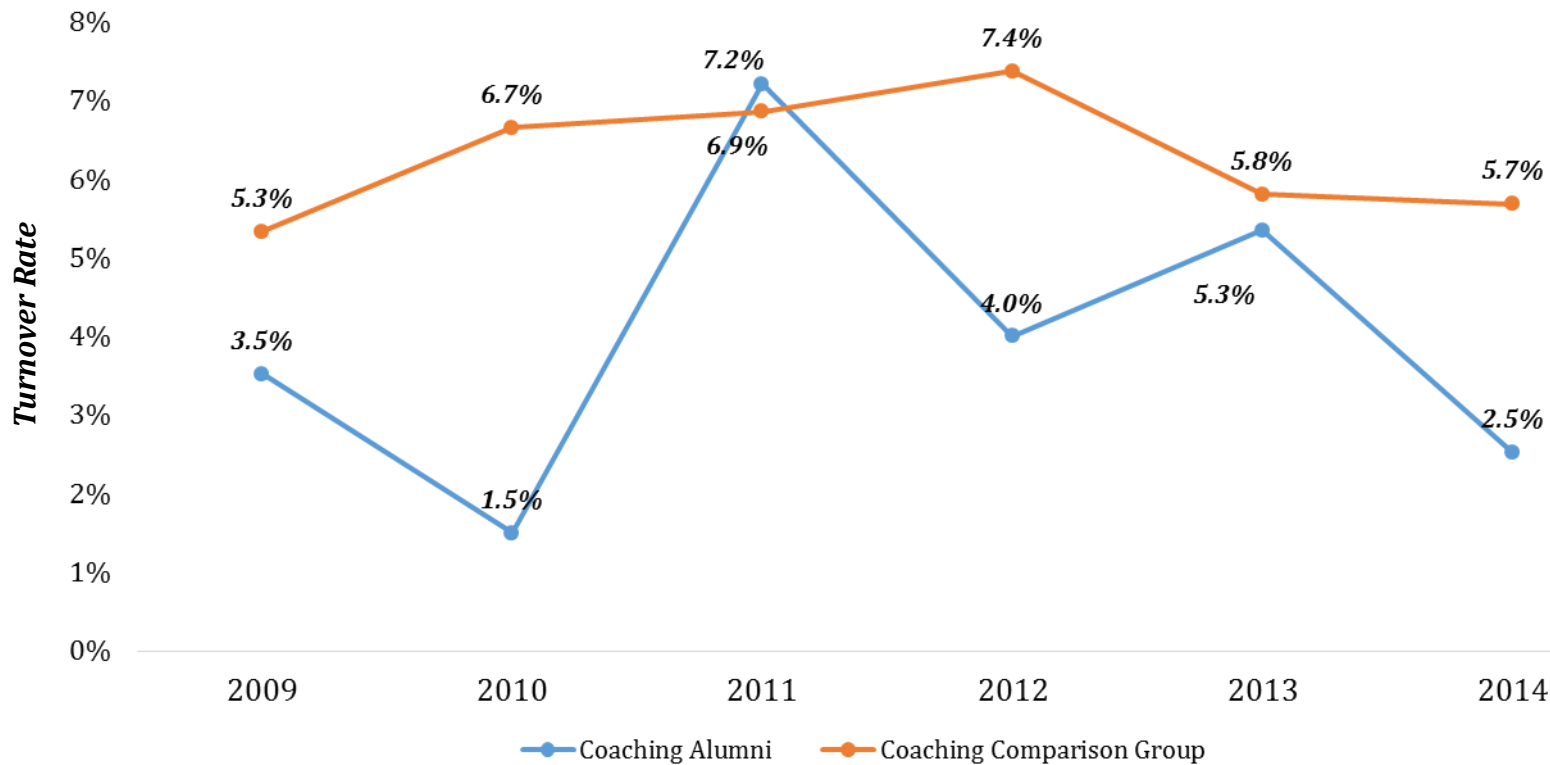
Average Headcount	2009	2010	2011	2012	2013	2014
Coaching Alumni	57	67	83	100	112	119
Coaching Comparison Group	2,624	2,676	2,681	2,590	2,515	2,463

- *Turnover excludes retirements and IC transfers.*

LEAP Turnover Rate Comparison

Although a small group, LEAP alumni have experienced no turnover until recently in 2014.
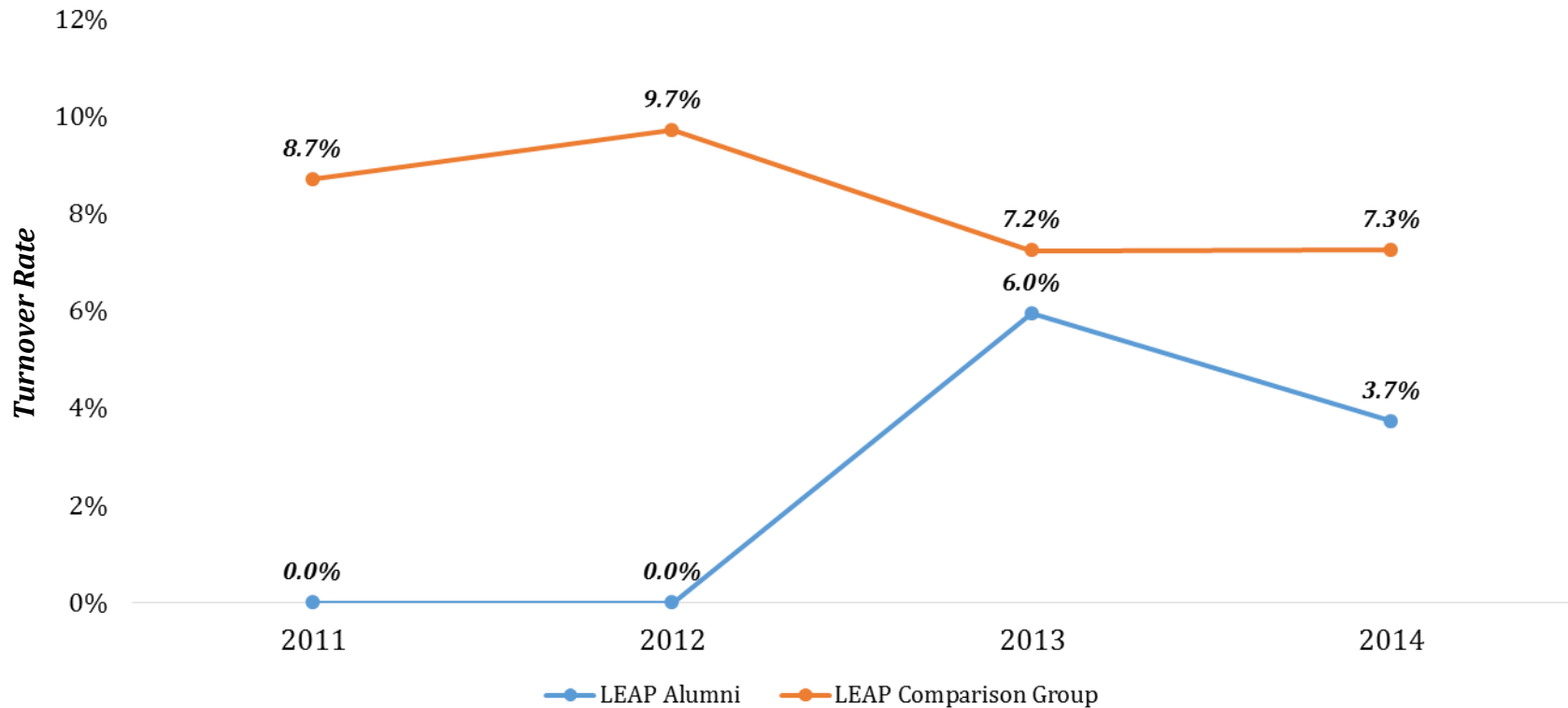
Average Headcount	2011	2012	2013	2014
LEAP Alumni	14	14	17	27
LEAP Comparison Group	1,849	1,779	1,726	1,695

- Turnover excludes retirements and IC transfers.

Return to Overall Turnover Rate

Alumni Multiple Courses Turnover Rate Comparison

Alumni taking multiple courses have experienced lower turnover than their comparison group.
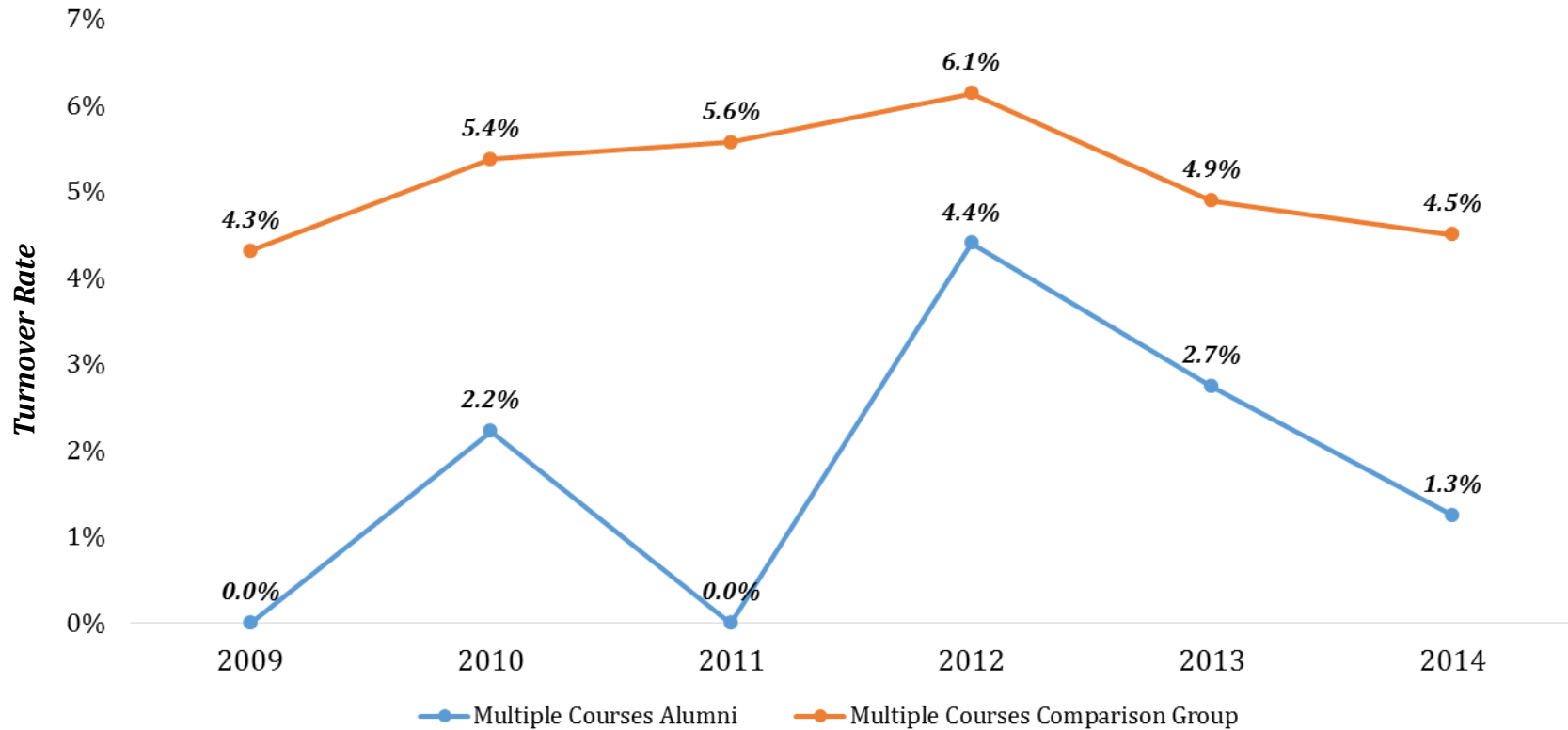
Average Headcount	2009	2010	2011	2012	2013	2014
Multiple Courses Alumni	43	45	55	68	73	80
Multiple Courses Comparison Group	2,716	2,771	2,783	2,688	2,616	2,554

- Turnover excludes retirements and IC transfers.

Statistical Analyses

Statistical Confirmatory Analysis

- Tests
  - Chi-Square Test of Independence
    - Few data assumptions to meet
    - Useful for categorical data

  - Independent Samples T-Test
    - Useful for continuous data

- Methods
  - Analyses performed for each year increased precision and to avoided double counting individuals

  - Computational software SPSS utilized for analyses

- Limitations
  - Some sample sizes were too small or unbalanced to perform statistical analysis

Statistical Findings Table

Primary findings were statistically confirmed, with analyses detecting effects for turnover, performance rates, monetary awards, and promotion rates.

The *p*-value is the probability of the observed effects resulting by mere chance. If this probability is .05 or lower, we reject chance as an explanation and can determine there is a real effect.

Method	Slide	Variable	2009	2010	2011	2012	2013	2014
Chi Square	15	Turnover Rate	.037**	.093*	.085*	.008***	.066*	.093*
Chi Square	19	Overall High Performer Rate	.004***	<.001***	<.001***	<.001***	<.001***	<.001***
Chi Square	50	Non-Supervisor High Performer Rate	.366	.001***	.038**	<.001***	.006***	.156
Chi Square	50	Supervisor High Performer Rate	.005***	<.001***	<.001***	<.001***	<.001***	<.001***
Chi Square	51	Managed High Performer Rate	.007***	.001***	<.001***	.064*	.579	.654
T-Test	52	Supervisory Employees Monetary Awards	.059*	.009***	<.001***	<.001***	.006***	<.001***
T-Test	21	All Employees Monetary Awards	<.001***	<.001***	<.001***	<.001***	<.001***	<.001***
Chi Square	22	Director Awards	N/A	.069*	<.001***	<.001***	<.001***	<.001***
T-Test	24	Managed Promotion Rate	.0015***	.025**	.0035***	.0095***	.009***	<.001***

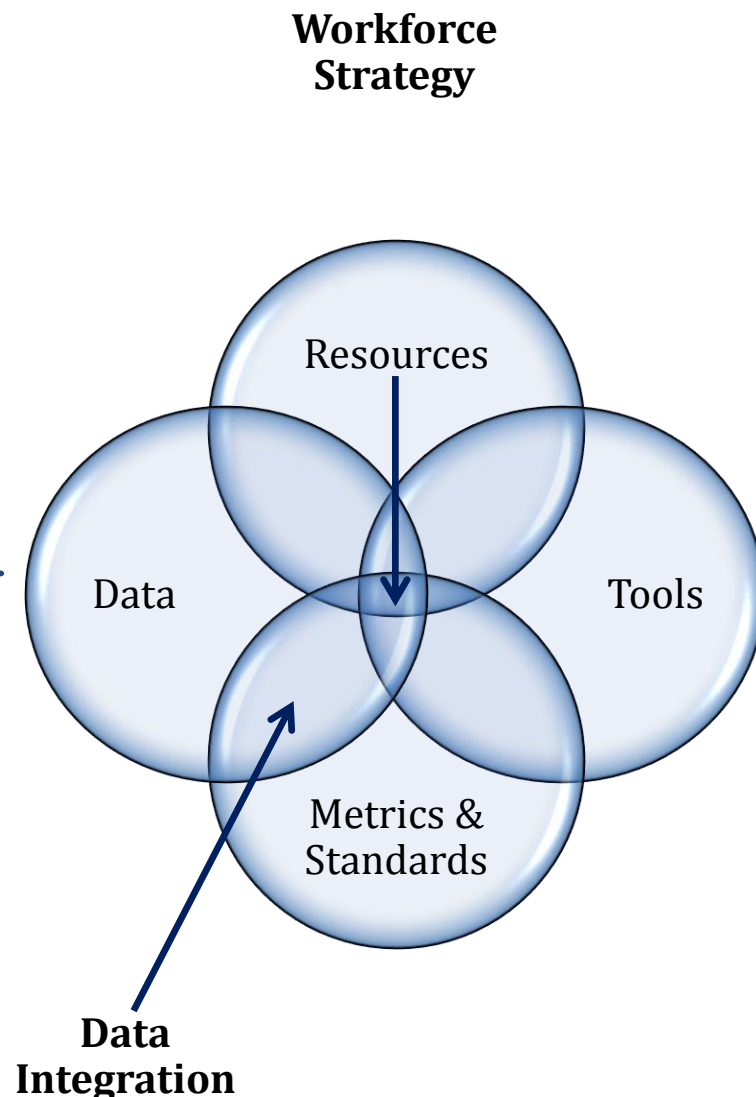■ **Statistically significant, *p*<.05** or *p*<.01*****   ■ **Approaching significance, *p*<.10***

HCMI Workforce Analytics Methodology

HMCI Analytics Methodology

Keys to Success:

- Formalize Workforce Strategy
- Find the Right Key Metric Indicators
  - Link to Critical Workforce Questions
- Create Data and Reporting Standards
- Build Analytics Skills and Create Focus
- Integrate Disparate Datasets
  - (BI or HRIS systems)
- Strong Processes and Tools
  - Governance and Oversight
  - Build or buy analysis tools; Automation
- Insights and Answers to Key Questions
- Quantify Financial Impact and ROI

- Interventions and Change Management

Workforce Strategy

Resources

Data

Tools

Metrics & Standards

Data Integration

Workforce Analytics Journey

Stage In Evolutionary Model

Start

goal

| Awareness	Action	Competence	Effectiveness	Excellence

Roadmap Steps Toward Excellence

1	2	3	3+	4	5
Select Measures that Align HR and Business Strategy	Launch Analytic Center of Excellence	Metrics and Benchmark Standards	Conduct Root Cause Analysis	Advanced Metrics use + ROI Analysis	Workforce Analytics that Quantify Impact

Capability Milestones

Metrics Framework and Scorecards + KPIs and Automated Reporting + Standards + Integrated Data Analysis + Hot Spot Identification and Trending + Performance and Retention Modelling = Key Driver of Business Strategy

*Review and Optimize Along the Way*

Workforce Standards and Metrics

Workforce Data Integration Blueprint

- ## *Data Integration:*
  - ✓ Comprehensive systems, data flow and structure
  - ✓ Data quality, gap identification, cleansing and proxies

- ## *Workforce Standards:*
  - ✓ Metrics standards, definitions, formulas and predictive linkage to business results
  - ✓ HCMI job framework, transaction and timing standards

- ## *Analytics and Planning Model:*
  - ✓ Data integration, positioning, segmentation, trending and predictive modeling
  - ✓ Structured analysis, insights and ROI across the talent management lifecycle

HCMI Workforce Standards

Transactions	Metrics	Job Framework	Timing and Reporting
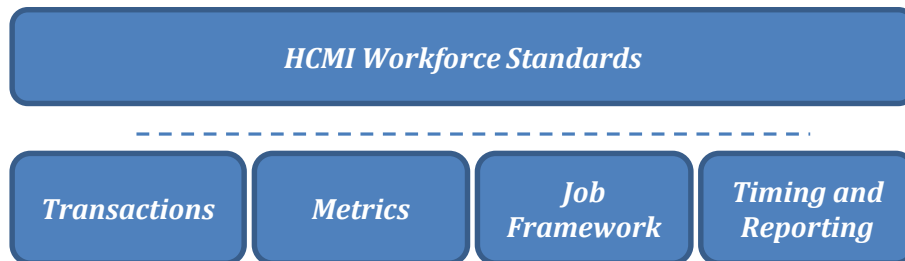
HCMI Workforce Analytics Methodology
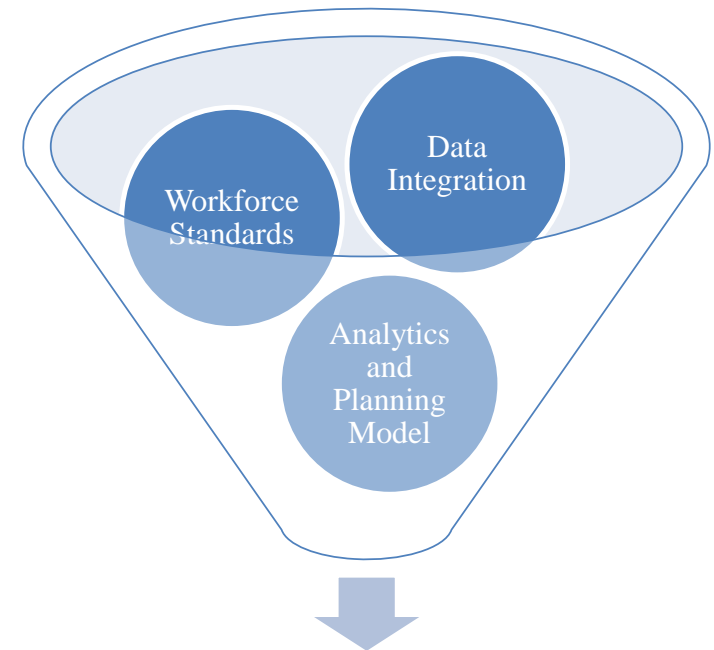
Sustainable Framework for Workforce Measurement, Analytics and Planning

Importance of Defining Job Roles

- **Accurate** workforce segmentation drives **on demand workforce analysis** and helps identify key areas of opportunity. Quantify the value and impact of interventions specific to each Job Role.

- Categorizing skills into Job roles enables quantitative forecasting. Additional Job Roles that emerge need to be added to the demand forecasting process. Job roles should have **significant** mass and **meaningful** skill sets.

- The ultimate goal is **not to understand the number of people** you need, but to understand the skill gaps. The problem which most organizations have is not so much the number of staff, but rather the correct mix of staff

Workforce Standards Overview

Prerequisites and Basics

Process Documentation

1. Documented process flow diagrams + Documented data flow diagrams

2. Documentation of all data transfers between systems, key fields, relationships, trigger points and timing

3. Workforce data element inventory across systems, by system, field, source and use

Systems and Data Knowledge/Access

1. Knowledge of all systems housing workforce data and understanding regarding sources and uses for such systems and data

2. System and data access to relevant workforce/human capital data

3. Knowledge and understanding (ideally thru detailed assessment of data audit of overall system data accuracy and efficacy

Core Standards

Report Timing and Cutoff Standards

- Eliminate transaction backdating, enforce specific, cutoff dates/times for workforce data transaction entry/processing. Activity beyond cutoff dates becomes a transaction for next period

- Standardize, document and control all workforce system data transfers. Monitor data transfer trigger points and cutoffs

- Standardize routine system updates/ maintenance

Transaction Processing Guidelines

- Issue standards/guidelines for manual or semi-manual data entry of workforce data. Ensure that every similar transaction is coded and entered

- Frequently conduct system and data tests/reviews to ensure data accuracy

- Periodic audit of workforce data to ensure accuracy & adherence to standards

- Roll based security for system and data access to relevant human capital data

Note: See HCMI's Human Capital Metrics Handbook for Workforce Metrics Standards.

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Workforce Intelligence Software

Workforce Intelligence Consortium Group

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