

# Attracting and Retaining Top STEM Talent

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Three Strategies for Managing  
Talent in the Fields of Science,  
Technology, Engineering,  
and Mathematics

September 2014



## **CEB Corporate Leadership Council**

### **Executive Directors**

Mike Griffin  
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### **Practice Manager**

Sari Wilde

### **Consultants**

Lisa Klautzer  
Jessica Knight

### **Senior Research Analyst**

Laura-Katherine Davey

### **Research Analyst**

Bethany Horstmann

## **Content Publishing Solutions**

### **Print Designer**

Prashant Chauhan

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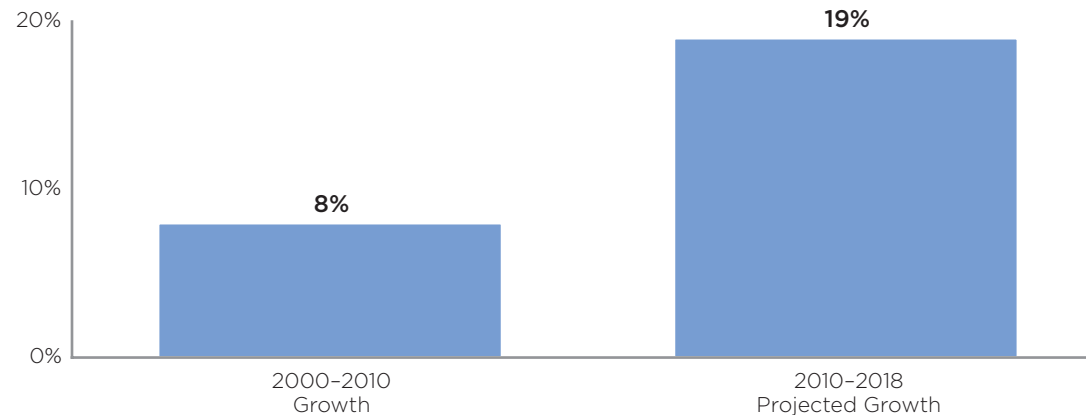


STEM employment is projected to more than double by 2018.

- STEM is an acronym that refers to the disciplines of science, technology, engineering, and mathematics.

## STEM IS A CRITICAL TALENT PRIORITY FOR ORGANIZATIONS

Past and Projected Growth in STEM Employment



Source: US Bureau of Labor Statistics, Employment Projections, US Department of Commerce, 2011.

**“We’re looking for new areas of potential growth. Through our technology development and our investment in R&D and innovation, we’ve been able to renew our portfolio.”**

Dr. João Bento, CEO  
Efacec Capital SCSP SA

Source: “Interview with Dr. João Bento,” PriceWaterhouseCoopers, accessed 23 September 2014, <http://www.pwc.com/gx/en/ceo-survey/2013/interviews/joao-bento.html>.

**“STEM is the heart of Innovation. Innovation drives growth, profits, and the roles of the future.”**

Michael Araten, CEO  
K’NEX Brands

Source: “Today’s CEO Leader in STEM: Michael Araten of K’NEX Brands,” STEMconnector, 28 October 2013, <http://blog.stemconnector.org/todays-ceo-leader-stem-michael-araten-k%E2%80%99nex-brands>.

Countries have made great strides to increase their available STEM talent.

# INCREASING STEM TALENT POOL IS A GLOBAL PRIORITY

Two Indicators of Multinational STEM Focus

1

## Countries Creating Special Commissions to Support STEM Talent

*Sample of Multinational Organizations  
Launching Commissions on STEM-Related Issues*



Commission on Science  
and Technology for  
Development



Policy Partnership on  
Science, Technology,  
and Innovation



THE WORLD BANK

Partnership in Applied  
Sciences, Engineering,  
and Technology

2

## Countries Revising Immigration Laws to Attract STEM Talent from Other Regions

*In the News: Revising Immigration Laws to Attract  
STEM Talent*

“Russia eases immigration  
rules for foreign specialists”

Source: Marina Obrazkova, “Russia to ease immigration rules for skilled workers and graduates,” Russia Behind the Headlines, 2 August 2013, [http://rbth.asia/news/2013/08/02/russia\\_to\\_ease\\_immigration\\_rules\\_for\\_skilled\\_workers\\_and\\_graduates\\_48345.html](http://rbth.asia/news/2013/08/02/russia_to_ease_immigration_rules_for_skilled_workers_and_graduates_48345.html).

“Relaxation in immigration rules: Germany  
attracts qualified & skilled workers from India”

Source: Ishani Duttgupta, “Relaxation in immigration rules: Germany attracts qualified & skilled workers from India,” The Economic Times, 20 March 2013, [http://articles.economictimes.indiatimes.com/2013-03-10/news/37581702\\_1\\_skilled-professionals-skilled-workers-card-scheme](http://articles.economictimes.indiatimes.com/2013-03-10/news/37581702_1_skilled-professionals-skilled-workers-card-scheme).

“US Plan Aims to Draw Immigrants  
With Technology Skills”

Source: Julia Preston, “U.S. Plan Aims to Draw Immigrants With Technology Skills,” The New York Times, 6 March 2014, [http://www.nytimes.com/2014/05/07/us/politics/us-plan-aims-to-draw-immigrants-with-technology-skills.html?\\_r=1](http://www.nytimes.com/2014/05/07/us/politics/us-plan-aims-to-draw-immigrants-with-technology-skills.html?_r=1).

“Expat immigration alert:  
Engineers needed in the UK...”

Source: Majorie van Leijen, “Expat immigration alert: Engineers needed in the UK...,” Emirates247, 12 January 2014, <http://www.emirates247.com/news/expat-immigration-alert-engineers-needed-in-the-uk-2014-01-12-1.534343>.

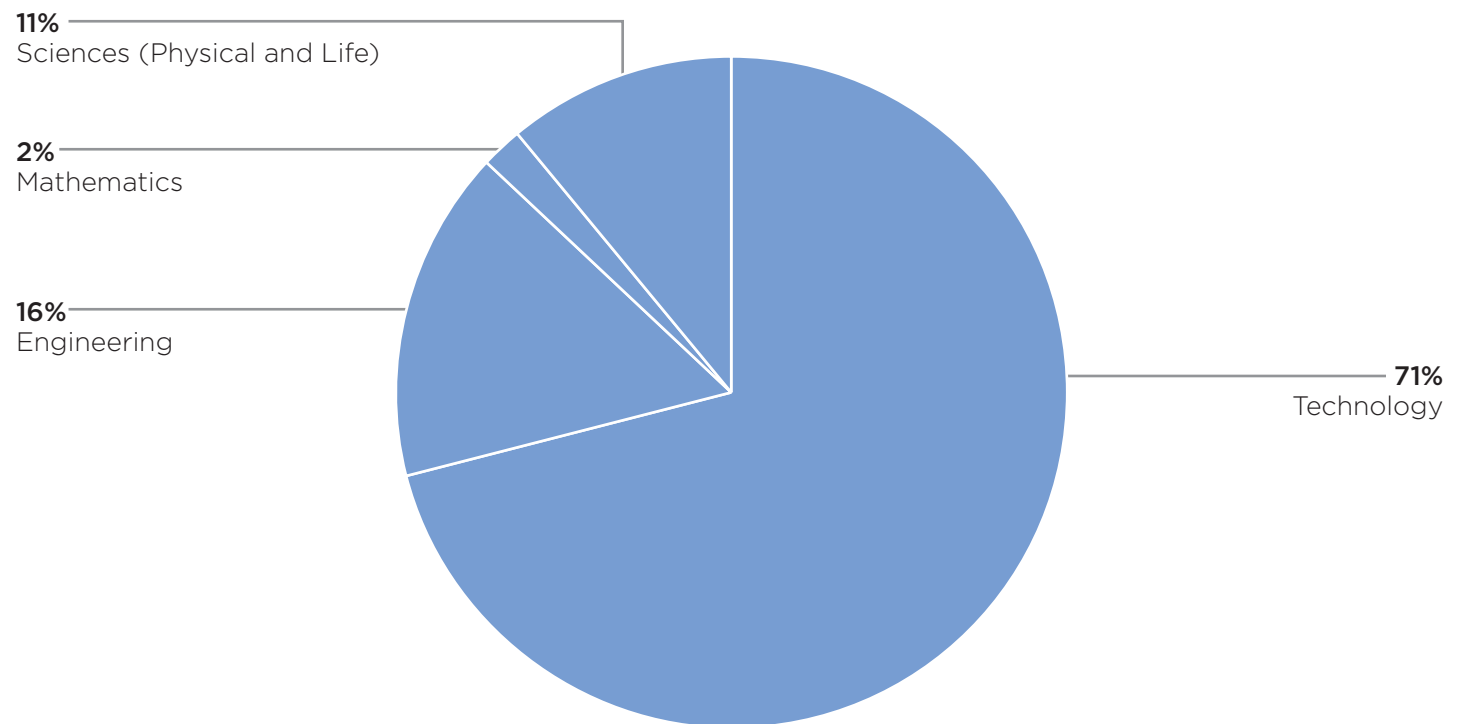


Within an organization, STEM talent generally works in the technology, engineering, and research and development (R&D) functions.

## STEM ROLES DEFINED

According to the Bureau of Labor Statistics (BLS), STEM talent includes employees in the **IT, R&D, and engineering and design** functions.

Percentage of STEM Jobs by Discipline



Source: Majorie van Leijen, "Expat immigration alert: Engineers needed in the UK...", Emirates247, 12 January 2014, <http://www.emirates247.com/news/expat-immigration-alert-engineers-needed-in-the-uk-2014-01-12-1.534343>.

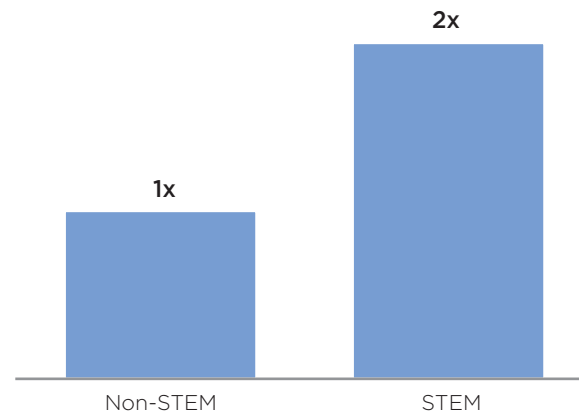


Each year organizations make significant time and financial investments to build a strong pool of STEM talent.

- Recruiters reach out to STEM talent twice as often as they do other talent.
- The average global cost of recruiting STEM talent is over US\$11,000.

## ORGANIZATIONS INVEST SUBSTANTIAL TIME AND MONEY TO ATTRACT STEM TALENT

Number of Times STEM and Non-STEM Employees Were Contacted by Recruiters in the Past Six Months<sup>a</sup>



n = 2,789.

Source: CEB 2014 Employment Branding Effectiveness Survey.

<sup>a</sup> Indexed.

Average Cost of Recruiting STEM Talent<sup>b</sup>

Region	Cost of Recruiting STEM Talent (in USD)
Asia	10,604
Africa	10,704
Europe	11,417
Latin America	10,731
North America	12,309
Australia and New Zealand	11,780
Global Average	11,225

Source: CEB TalentNeuron research and analysis; CEB 2014 Talent Neuron Internal Database; CEB Turnover Cost Calculator.

<sup>b</sup> Refers to average cost per hire, recruiter and hiring manager compensation costs, relocation and signing bonuses, and orientation expenses; does not include average starting salary for employees.

**“Countries need to prioritize their investments to create a workforce that has the requisite technology skills and innovation capabilities, in addition to cultural competencies, to compete in a global economy.”**

Balaji Ganapathy

Head of Workforce Effectiveness, North America, Tata Consultancy Services

Source: Edie Fraser, “Resilience: Growth with STEM Innovation, Technology, and Job Creation,” Diplomat Courier, 5 October 2013, <http://www.diplomaticourier.com/news/sponsored/1830-resilience-growth-with-stem-innovation-technology-and-job-creation>.



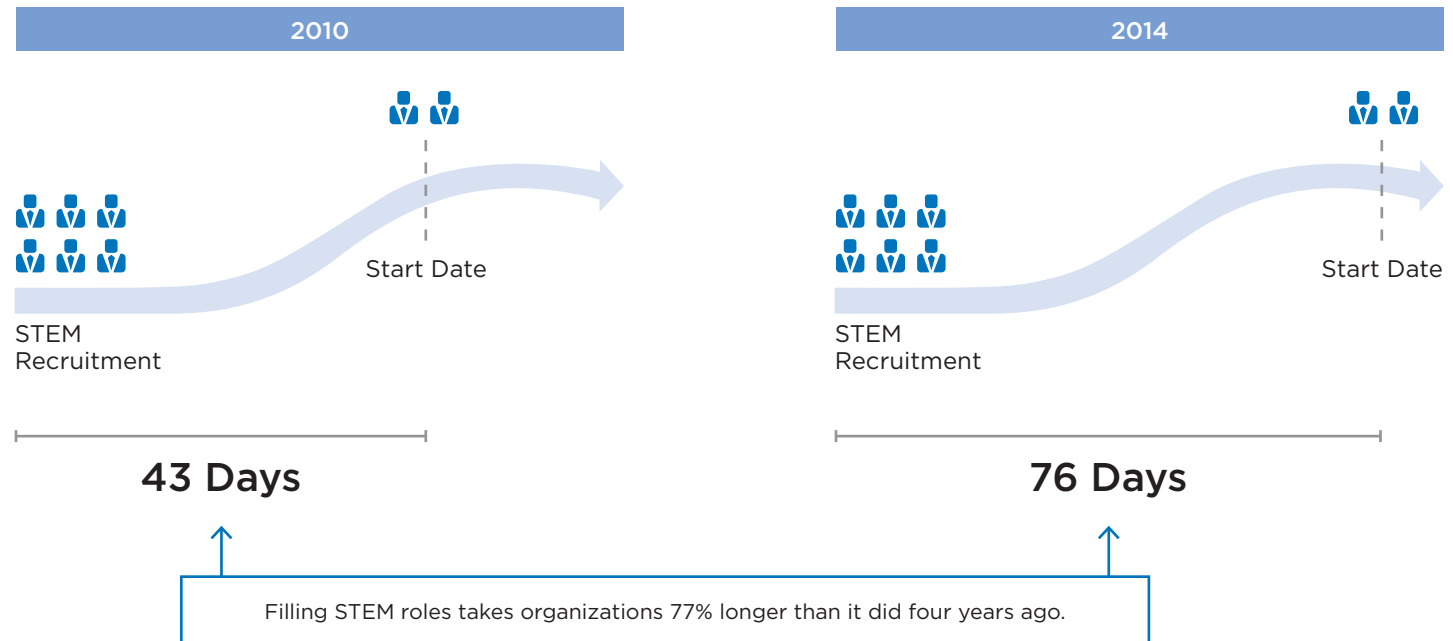
Despite these substantial investments, organizations struggle to attract STEM talent.

- Filling STEM roles takes 77% longer than it did four years ago.

## DESPITE INVESTMENTS, STEM TALENT IS DIFFICULT TO ATTRACT

STEM Roles Take Longer to Fill Today

*Median Time to Fill for STEM Roles (Business Days)<sup>a</sup>*



Source: CEB 2010 Recruiting Effectiveness Survey; CEB 2014 Employment Branding Effectiveness Survey.

<sup>a</sup> Time to fill increased from 42 days in 2010 to 66 days in 2014 for all other roles.

“We are struggling to attract qualified IT staff; we just aren’t a ‘sexy’ tech company.”

VP of Recruiting  
Financial Services Industry



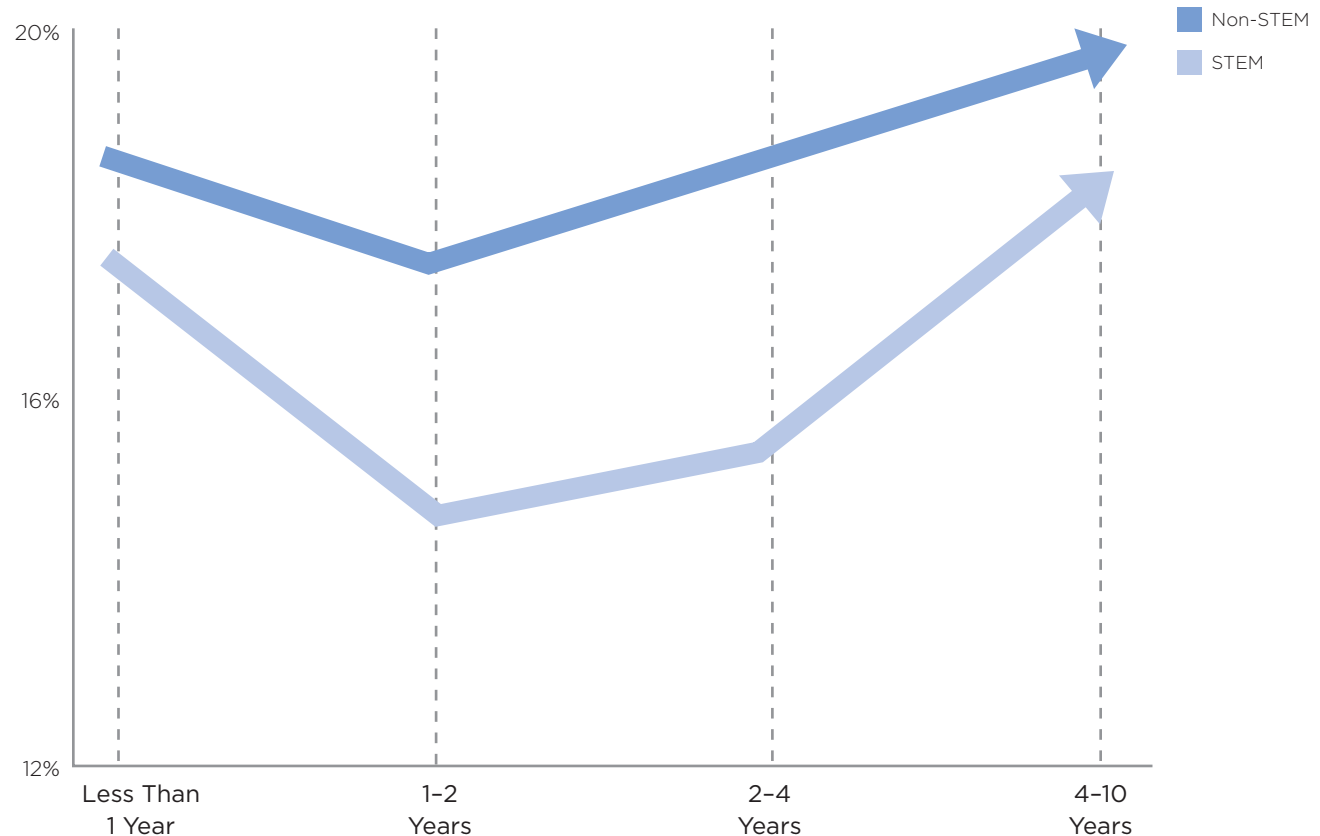
STEM talent report lower levels of discretionary effort than their peers—even early in their careers.

- STEM levels of discretionary effort are lowest one to two years in role.

## STEM TALENT IS LESS ENGAGED THAN PEERS FROM OTHER FUNCTIONS

STEM Talent Report Lower Discretionary Effort Than Peers Early in Their Careers

*Percentage of Employees Reporting High Levels of Discretionary Effort, by Tenure*



Source: CEB 2014 Q1 Global Labor Market Survey.

“We have a lot of technical people who don’t want to be managers. How do we make them feel appreciated so they will remain engaged?”

Head of Talent Development  
Health Care Industry





Organizations continue to face major challenges with their STEM workforce.

- Managers rate only 21% of all STEM employees as highly effective at enterprise contribution.

## STEM TALENT IS LESS EFFECTIVE AT ENTERPRISE CONTRIBUTION

STEM Talent Is Less Likely to Be Effective at Enterprise Contribution Than Their Peers

*Percentage of Employees Scoring High at Enterprise Contribution*



Source: CEB 2014 Enterprise Contribution Workforce Survey.

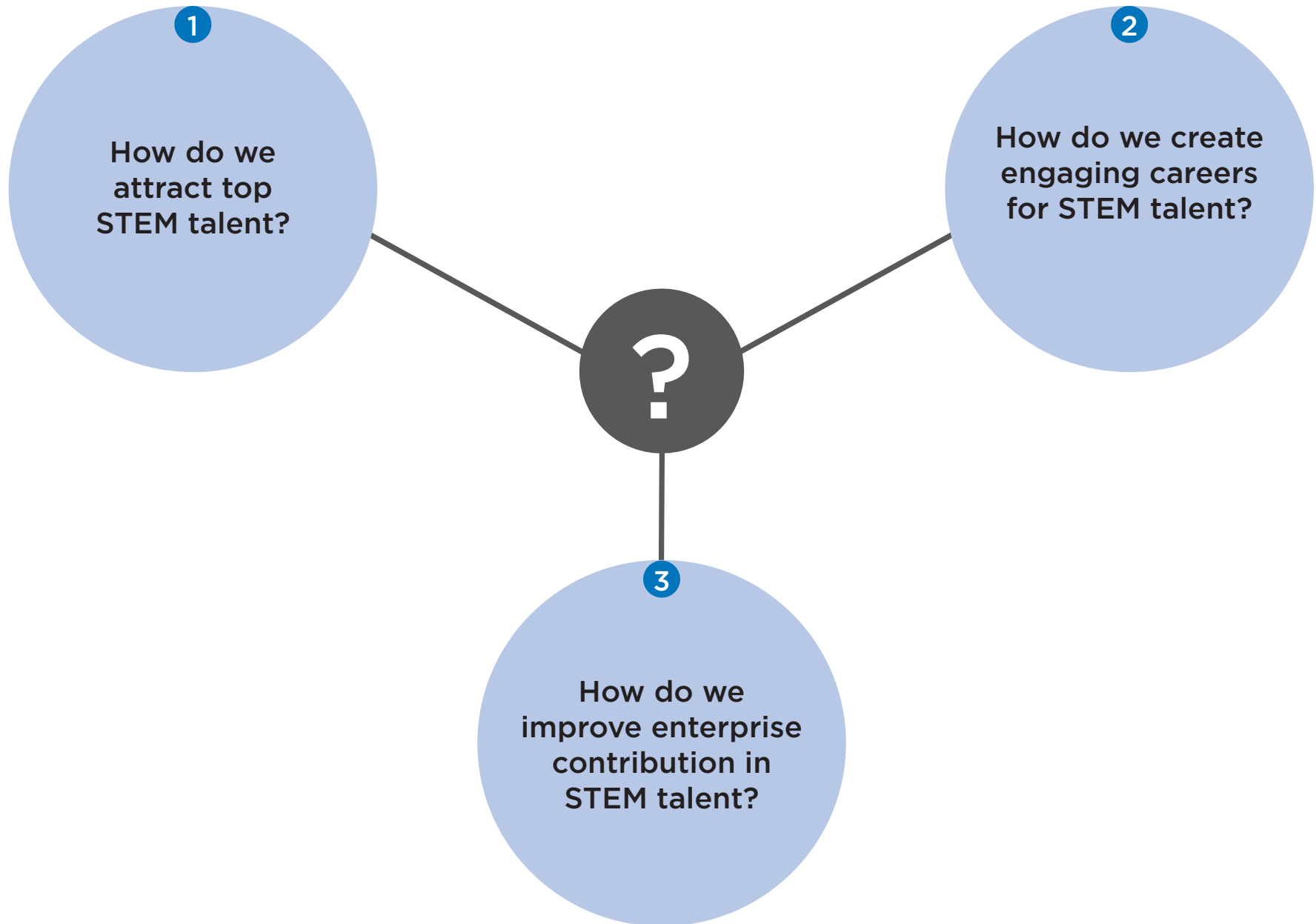
“It’s impossible to get the engineers in our business unit to hold a normal conversation; they just stare at their shoes.”

HRBP  
Manufacturing Industry







### Enterprise Contribution

Enterprise contribution is the combination of an employee’s effectiveness at his or her individual tasks as well as his or her effectiveness at contributing to and receiving contributions from others. It is a measure of performance in the new work environment.

# KEY QUESTIONS ABOUT STEM TALENT



# THREE STRATEGIES TO ATTRACT AND RETAIN TOP STEM TALENT

Strategy	Incorporate Development EVP into STEM Recruitment Strategies	Rethink the Traditional STEM Career Path to Drive Engagement	Embed Collaborative Responsibilities and Behaviors into STEM Job Success
Insight	Attract STEM Talent with Opportunities for Development, Not Just Expensive Compensation Packages	Empower STEM Talent To manage Their Own Careers, Don't Just Force Them Through the Traditional Career Ladder	Incorporate Enterprise Contribution into STEM Roles, Don't Just Convince Them of the Value of Collaboration
Best Practice	<p>Assess areas to invest in competitive differentiation against critical EVP attributes.</p> <p> <b>Scotiabank</b></p> <p><b>Employment Value Proposition (EVP) Redesign</b></p> <hr/> <p><b>APPENDIX</b></p> <p>Incorporate conversations on long-term career development into internship programs.</p> <p> <b>Principal Financial Group</b></p> <p><b>Career-Centric IT Internship</b></p>	<p>Equip employees to drive career conversations.</p> <p> <b>MITCHELL</b></p> <p><b>Employee-Owned Performance Conversations</b></p> <p>Embed leadership competencies in development across employee careers.</p> <p> <b>Intelsat</b></p> <p><b>High-Performance Leadership Academy</b></p> <p>Reduce reputation risk by creating projects for talent to practice newly developed skills.</p> <p> <b>Hillshire BRANDS</b></p> <p><b>Riskless Ideas-Sharing Workshops</b></p>	<p>Embed responsibility for fostering connections into employees' roles.</p> <p> <b>ExxonMobil</b></p> <p><b>Connection-Making Exemplars</b></p>

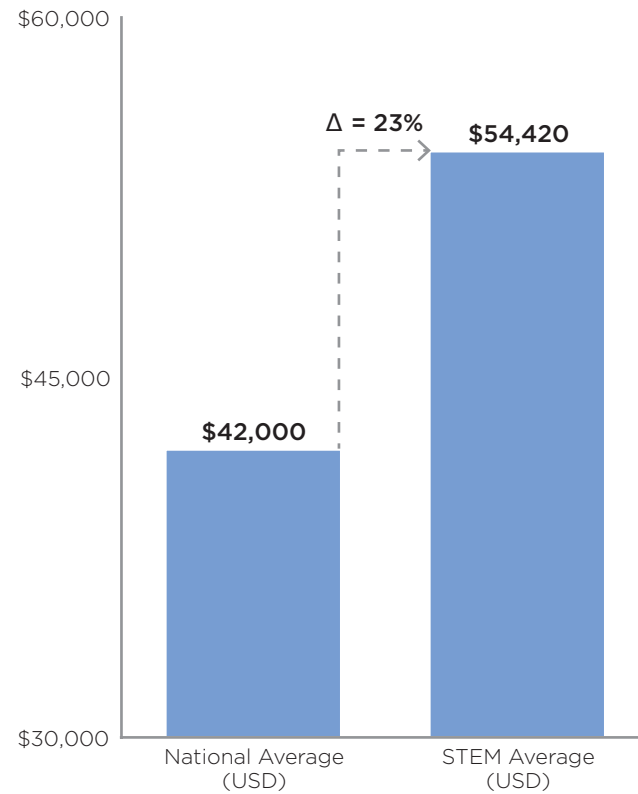


Organizations pay a premium for their STEM talent.

- STEM employees earn a starting salary that is 23% higher than the national average for all employees.
- STEM talent anticipate a higher job-switching premium than other talent.

## STEM SKILLS ARE PAID PREMIUM ON THE MARKET

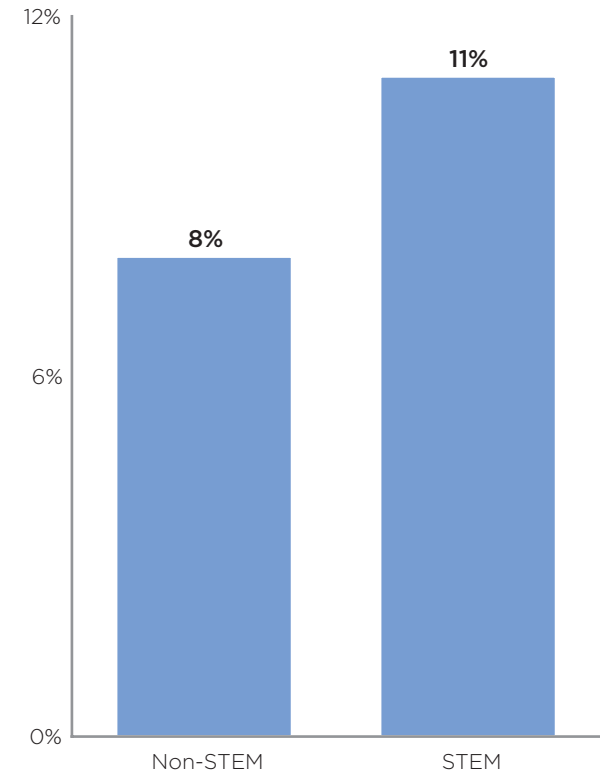
STEM Talent Earns a Higher Salary Than Peers  
*Average Starting Salary in the United States for STEM Employees Compared to the National Average*



Source: CEB 2014 TalentNeuron research and analysis; CEB 2014 Talent Neuron Internal Database; Glassdoor Analysis 2014.

STEM Talent Job-Switching Premiums Are Higher Than Peers

*Percentage Change in Total Compensation Employees Expect to Receive When Switching to a New Employer*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.



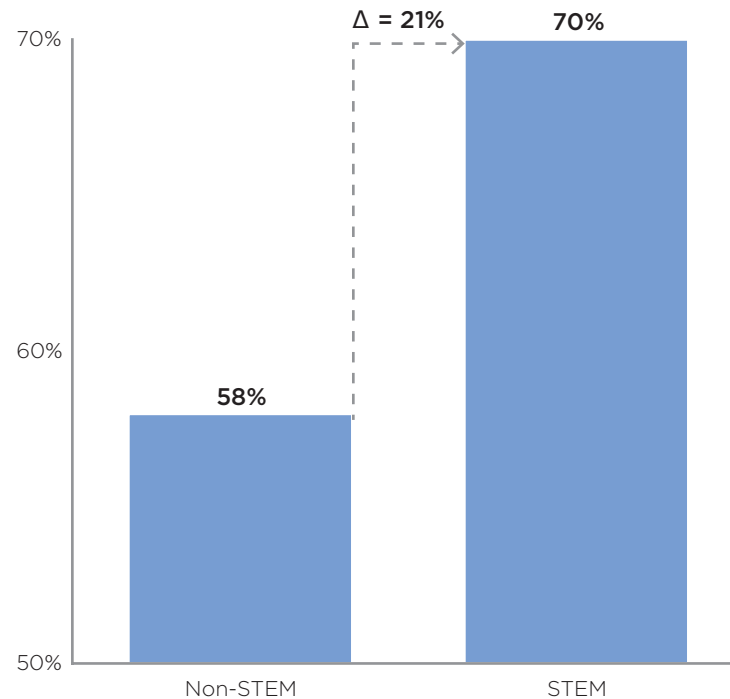
STEM talent is in greater demand than other talent, so organizations must look beyond compensation to attract the talent they want.

- Almost three-quarters of STEM talent have been contacted by a recruiter within the past six months.

## HIGH DEMAND FOR STEM TALENT REQUIRES ORGANIZATIONS TO THINK BEYOND COMPENSATION

STEM Talent Is in Greater Demand Than Non-STEM Talent

*Percentage of Employees Contacted by a Recruiter Within the Past Six Months*



n = 2,789.

Source: CEB 2014 Employment Branding Effectiveness Survey.

**Imperative:** Organizations must find strategies outside of costly compensation packages to attract STEM talent.



Organizations have an opportunity to base their EVP on development to attract STEM talent.

- STEM and non-STEM talent are equally attracted by compensation, but STEM talent care more about development.

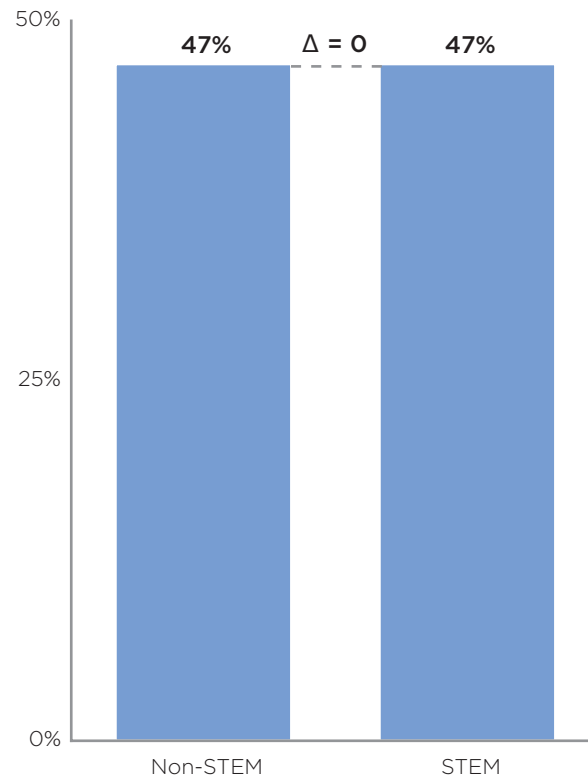
#### Compensation Is Still Important

Although compensation is the top EVP driver for both STEM and other employees, the difference between the groups is negligible compared to other attributes.

## DEVELOPMENT, NOT COMPENSATION, DIFFERENTIATES THE STEM EVP

STEM Values Compensation the Same as Others

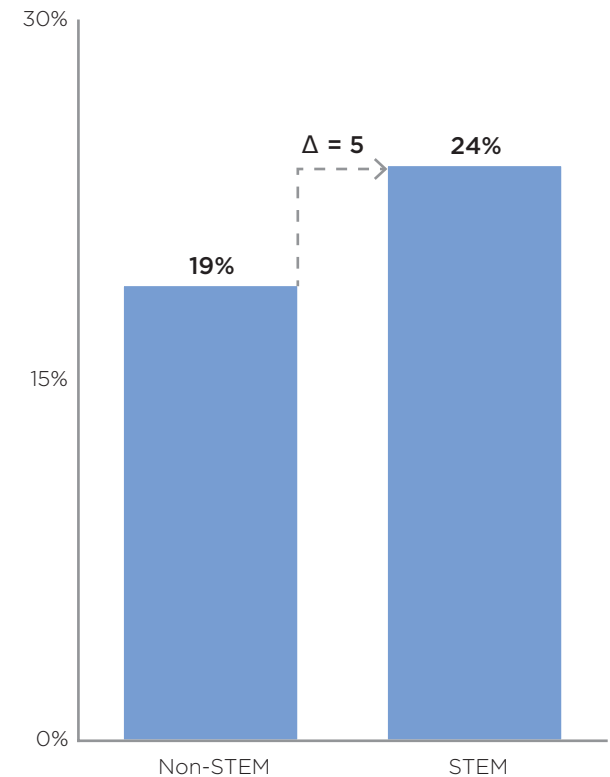
*Percentage of Employees Rating Compensation Among Top Five Attributes*



n = 17,971.  
Source: CEB 2014 Q1 Global Labor Market Survey.

STEM Cares More About Development Opportunities

*Percentage of Employees Rating Development Opportunities Among Top Five Attributes*



n = 17,971.  
Source: CEB 2014 Q1 Global Labor Market Survey.

**Insight 1:** STEM talent value development, not compensation, more than other talent. Organizations should set themselves apart during the recruitment process by basing their EVPs on development opportunities for STEM talent.

Many organizations attempt to incorporate development into their recruiting material but it is often overly general to the organization and buried under other material.

- Conventional job postings and recruitment web portals inconsistently communicate what development opportunities are available to STEM talent.

## MOST ORGANIZATIONS' DEVELOPMENT EVPs ARE BURIED WITHIN RECRUITING EFFORTS

Development Is Hidden on Recruitment Websites

*Illustrative*



Source: CEB analysis.

Job Postings Regurgitate Standard Company Language

*Illustrative*

### XYZ Company— Software Engineer, Java

#### Requirements

- Skilled programmer
- Bachelor's degree in Computer Science
- 4-5 years' experience as a Java developer

XYZ Company is committed to a culture of innovation, growth, and teamwork. Whether you are just starting your career or are ready for the next step, XYZ Company offers you a fantastic work environment and a culture committed to helping you build a successful future.

Scotiabank launches a series of surveys and uses focus groups to identify seven potential aspects of the EVP that drive candidate attraction and employee retention.

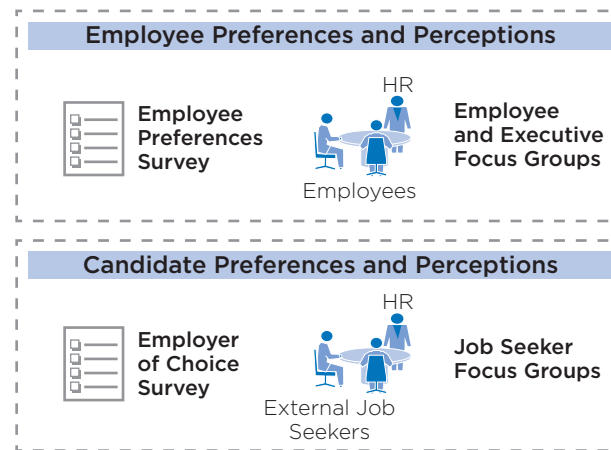
- Based on current candidate and employee perceptions of the bank, Scotiabank assesses its relative strengths and weaknesses as an employer against each of the seven potential EVP aspects.

## UNDERSTAND CANDIDATE AND EMPLOYEE PREFERENCES AND PERCEPTIONS



*Through surveys and focus groups, HR identifies aspects of the EVP that would drive attraction...*

Data Collected About Employee and Candidate Preferences and Perceptions

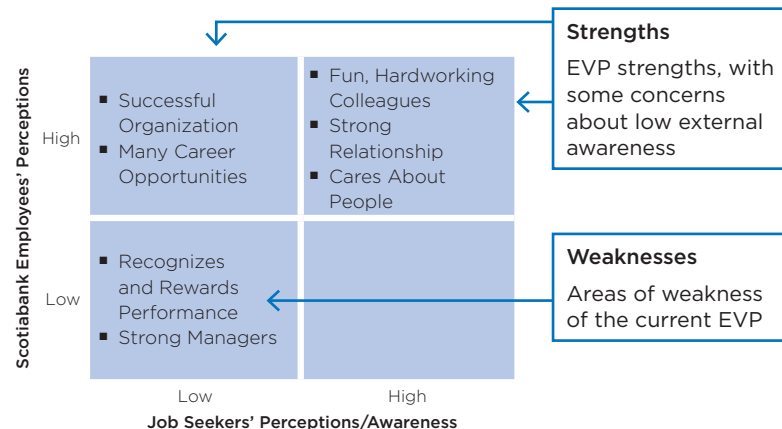


EVP Aspects That Drive Both Attraction and Retention

1. Recognizes and Rewards Performance
2. Strong Managers
3. Fun, Hardworking Colleagues
4. Successful Organization
5. Many Career Opportunities
6. Strong Relationships
7. Cares About People

*...and assesses candidate and employee perceptions of Scotiabank against these aspects.*

Assessment of Employee and Candidate Perceptions of Scotiabank



### EVP Pitfalls

1. The EVP is only focused on employee and candidate preferences, not perceptions, leading to misalignment between the EVP and workplace realities.
2. The EVP is only focused on current organizational strengths, which might not provide the level of EVP competitiveness needed.
3. The EVP is overly focused on either candidate preferences or employee preferences leading to attraction or retention challenges.

Source: The Bank of Nova Scotia; CEB analysis.





HR at Scotiabank ranks policies and programs by highest impact on reinforcing EVP and then prioritizes those whose perceived ROI are highest.

- To identify high-return investments, HR ranks all people-related policies and programs by relative impact on the top three aspects of its EVP.
- HR then invests more in the highest-impacting policies and programs where Scotiabank has the most room for improvement and where HR believes the talent attraction and retention return is the greatest.

#### Effectiveness Gap

The gap between importance of program to employees and current effectiveness at delivering program

#### ROI

The cost of improving program relative to potential talent attraction and retention return

## IDENTIFY HIGHEST-RETURN INVESTMENTS TO REINFORCE THE EVP

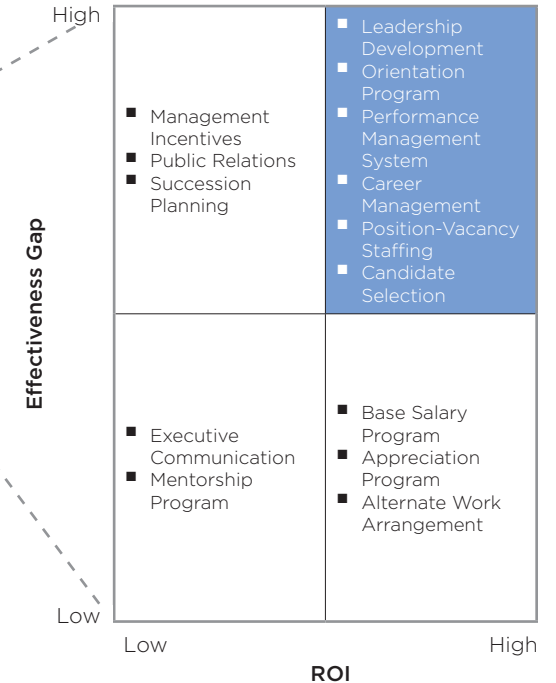


### 1. Identify High-Impact EVP Investments

	Rewarding and Recognizing Performance Related Attributes ■ Recognition ■ Promotion	Establishing Strong Relationships Related Attributes ■ Manager Quality ■ Coworker Quality	Successful Company Related Attributes ■ Senior Team Quality ■ Company Brand
High Impact	Management Incentives	Mentorship Program	Leadership Development
	Base Salary Program	Appreciation Program	Succession Planning
	Performance Management System	Alternate Work Arrangement	Executive Communication
	Career Management	Orientation Program	Public Relations
	Position-Vacancy Staffing		
	Candidate Selection		
Moderate Impact	Leading-Edge Development Program	Referral Program	Employee Share Ownership Plan
	Financial Services MBA	Scotiabank Scholarship Program	Job-Level Protection
	Educational Assistance Program	Work Experience Programs	Town Hall Conference
	Institute of Canadian Bankers (ICB)	Employee Communication Policy	
		Ideas in Action	
		Pension Plan	
Low Impact		Guidelines for Employing Family	
		Suspensions, Resignations Policy	
		Occupational Health and Safety	
		Smoking Policy	

### 2. Prioritize Investments by Perceived ROI

- Secondary HR Priorities
- Primary HR Priorities









HR assesses the impact of each policy or program on the EVP by evaluating the following attributes:

- Connection between EVP attributes and program or policy
- Extent to which program or policy impacts a significant portion of the workforce

### Application for STEM

To identify which opportunities will have the greatest ROI for attracting STEM talent, look for areas where development at your organization is a source of competitive differentiation. Next, determine how to expose STEM talent to these aspects of your EVP during the recruiting process.

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STEM talent report lower levels of intent to stay and discretionary effort early in their careers.

- STEM employees report significantly lower levels of intent to stay and discretionary effort than their peers, even during their first year on the job.
- Organizations that do not increase STEM talent's intent to stay risk spending over US\$15,000 per employee that leaves the organization.

#### Do the Math

Median STEM Voluntary Turnover Rate: **8%**

Average Number of IT and R&D Staff at an Organization:<sup>1</sup> **1,546**

Average STEM Starting Salary: **US\$26,230**

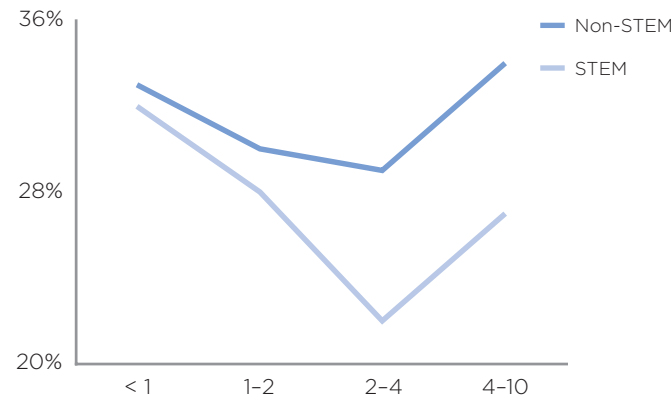
- Average Total Cost of Turnover per Departing Employee: **US\$15,560**
- Average Total Cost of Turnover per Organization: **US\$1,924,494**

To calculate the cost of STEM turnover at your organization, please use our Turnover Cost Calculator at [clc.executiveboard.com](http://clc.executiveboard.com)

<sup>1</sup> To see the assumptions for calculating the average number of STEM talent in an organization, please refer to the appendix.

## ORGANIZATIONS STRUGGLE TO ENGAGE STEM TALENT EARLY IN THEIR CAREERS

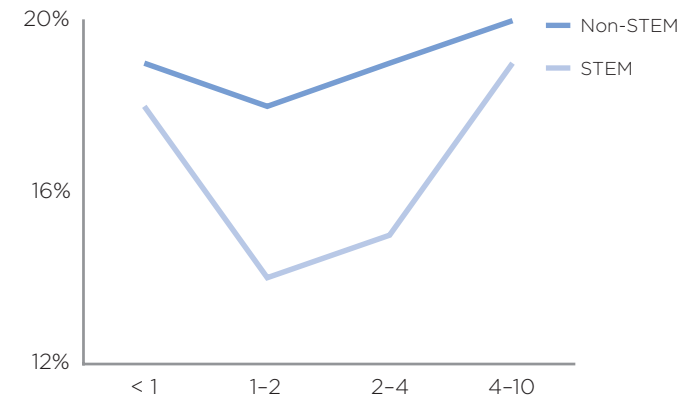
Percentage of Employees Reporting High Levels of Intent to Stay  
*By Tenure (Years)*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

Percentage of Employees Reporting High Levels of Discretionary Effort  
*By Tenure (Years)*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

### Business Impact of Increasing Intent to Stay

Organizations that can reduce their STEM turnover rate by five percentage points can save over **US\$1.2 million annually, or \$15,560 per employee.**



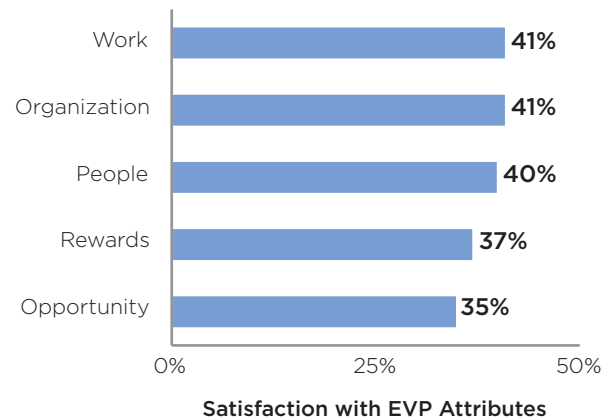
STEM talent is least satisfied with EVP attributes related to career opportunities.

- If organizations can increase satisfaction in these attributes, they can double STEM talents levels of engagement.

## IMPROVING SATISFACTION WITH CAREER OPPORTUNITIES WILL INCREASE ENGAGEMENT

### STEM Talent Is Least Satisfied with Opportunity EVP

*STEM Employees' Satisfaction with the EVP*

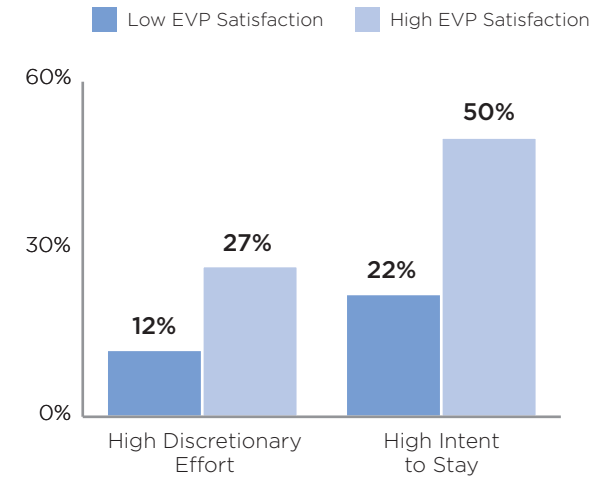


n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

### Increasing STEM Employees' Satisfaction with EVP Significantly Improves Engagement

*Impact of EVP Satisfaction on STEM Employee Engagement*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

STEM employees who are satisfied with their EVP are more than twice as likely to report high discretionary effort and intent to stay.

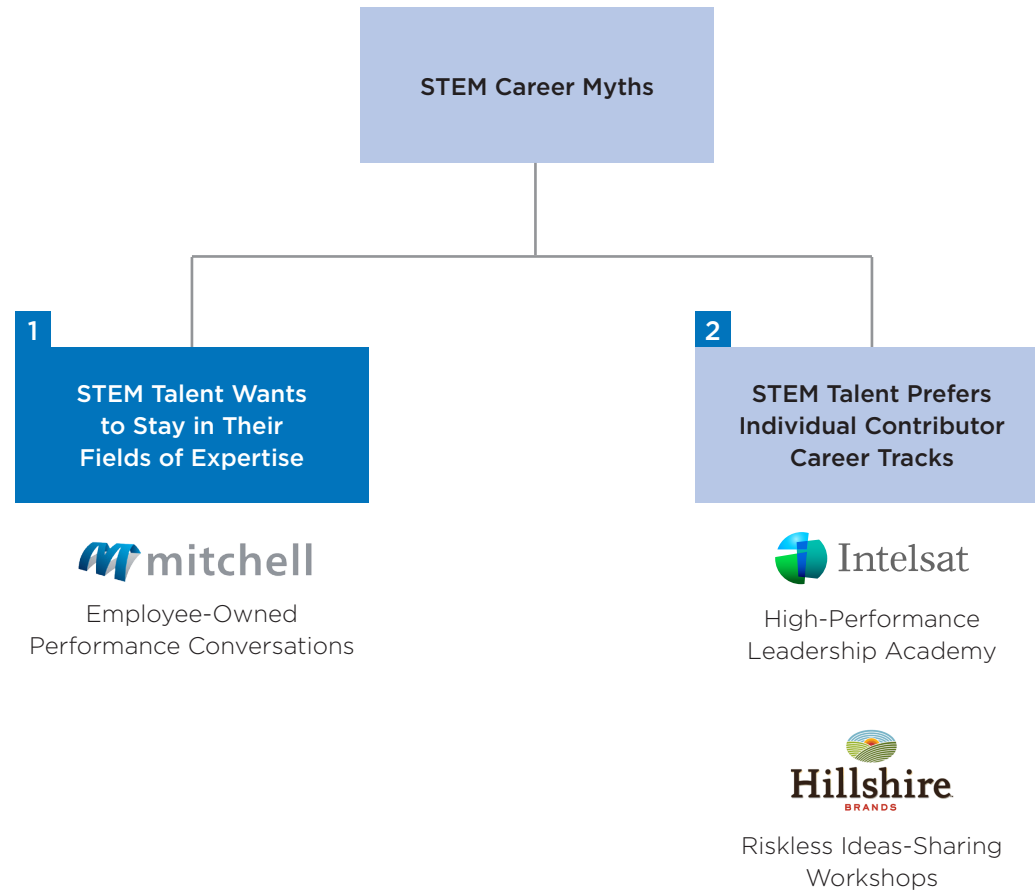
#### Opportunity

The 38 EVP attributes fall into five categories. The EVP attributes related to opportunity including the following:

- Future career opportunity
- Development opportunity
- Meritocracy
- Stability
- Growth rate

Organizations risk disengaging STEM talent by falling for two common myths about STEM career management.

## TWO COMMON MYTHS ABOUT STEM CAREERS



Although organizations believe that STEM talent wants to stay in their current functions, they aspire to greater variety in their careers than do other talent segments.

- STEM talent are more likely to want to learn new skills than their peers in other functions.

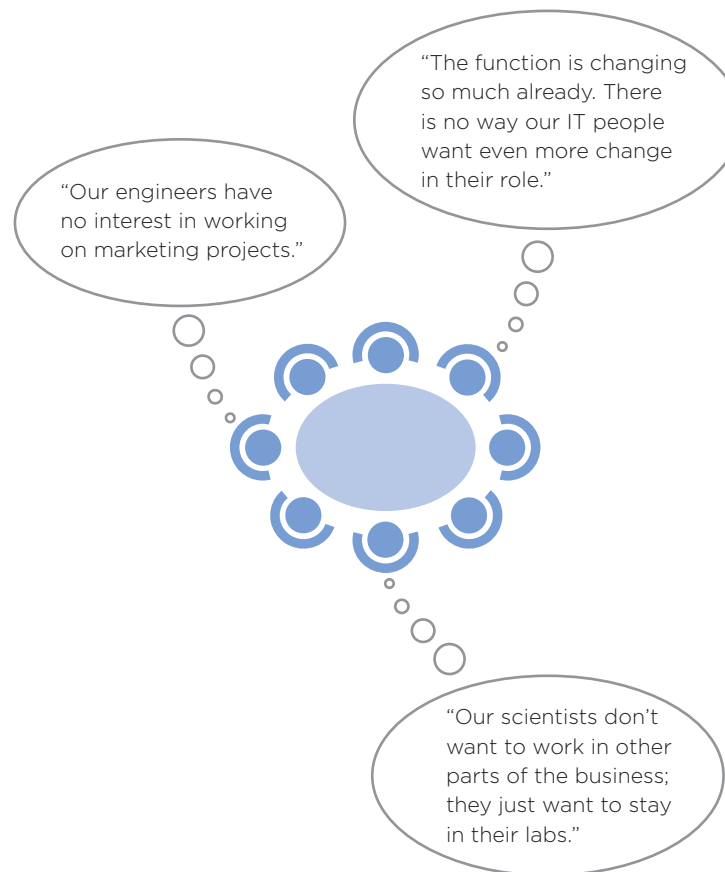
#### STEM and Non-STEM Employees Share Most Career Goals.

When asked to select the top two most significant goals of their career, STEM and Non-STEM employees ranked most goals at similar levels, the biggest differences between what STEM valued more than Non-STEM were the following goals:

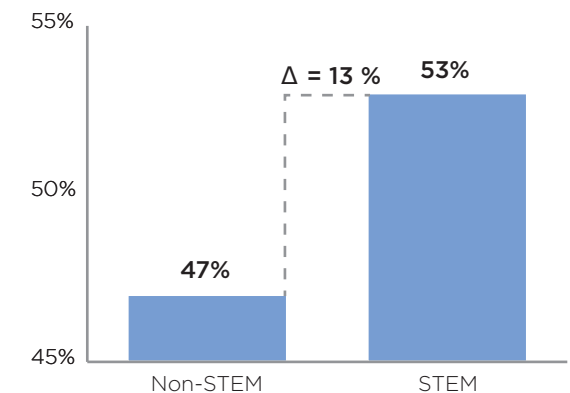
- Working on High Profile Business Projects (9%)
- Learning New Skills (6%), and
- Receiving Multiple Promotions (6%)

## MANY BELIEVE STEM EMPLOYEES PREFER PREDICTABILITY, BUT THEY WANT TO LEARN NEW SKILLS

STEM Talent Is Thought to Be Hesitant to Try Different Types of Work...



...But, STEM Talent Are More Likely to Want to Learn New Skills  
*Percentage of Employees Rating Learning New Skills Among Top Two Career Goals*



n = 17,971.  
 Source: CEB 2014 Q1 Global Labor Market Survey.

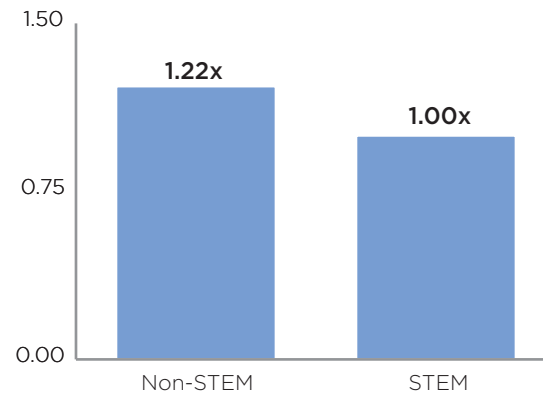


Although STEM talent aspire to learn new skills, STEM managers are less likely to discuss career options with them.

- STEM managers are 22% less open to their talent moving to a different part of the organization, and less than one-fifth of STEM employees have even discussed possible career alternatives.

## MANAGERS RELUCTANTLY DISCUSS CAREER OPTIONS WITH STEM TALENT

STEM Managers Are Less Open to Letting Their Employees Move Outside the Team  
*Employees Agreeing That Their Manager Would Be Open to Them Moving to Another Part of the Organization<sup>a</sup>*

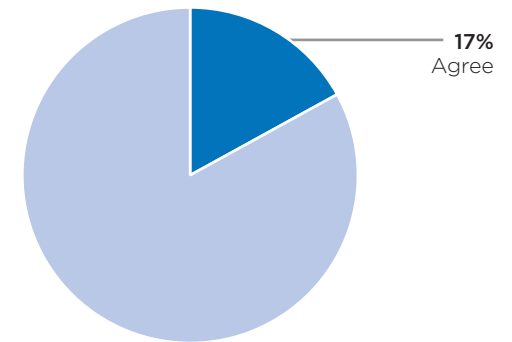


n = 3,331.

Source: CEB 2013 Succession Management Survey.

<sup>a</sup> Indexed.

Few STEM Managers Discuss Career Alternatives with Employees  
*Percentage of STEM Employees Agreeing That They Discuss Alternative Career Options with Their Managers*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

**Insight 2:** STEM talent are unaware of the career options available to them if managers are less likely to discuss alternatives. Organizations should empower STEM talent to lead career discussions with their managers and take advantage of different job opportunities.



Employees at Mitchell own monthly performance conversations, allowing them to customize performance discussions to their specific needs.

- Although most organizations strive for two-way performance conversations, managers generally run and conduct the sessions.
- Mitchell requires employees to schedule monthly performance conversations with their managers (at a minimum); it also expects employees to set the agenda and run the conversation.
- To ensure conversations are effective, Mitchell provides employees with a 1x1 worksheet they must fill out prior to meeting with their managers.

# REQUIRE MONTHLY CAREER DISCUSSIONS WITH MANAGERS TO IDENTIFY CONCERNS EARLY



## Mitchell's 1x1 Employee Conversation Template

**1**

**Employees direct the conversation.** By identifying key discussion items, both personal and professional, employees focus conversations with managers on their specific needs.

**PRIORITIES (WHAT ARE YOUR TOP FOCUS AREAS?)**

Team Goals	Individual Priorities	Key Action
	■	■
	■	■
Emerging List (What's on the Horizon)		

**DISCUSSION ITEMS (WORK RELATED OR PERSONAL ITEMS)**

■

**HOW AM I DOING? (DISCUSS HOW PERFORMANCE IS TRENDING AGAINST PRIORITIES.)**

Meeting Expectations →	Exceeding Expectations ↑	Not Meeting Expectations ↓
------------------------	--------------------------	----------------------------

**2**

**Guided conversation ensures productivity.** Although employees direct the conversation, the template ensures that it is holistic and productive. Employees come to discussions with their managers prepared with the filled-out template.

**3**

**Employees obtain and share 360-degree feedback with managers.** By owning their own 360-degree feedback, employees gain a better sense of self-awareness and the impact their performance has on their peers and teammates.

**360-DEGREE FEEDBACK (SHARE FEEDBACK RECEIVED BASED ON WORK PRODUCTS OR INTERACTIONS.)**

■

■

**CAREER DEVELOPMENT ACTION ITEMS (WHAT ACTIONS HAVE/WILL YOU TAKE REGARDING YOUR DEVELOPMENT PLAN?)**

Development Opportunity	Key Action
1.	1.
2.	2.
3.	3.

**1X1 FOLLOW-UP ACTION ITEMS (WHAT ACTIONS WILL YOU TAKE AS A FOLLOW-UP TO THE 1X1 DISCUSSION?)**

Key Actions	Comments	Date Due

Source: Mitchell International, Inc.; CEB analysis.

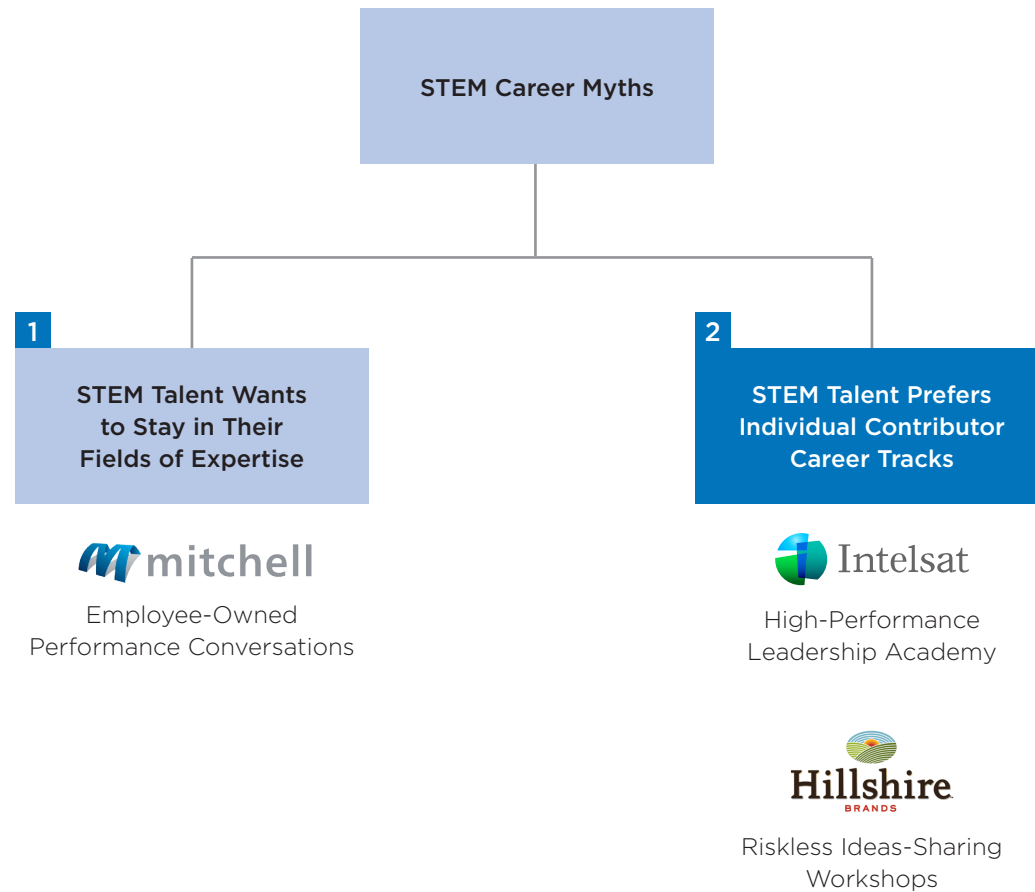
Note: To see the entire Mitchell case profile, please visit [clc.executiveboard.com](http://clc.executiveboard.com) or follow the link [here](#).





Organizations risk disengaging STEM talent by falling for two common myths about STEM career management.

## TWO COMMON MYTHS ABOUT STEM CAREERS

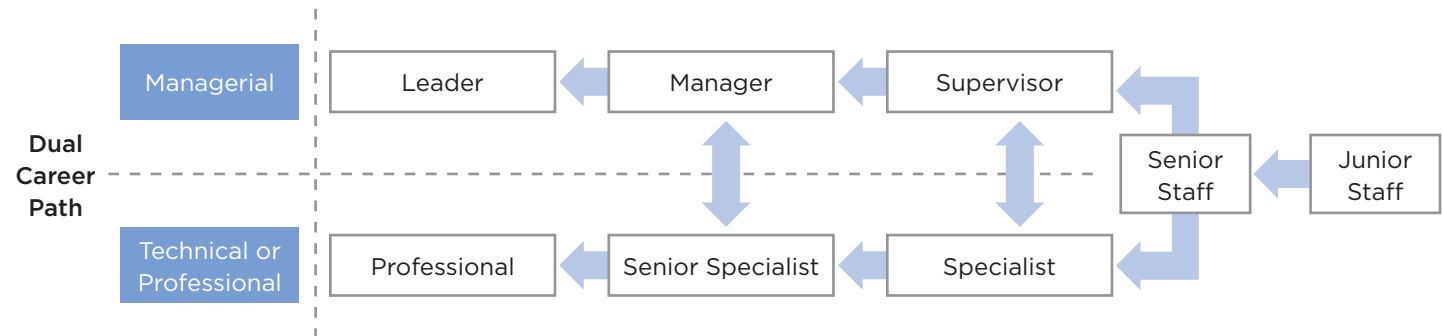


STEM functions create two types of career paths for their talent: **managerial** for individuals with leadership capability and **technical** for everyone else.

- These dual career ladders help address manager and HR concerns that most STEM talent are not capable of or interested in leadership.

## STEM FUNCTIONS USE DUAL CAREER LADDERS TO ACCOMMODATE INDIVIDUAL CONTRIBUTOR CAREERS

Career Ladder  
*Illustrative*



Source: CEB analysis.

### HR and Managers Lack Confidence in Current Talent

“We need to find alternate ways to further enhance, recognize, and showcase our technical and engineering talent who are capable of leadership.”

Vice President, HR  
Technology Industry

“Some members on our team naturally have the skills that will make them successful in a leadership role. For most others, we need to create an alternative path so we don't lose their technical expertise.”

Vice President, IT  
Health Care Industry



In comparison to other talent segments, STEM talent are more likely to want a career with opportunities for leadership.

- STEM talent are more likely to want multiple promotions and to rise to a senior management position.

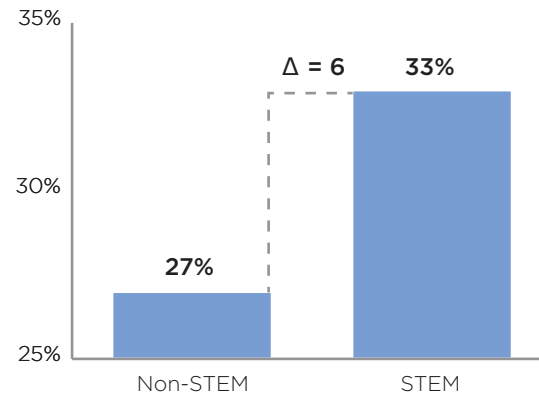
#### STEM and Non-STEM Employees Share Most Career Goals

When asked to select the top two most significant goals of their career, STEM and Non-STEM employees ranked most goals at similar levels, the biggest differences between what STEM valued more than Non-STEM were the following goals:

- Working on High Profile Business Projects (9%)
- Learning New Skills (6%), and
- Receiving Multiple Promotions (6%)

## STEM TALENT ARE MORE LIKELY TO WANT A CAREER WITH LEADERSHIP OPPORTUNITIES

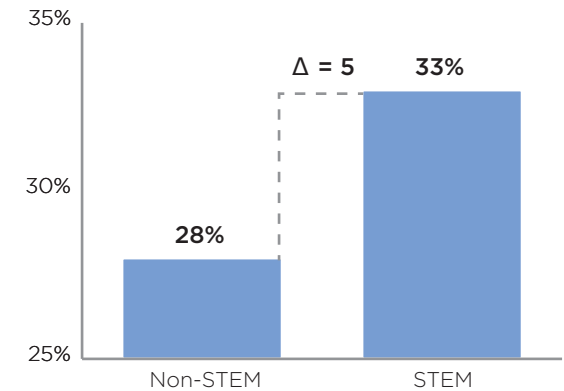
STEM Talent More Likely to Want Promotions  
*Percentage of Employees Rating Receiving Multiple Promotions Among Top Two Career Goals*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

STEM Talent More Likely to Want to Rise to a Management Position  
*Percentage of Employees Rating Rising to a Senior Manager Position Among Top Two Career Goals*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

Despite leadership aspirations STEM employees are less developed in critical leadership competencies than are non-STEM employees.

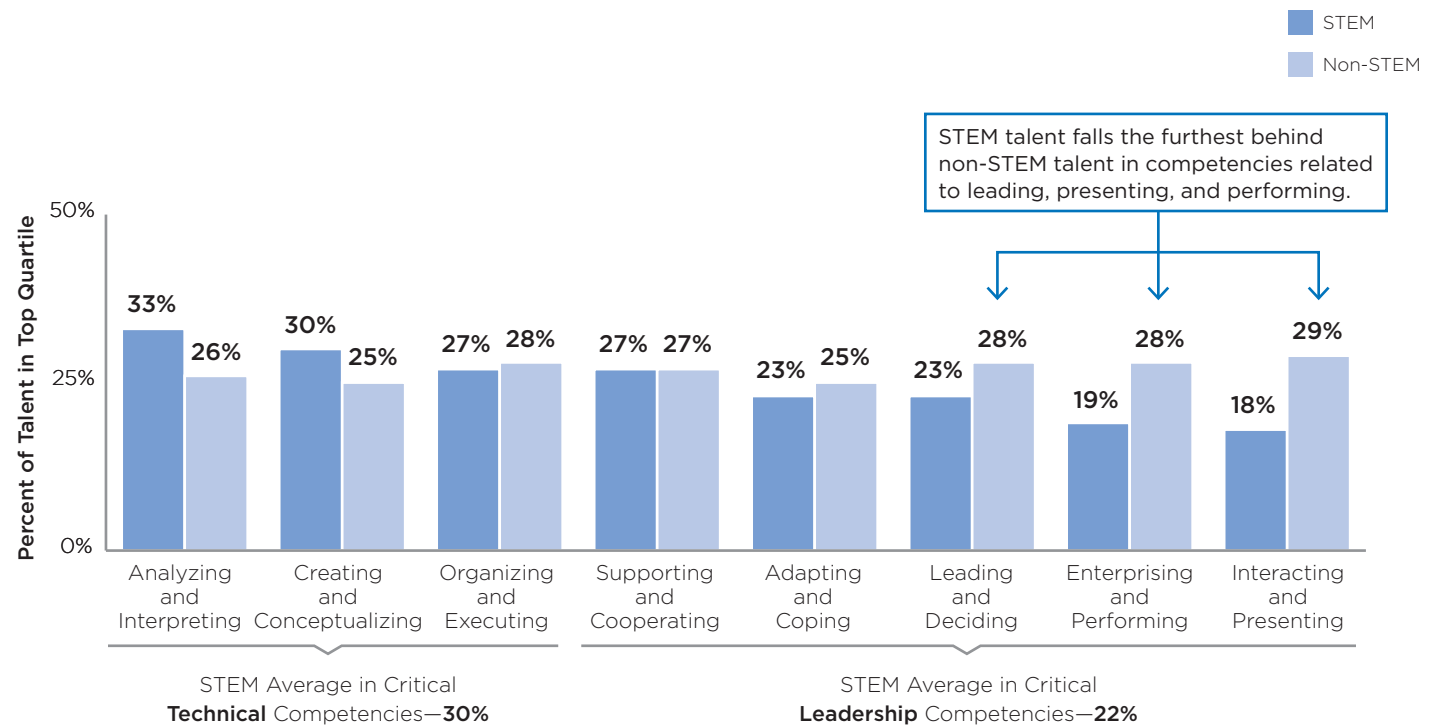
- Critical technical competencies include analyzing, organizing, and creating.
- Critical leadership competencies are leading, enterprising, cooperating, adapting, and presenting.

### SHL's UCF and "The Great Eight"

The SHL Universal Competency Framework (UCF) establishes a standard classification for **competencies required to succeed in any job, at any level, in any organization**. At the top of the competency hierarchy are "the Great Eight." Which are a general categorization of behaviors that influence job performance. For more information, please visit [ceb.shl.com](http://ceb.shl.com).

## STEM LAGS BEHIND OTHER FUNCTIONS IN LEADERSHIP COMPETENCIES

STEM and Other Talent Scores Against the "Great Eight" Competencies



n = 242,684.

Source: CEB 2001-2014 SHL Universal Competency Framework.

**Insight 3:** STEM talent can't reach their leadership potential if they are not developed in critical leadership competencies. Organizations should incorporate leadership skills into all levels of STEM development.



Organizations struggle to transition from a culture of technical leadership to business leadership due to seven barriers.

# CHALLENGES TRANSITIONING FROM TECHNICAL LEADERS TO BUSINESS LEADERS



Seven Barriers to Instilling Business Leadership into Company Culture

**1. Technical leaders lack management skills.**

Technical leaders' performance is based on their technical capabilities rather than management and leadership capabilities.

**2. Business goals are not adequately integrated into leadership development programs.**

Business goals either are not integrated into leadership development programs or are so vague (e.g., increase profits) that they fail to lead to business outcomes.

**3. Leadership development lacks integration with performance management.**

Leadership development skills are not integrated into performance management processes, limiting reinforcement.

**4. Leadership development narrowly focuses on leadership levels.**

Organizations focus on leadership development at the top of the organization, failing to recognize that leadership manifests at all levels to drive meaningful change throughout the organization.

**5. Business leadership skills are not taught in a reality-based manner that facilitates change.**

Business leadership skills are generic and not taught based on individual employee's needs or work realities.

**6. Leadership development fails to create meaningful, collaborative networks.**

Traditional leadership development programs group employees from different functions or departments but fail to do so in a way that generates lasting relationships.

**7. Leadership development lacks global applicability.**

Leadership development fails to adequately account for cultural differences and skill variation across geographies.

Source: Intelsat; CEB analysis.



With the competency model as a guide, Intelsat develops a comprehensive leadership academy customized by level.

- The tiered approach to leadership development ensures that all employees build and reinforce, for one another, the skills Intelsat requires for business success appropriate for their role.
- The academy ensures cultural transformation across the company in a way that is relevant to employees' individual skill needs.
- The leadership academy is designed for employees across all of Intelsat's global locations.
- To minimize disruptions to work and allow participants to apply the skills they learned in the workplace, the modules are spread across a two-year time frame.

# INTELSAT'S TIERED LEADERSHIP ACADEMY



Level-Appropriate Business Leadership Skills Reinforce Broad-Scale Change

Employee Level		Leadership Academy Components			
<b>Executive</b> Provides highly individualized coaching and feedback to refine executives' existing leadership skills		<b>1. Executive Leadership Off-sites:</b> Off-sites for strategic planning and leadership development	<b>2. Executive Presentations:</b> Business case presentations to develop influencing skills	<b>3. Individual Coaching:</b> One-on-one coaching to refine personal leadership skills	<b>4. Mentoring:</b> Two-way development relationship between executive and future leader
		<b>1. Action Learning Projects:</b> Team projects to solve core business challenges	<b>2. Presentation Skills:</b> As-needed team presentations of action learning project outcomes	<b>3. Group Coaching:</b> Group coaching to guide action learning teams through project completion	
		<b>1. Project Management:</b> Guidance on Intelsat's project-based approach to work	<b>2. Effective Performance Management:</b> Skills for providing feedback and conducting reviews	<b>3. Business Acumen:</b> Simulation for teaching relevant financial skills to non-finance leaders	<b>4. Leadership Excellence:</b> Assessment of both individual leaders' and Intelsat's general leadership styles
		<b>1. Go-To Guide for New Managers:</b> Tactical guide to managing at Intelsat	<b>2. Management Skills for New Managers:</b> Basic people-management skills for new managers	<b>3. Meeting Facilitation:</b> Guidance on facilitating effective meetings	<b>4. Managing Within the Law:</b> Overview of relevant laws and their implications
<b>High Potential</b> Develops robust business, critical-thinking, and strategy-execution skills in future executives					
<b>Leadership</b> Builds on foundational management skills with increasing focus on business results and cross-organizational collaboration for experienced managers					
<b>Management</b> Builds foundational leadership skills, including people-management skills and basic guidance on how Intelsat conducts business					

Source: Intelsat; CEB analysis.

Note: To see the entire Intelsat case profile, please visit [clc.executiveboard.com](http://clc.executiveboard.com) or follow the link [here](#).



Hillshire eliminates staff's perception of reputation risk by having leaders provide feedback on ideas, not individuals, during extracurricular, "SNOW Day" activities.

- Idea presentation guidelines written informally language remove staff perception that they will be formally assessed.
- The executive committee provides feedback on the ideas business fit and also provides guidance on further idea refinement.
- Only idea names and their scores (1 to 4) are displayed, ensuring no individual's weaknesses are highlighted.
- Idea presentations give executives an opportunity to informally take notice of their staff's Influencer and Customer Emphathizer behaviors.

## REDUCE REPUTATION RISK BY PROVIDING DEPERSONALIZED FEEDBACK

Innovation Idea Presentation Guidelines for R&D Workforce



### SNOW Day Idea Presentations

#### Guidelines for Presenting Ideas

- ☐ No slides, no sitting, no fear
- ☐ 1-5 minute presentation
- ☐ Find unique ways to present
- ☐ Presentation content should include:
  - Idea definition,
  - Business fit, and
  - Learnings,

#### Executive Feedback

- ☐ Seek executive guidance for ideas presented.
- ☐ Executives will provide feedback on the business fit of the idea and help refine the idea.

#### Results

- ☐ Idea scores are displayed on the Innovation Board.
- ☐ Idea scores displayed are anonymous and identified by their idea names, not individual names.

### How can executives depersonalize feedback?



Absence of formal presentation slides and an informal environment ensure staff do not take executive feedback personally.



Idea reviews are two-way conversations ensuring staff see value in seeking feedback on refining their ideas faster.

4	3
1	2







Executives' assessments on ideas, and not on the individual, mitigates employee fear that their weaknesses will be highlighted.

Depersonalizing feedback encourages staff to pursue bold new ideas, increasing executives' awareness of staff's innovation potential.

Source: Hillshire Brands; CEB analysis.

Note: To see the entire Hillshire case profile, please follow the link [here](#). (Requires a membership in CEB Research & Development Leadership Council)

# THREE STRATEGIES TO ATTRACT AND RETAIN TOP STEM TALENT

Strategy	Incorporate Development EVP into STEM Recruitment Strategies	Rethink the Traditional STEM Career Path to Drive Engagement	Embed Collaborative Responsibilities and Behaviors into STEM Job Success
Insight	Attract STEM Talent with Opportunities for Development, Not Just Expensive Compensation Packages	Empower STEM Talent To manage Their Own Careers, Don't Just Force Them Through the Traditional Career Ladder	Incorporate Enterprise Contribution into STEM Roles, Don't Just Convince Them of the Value of Collaboration
Best Practice	<p>Assess areas to invest in competitive differentiation against critical EVP attributes.</p> <p> <b>Scotiabank</b></p> <p><b>Employment Value Proposition (EVP) Redesign</b></p> <hr/> <p><b>APPENDIX</b></p> <p>Incorporate conversations on long-term career development into internship programs.</p> <p> <b>Principal Financial Group</b></p> <p><b>Career-Centric IT Internship</b></p>	<p>Equip employees to drive career conversations.</p> <p> <b>MITCHELL</b></p> <p><b>Employee-Owned Performance Conversations</b></p> <p>Embed leadership competencies in development across employee careers.</p> <p> <b>Intelsat</b></p> <p><b>High-Performance Leadership Academy</b></p> <p>Reduce reputation risk by creating projects for talent to practice newly developed skills.</p> <p> <b>Hillshire BRANDS</b></p> <p><b>Riskless Ideas-Sharing Workshops</b></p>	<p>Embed responsibility for fostering connections into employees' roles.</p> <p> <b>ExxonMobil</b></p> <p><b>Connection-Making Exemplars</b></p>





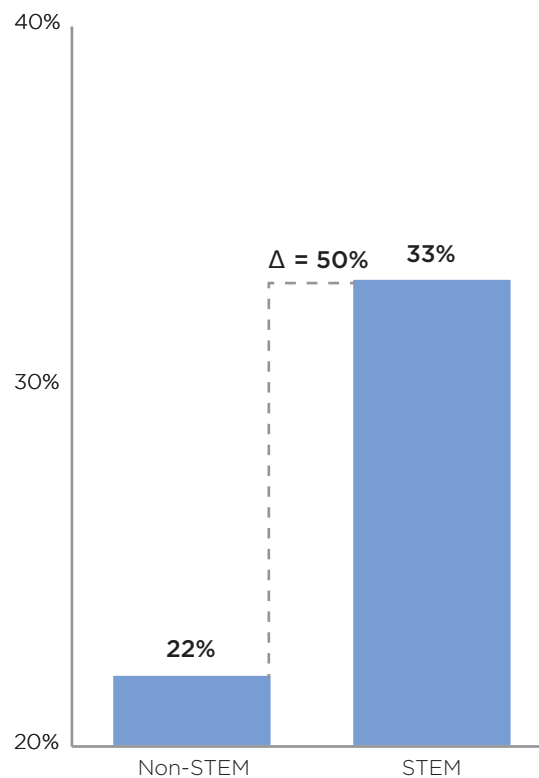
STEM talent works with peers in other functions more frequently than other talent do.

- STEM talent is experiencing a faster growth in the number of their professional relationships than are other talent.

## COLLABORATION IN STEM WORK IS INCREASING MORE QUICKLY THAN IN OTHER ROLES

### STEM Work Is More Cross-Functional Than That of Other Talent

*Percentage of Employees Agreeing That Their Work Involves Employees from Different Functions or Divisions Across the Organization*

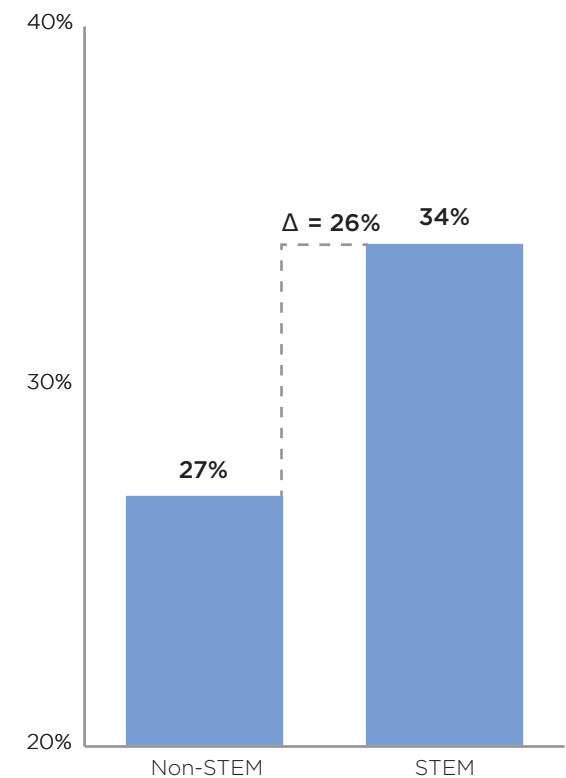


n = 10,531.

Source: CEB 2014 Enterprise Contribution Workforce Survey.

### STEM Employees' Networks Are Growing More Rapidly Than Those of Other Talent

*Percentage of Employees Agreeing That, Compared with Three Years Ago, They Have More Professional Relationships*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

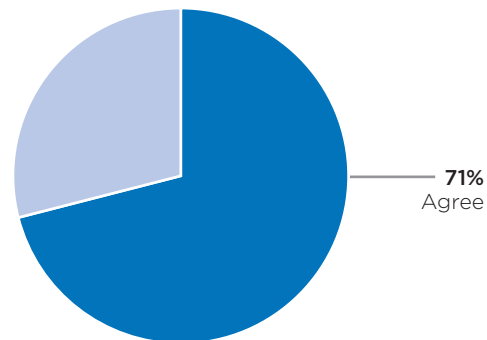


Despite believing in its importance, STEM talent are ineffective at enterprise contribution.

- Less than one-quarter of STEM employees are enterprise contributors.

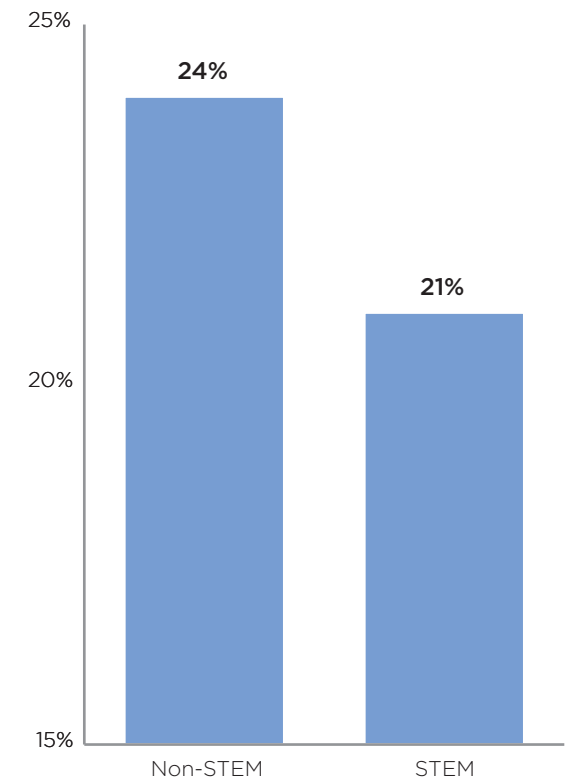
## STEM TALENT LESS LIKELY TO BE ENTERPRISE CONTRIBUTORS

STEM Talent Believes That Enterprise Contribution Is Important to Their Job...  
*Percentage of STEM Employees Who Believe Enterprise Contribution Is Part of the Job*



n = 10,531.  
Source: CEB 2014 Enterprise Contribution Workforce Survey.

...But They Are Less Likely to Be Effective at Enterprise Contribution  
*Percentage of Employees Scoring High at Enterprise Contribution*



n = 10,531.  
Source: CEB 2014 Enterprise Contribution Workforce Survey.

### Enterprise Contribution

Enterprise contribution is the combination of an employee's effectiveness at his or her individual tasks and his or her effectiveness at contributing to and receiving contributions from others.



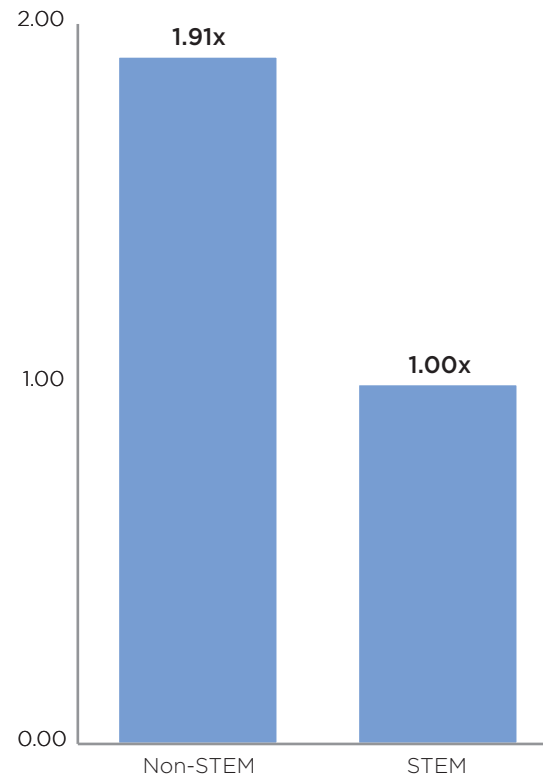
STEM employees struggle to build, manage, and influence their professional networks.

- STEM talent are half as likely as other talent to maintain productive working relationships with internal and external customers.

## STEM TALENT STRUGGLES TO MANAGE RELATIONSHIPS AND INFLUENCE STAKEHOLDERS

STEM Talent Are Less Effective Than Peers at Maintaining Positive and Productive Working Relationships with Customers

*Managers Agreeing Their Employees Are Effective at Maintaining Positive and Productive Working Relationships with External and Internal Customers<sup>a</sup>*

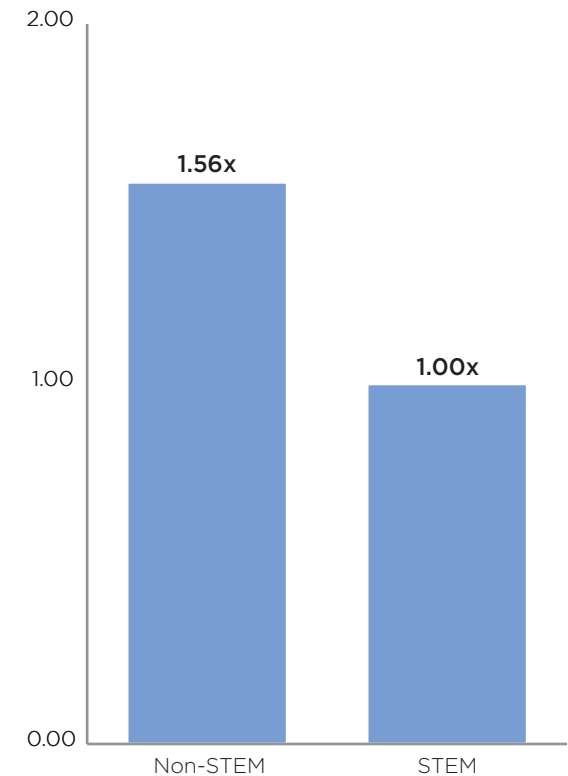


n = 23,339.

Source: CEB 2012 High Performance Survey.

<sup>a</sup> Indexed.

STEM Talent Less Effectively Influence Others  
*Managers Agreeing Their Employees Are Effective at Influencing Others to Gain Support<sup>a</sup>*



n = 23,339.

Source: CEB 2012 High Performance Survey.

<sup>a</sup> Indexed.

**Insight 4:** STEM talent understand the importance of enterprise contribution, but they struggle to effectively manage their external networks. Organizations should support STEM enterprise contribution by embedding network management into STEM roles.

Recognizing the importance of connection making as a core competency for technical employees, ExxonMobil embeds related skills and behaviors into employees' jobs.

- ExxonMobil also holds managers accountable for providing their teams with opportunities to generate external connections.
- ExxonMobil explicitly assigns responsibility for external connection making, recognizing that facilitating of external relationships would probably not happen otherwise.

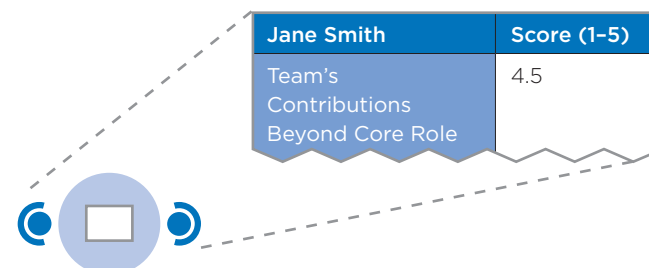
## EMBED CONNECTION-MAKING RESPONSIBILITIES INTO THE JOB

Incorporate Connection-Making Competencies and Opportunities into All Employees' Jobs

Competency Area	Level 1	Level 2	Level 3	Level 4
<b>Technical</b>	Accesses external science and technology and applies them to internal problems		Provides innovative solutions and ideas that go beyond current knowledge and applies them to advance own work and assist others	Discovers, develops, and rapidly deploys technology to create a track record of high value for ExxonMobil
<b>Business</b>	Creates effective technical and business partner networks			Facilitating and accessing external technical networks is required for success at all employee levels.
<b>Leadership</b>		Proactively shares technical and organizational knowledge		Demonstrates considerable influence internally and, where appropriate, on the external technical community

### Manager Review

ExxonMobil holds managers accountable for providing their teams with opportunities to generate external connections. Managers are evaluated based on their teams' contributions beyond their core jobs.



Source: CEB analysis.

# KEY TAKEAWAYS AND IMPLICATIONS FOR THE CHRO

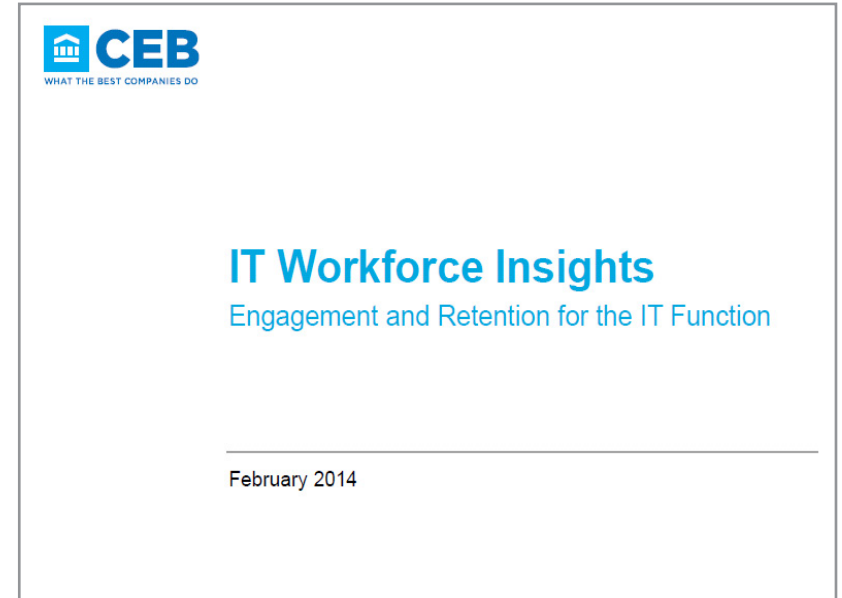
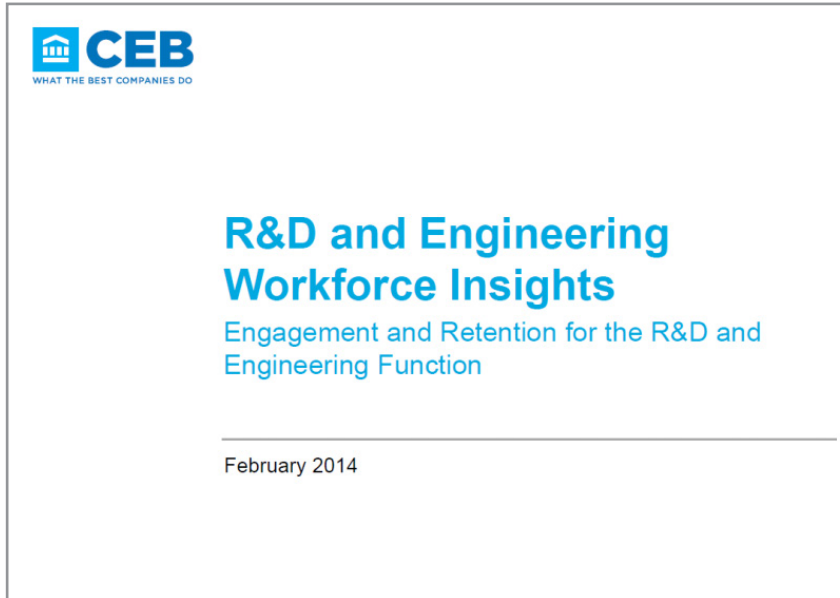
## Key Takeaways

- STEM talent value development opportunities, not compensation, more than other employees do.
- STEM talent want a career with a variety of experiences, but managers are reluctant to let them move to another part of the organization.
- STEM talent aspire to leadership, but they have underdeveloped leadership competencies.
- STEM talent work is more cross-functional than other work, but STEM talent struggle to manage stakeholder expectations.

## Implications for the CHRO

- Differentiate your EVP by focusing on around development to attract top STEM talent.
- Empower STEM talent to lead career conversations with their managers.
- Unlock leadership potential in STEM talent by increasing their development in leadership competencies.
- Increase enterprise contribution in STEM talent by embedding collaborative responsibilities and behaviors into job success.

# ADDITIONAL RESOURCES FOR MANAGING STEM EMPLOYEES



# Appendix

The Principal Financial Group IT internship provides the organization and candidates with an opportunity to evaluate career EVP alignment in a controlled environment.

- To better distinguish from other IT internships, The Principal has centered its program on the career development opportunities candidates can expect if they were to join the organization as a full-time employee.
- The Principal weaves the career mobility EVP into the internship experience via three key steps:
  - Exposing interns to business units (BUs) outside their assigned alignment,
  - Emphasizing cross-team, and real-world work
  - Showcasing potential career paths.

## COMPANY SNAPSHOT

### The Principal Financial Group

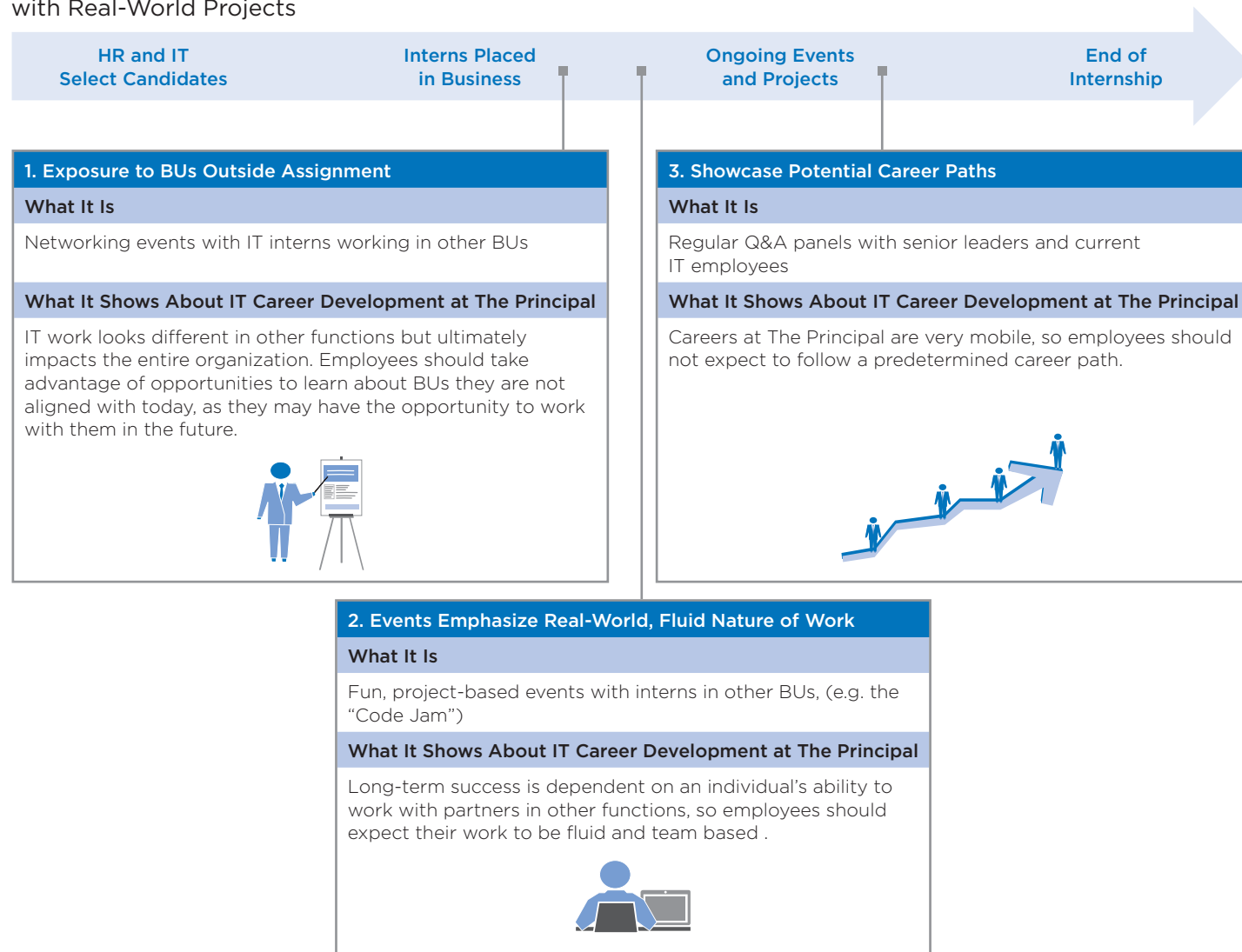
Industry: Financial Services  
 2013 Sales: US\$9.2 Billion  
 2013 Employees: 14,600  
 Headquarters: Des Moines, IA

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# USE INTERNSHIPS TO DEMONSTRATE CAREER DEVELOPMENT EVP TO IT CANDIDATES



The IT Internship Experience at The Principal Partners Long-Term Career Development with Real-World Projects



Source: The Principal Financial Group; CEB analysis.

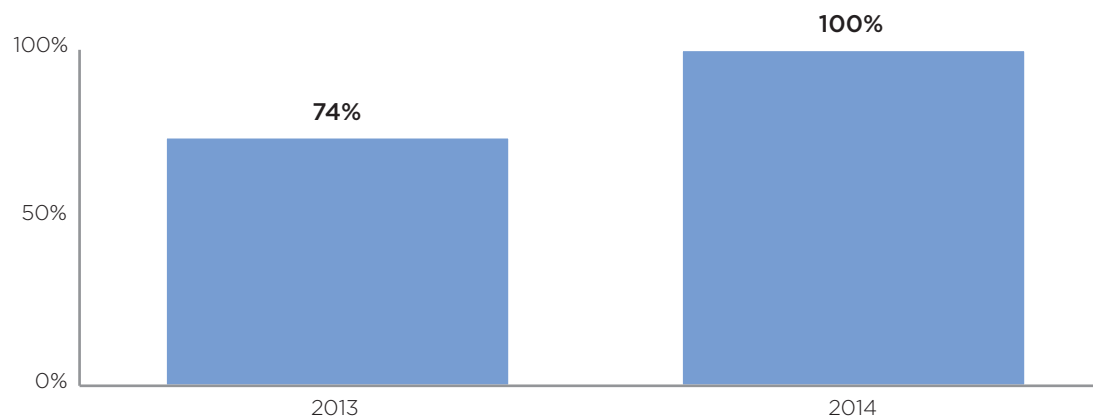


By centering the internship program on career development aspects of the EVP, The Principal can better identify and convert long-term talent for the company.

## A CAREER-CENTRIC INTERNSHIP MATCHES THE PRINCIPAL WITH EVP-ALIGNED CANDIDATES



Investment in Intern Career Development at The Principal Has Increased Conversion Rates  
*Percentage of Candidates Receiving a Full-Time Offer Who Have Accepted*



Source: The Principal Financial Group; CEB analysis.

“The IT internship program not only prepares the intern for success at The Principal but also directly impacts our ability to convert top candidates. By communicating that our program is designed to expose candidates to the rich variety of careers available here, the IT Recruiting Committee has been able to more effectively distinguish our internship from others and identify long-term talent for the company.”

Joan Sheridan  
HR Business Partner Leader  
The Principal Financial Group

The Principal has seen a 26% increase in its conversion rate for IT talent since updating its IT internship program—indicating a better fit and higher quality candidates.



Across all regions,  
the rate of students  
graduating with a STEM  
degree is increasing.

## REGIONAL GROWTH RATE OF STEM GRADUATES

Regional Growth Rate of STEM Graduates<sup>a</sup>

Region	Growth Rate of STEM Graduates <sup>a</sup>
Asia	9.78%
Africa	12.85%
Europe	5.50%
Latin America	10.05%
North America	5.05%
Australia and New Zealand	3.08%
<b>Global</b>	<b>7.80%</b>

Source: CEB analysis.

<sup>a</sup> CEB TalentNeuron analyzed the growth rate of STEM graduates over the past five years.



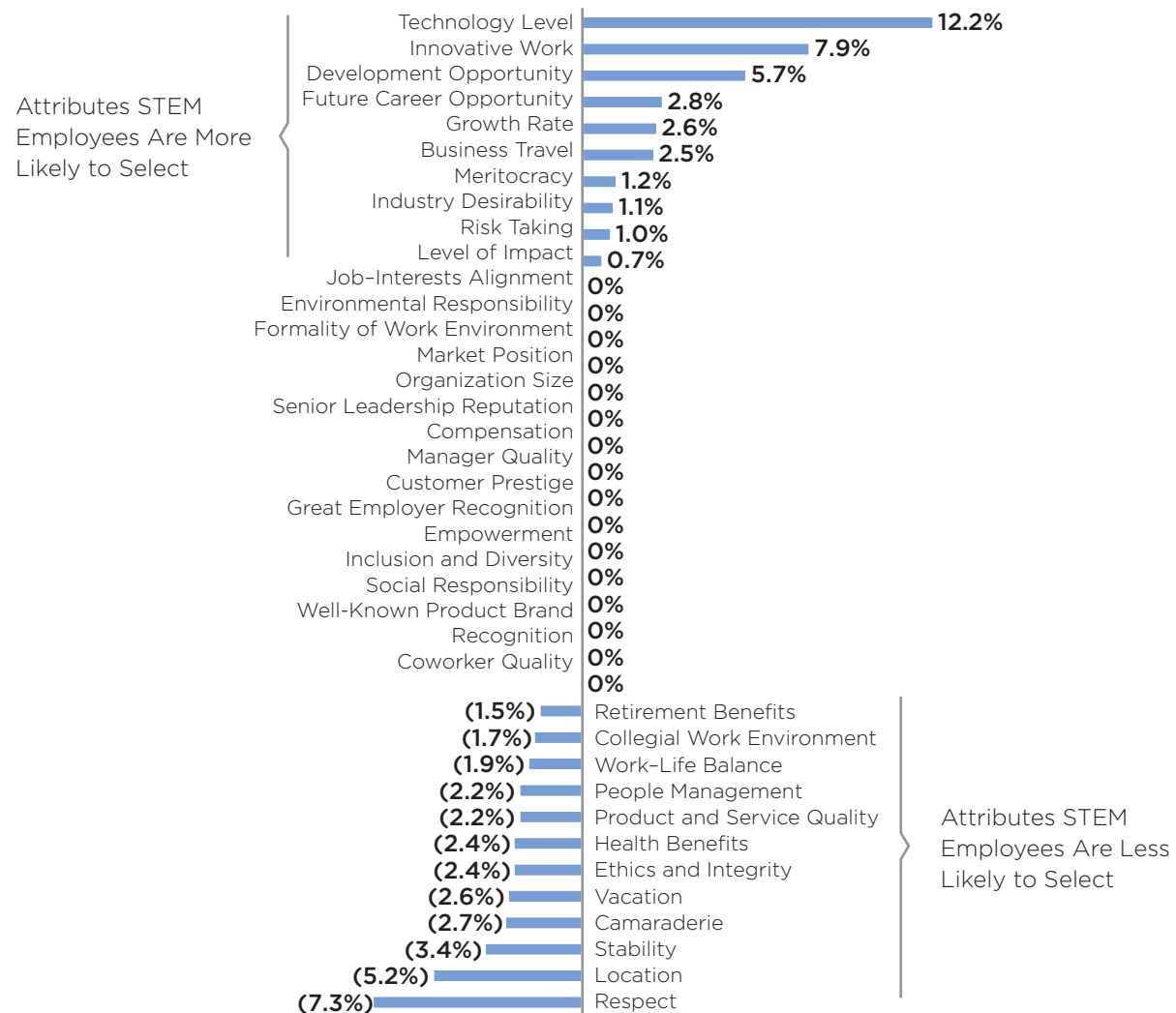
Compared to other employees, STEM employees are more likely to value technology.

- STEM employees are less likely to value camaraderie, stability, location, and respect.

## STEM EMPLOYEES PRIORITIZE TECHNOLOGY LEVEL AND INNOVATION

Extent to Which STEM Employees' EVP Preferences Differ from Other Employees

*Percentage Point Change in Likelihood of Selecting Attribute in Top Five Most Important Attributes*



n = 17,838.

Source: CEB Q2 2014 Global Labor Market Survey.

# DISCRETIONARY EFFORT TRENDS BY FUNCTION

Percentage of Employees with High Levels of Discretionary Effort

By Function

Function	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Quarter-Over-Quarter Change
Communications	13.2%	12.6%	18.0%	19.8%	15.2%	16.8%	15.5%	16.6%	17.3%	15.1%	18.6%	17.2%	15.6%	12.0%	(3.6%)
Corporate <sup>a</sup>	16.9%	25.3%	23.5%	25.3%	25.7%	23.7%	24.6%	23.5%	24.1%	25.8%	27.5%	26.0%	23.9%	21.4%	(2.5%)
Customer Contact	15.6%	20.4%	18.6%	19.0%	20.1%	17.7%	16.8%	18.0%	18.9%	18.5%	20.6%	19.8%	20.8%	16.9%	(3.9%)
Finance and Accounting	13.5%	19.5%	15.0%	18.9%	19.5%	19.5%	18.5%	17.7%	16.2%	18.3%	21.1%	19.6%	19.0%	18.5%	(0.5%)
HR <sup>b</sup>	18.0%	24.0%	19.2%	19.8%	22.4%	20.9%	23.4%	21.7%	22.6%	23.1%	24.0%	21.8%	20.3%	21.5%	1.1%
IT	11.5%	15.5%	16.4%	17.1%	17.2%	17.9%	18.2%	16.0%	16.5%	18.9%	18.4%	19.9%	17.6%	18.4%	0.8%
Manufacturing	13.6%	17.0%	17.8%	16.8%	18.0%	16.2%	17.4%	15.3%	14.3%	17.5%	15.9%	15.5%	16.1%	15.8%	(0.3%)
Marketing and Market Research	11.2%	19.1%	19.7%	17.5%	18.5%	14.8%	17.9%	11.7%	15.8%	18.0%	17.8%	18.0%	18.6%	18.9%	0.3%
Operations	18.5%	23.3%	21.5%	21.2%	22.6%	22.3%	22.9%	20.6%	20.7%	22.0%	23.2%	22.6%	22.4%	21.5%	(0.9%)
Quality	13.8%	18.8%	18.5%	17.4%	18.4%	16.2%	17.5%	18.8%	17.1%	20.4%	19.6%	19.5%	20.6%	17.9%	(2.6%)
R&D and Engineering	11.3%	14.8%	17.1%	15.2%	17.6%	17.5%	18.4%	16.1%	17.6%	17.1%	18.2%	17.1%	18.1%	17.0%	(1.1%)
Retail	19.3%	23.1%	21.6%	23.8%	23.6%	22.7%	20.9%	23.6%	21.7%	19.5%	22.2%	23.3%	20.4%	21.4%	1.0%
Sales	13.5%	19.5%	17.6%	19.8%	19.7%	21.0%	19.4%	20.2%	18.7%	21.4%	18.8%	17.2%	18.4%	18.0%	(0.4%)
Supply Chain and Logistics	16.5%	19.9%	17.7%	21.0%	21.5%	19.1%	20.0%	17.6%	18.4%	17.7%	16.5%	19.7%	21.5%	18.8%	(2.7%)

Source: CEB 2011-2014 Global Labor Market Survey.

Note: Quarter-over-quarter changes calculated from unrounded data.

<sup>a</sup> Corporate includes corporate legal, strategy, and real estate departments.

<sup>b</sup> Historical discretionary effort trends for the HR function have been slightly adjusted to reflect a more accurate picture of the corporate HR function.

# INTENT-TO-STAY TRENDS BY FUNCTION

Percentage of Employees with High Levels of Intent to Stay

By Function

Function	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Quarter-Over-Quarter Change
Communications	24.3%	25.2%	33.2%	34.0%	30.7%	28.0%	28.2%	28.4%	26.8%	26.9%	29.1%	31.7%	34.5%	28.0%	(6.5%)
Corporate <sup>a</sup>	29.7%	34.6%	35.3%	40.2%	37.0%	33.9%	39.0%	38.8%	38.6%	37.8%	39.0%	35.9%	42.1%	40.8%	(1.3%)
Customer Contact	25.5%	28.8%	29.3%	30.4%	30.9%	29.2%	30.2%	31.1%	31.6%	32.2%	32.8%	32.2%	34.8%	33.7%	(1.1%)
Finance and Accounting	29.6%	32.9%	33.1%	31.7%	32.4%	33.7%	30.4%	33.5%	31.1%	31.4%	32.2%	33.6%	34.3%	36.1%	1.8%
HR <sup>b</sup>	28.2%	29.6%	33.7%	35.3%	33.2%	32.8%	31.4%	33.7%	32.3%	38.5%	32.8%	32.2%	37.7%	39.1%	1.4%
IT	24.3%	28.5%	25.7%	26.9%	26.0%	26.6%	25.7%	27.5%	25.9%	27.3%	29.5%	27.8%	31.5%	28.3%	(3.2%)
Manufacturing	28.6%	30.7%	33.0%	32.3%	32.0%	32.1%	30.7%	31.3%	31.4%	34.0%	33.9%	30.0%	37.6%	35.5%	(2.1%)
Marketing and Market Research	22.1%	26.3%	23.4%	29.5%	25.8%	24.7%	26.2%	28.9%	26.5%	23.4%	27.5%	25.4%	29.4%	30.7%	1.3%
Operations	33.3%	34.8%	37.3%	37.4%	36.9%	35.7%	35.6%	36.2%	38.8%	37.7%	37.9%	37.4%	40.5%	41.6%	1.2%
Quality	31.4%	29.5%	34.8%	30.1%	33.0%	31.6%	31.0%	30.5%	32.0%	31.3%	33.2%	35.1%	39.0%	37.5%	(1.4%)
R&D and Engineering	23.0%	25.6%	28.4%	24.9%	28.4%	26.6%	29.3%	27.5%	31.0%	29.6%	30.3%	26.6%	35.0%	32.3%	(2.7%)
Retail	27.6%	29.0%	31.7%	31.5%	29.5%	30.0%	31.6%	30.8%	32.4%	31.3%	33.9%	35.0%	34.4%	34.5%	0.1%
Sales	28.7%	29.4%	30.8%	31.4%	32.7%	33.0%	30.8%	32.1%	33.1%	34.7%	31.8%	32.6%	36.0%	35.9%	(0.1%)
Supply Chain and Logistics	28.6%	33.9%	33.5%	39.4%	36.5%	33.9%	37.8%	34.0%	32.7%	34.1%	34.5%	34.8%	39.2%	38.2%	(1.0%)

Source: CEB 2011-2014 Global Labor Market Survey.

Note: Quarter-over-quarter changes calculated from unrounded data.

<sup>a</sup> Corporate includes corporate legal, strategy, and real estate departments.

<sup>b</sup> Historical discretionary effort trends for the HR function have been slightly adjusted to reflect a more accurate picture of the corporate HR function.



Entry-level starting salaries for STEM talent vary by region.

# REGIONAL ENTRY-LEVEL SALARIES FOR STEM TALENT

Regional Entry-Level Starting Salary for STEM Talent  
*By Region*

Region	Average Starting Salary of STEM Talent (in USD)
Asia	10,080
Africa	12,695
Europe	31,218
Latin America	13,395
North America	54,420
Australia and New Zealand	40,660
<b>Average</b>	<b>26,230</b>

Source: CEB TalentNeuron research and analysis, CEB Talent Neuron Internal Database.

# HOW TURNOVER COST IS CALCULATED

1. The median STEM voluntary turnover rate in 2012 was 8%.

n = 102.  
Source: CEB 2013 Annual Turnover Benchmark.

2. The average number of STEM staff at an organization is 1546.

n = 54, 160.  
Source: CEB RTEC 2012 Budget, Spend, and Performance Survey; CEB IT 2013 Budget Benchmark.

3. The average starting salary of STEM employees globally is \$26,230.

Source: CEB TalentNeuron research and analysis, CEB 2014 Talent Neuron Internal Database.

4. Using standard assumptions about compensation, the CEB Turnover Calculator calculates the following costs:

Total Cost of Turnover per Departing Employee (Annual)	
Total	\$15,560
Direct Cost <sup>a</sup>	\$11,225
Indirect Cost <sup>a</sup>	\$4,335

Total Cost of Turnover per Departing Organization (Annual)	
Total	\$1,924.494

Reduction in Turnover Rate by: <sup>a</sup>	Yields Cost Savings of:
2%	\$481,123
5%	\$1,202,809
10%	NA
15%	NA

<sup>a</sup> Reduction in percentile points, e.g., an original turnover rate of 15% reduced by 2% results in a turnover rate of 13%.

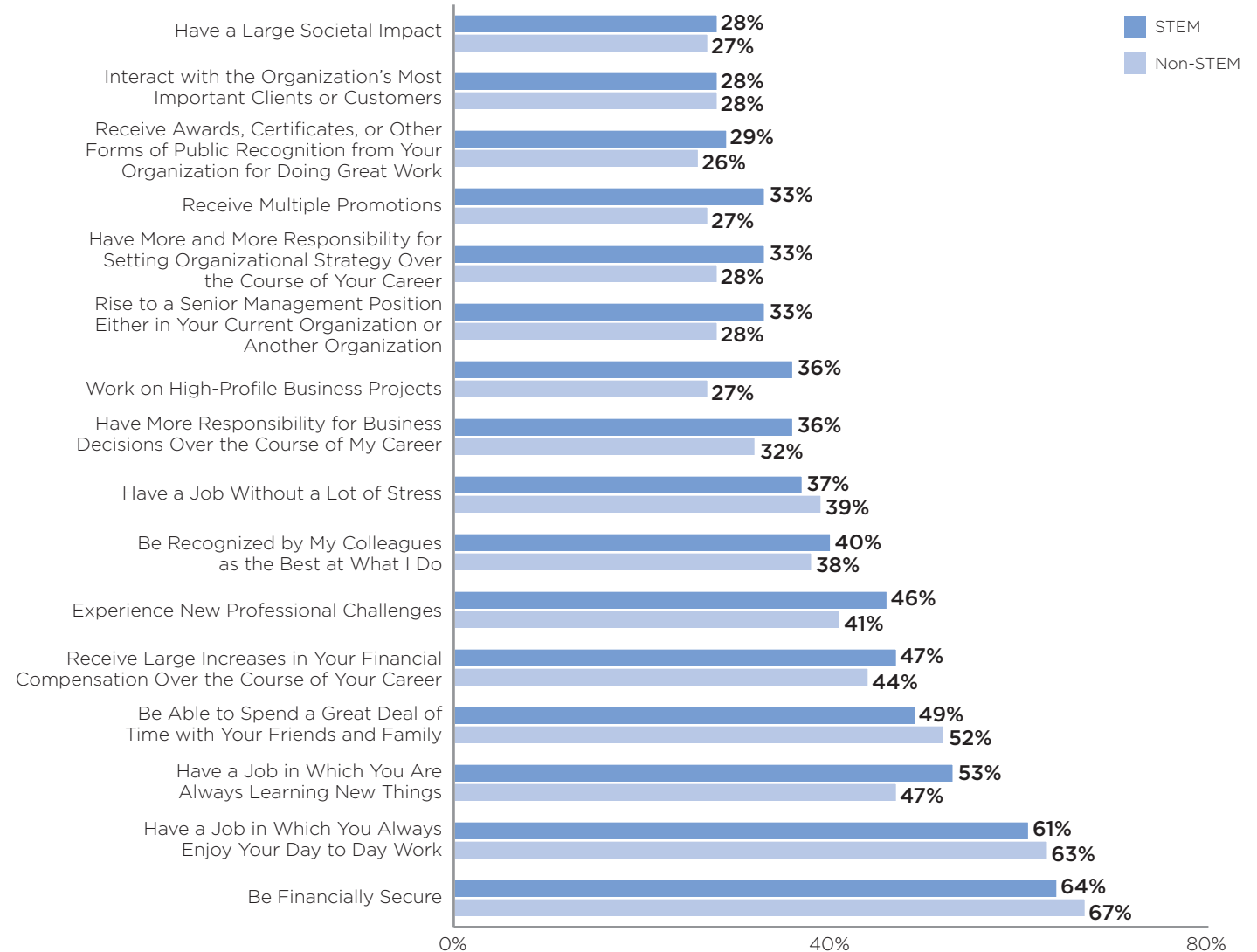


STEM and non-STEM employees value different aspects of their careers.

## COMPARISON OF CAREER GOALS, STEM VERSUS NON-STEM EMPLOYEES

### Employees, Career Goal Preferences

*Percentage of Employees Selecting Goal in Top Two Goals Most Important in Their Careers*



n = 17,971.

Source: CEB 2014 Q1 Global Labor Market Survey.

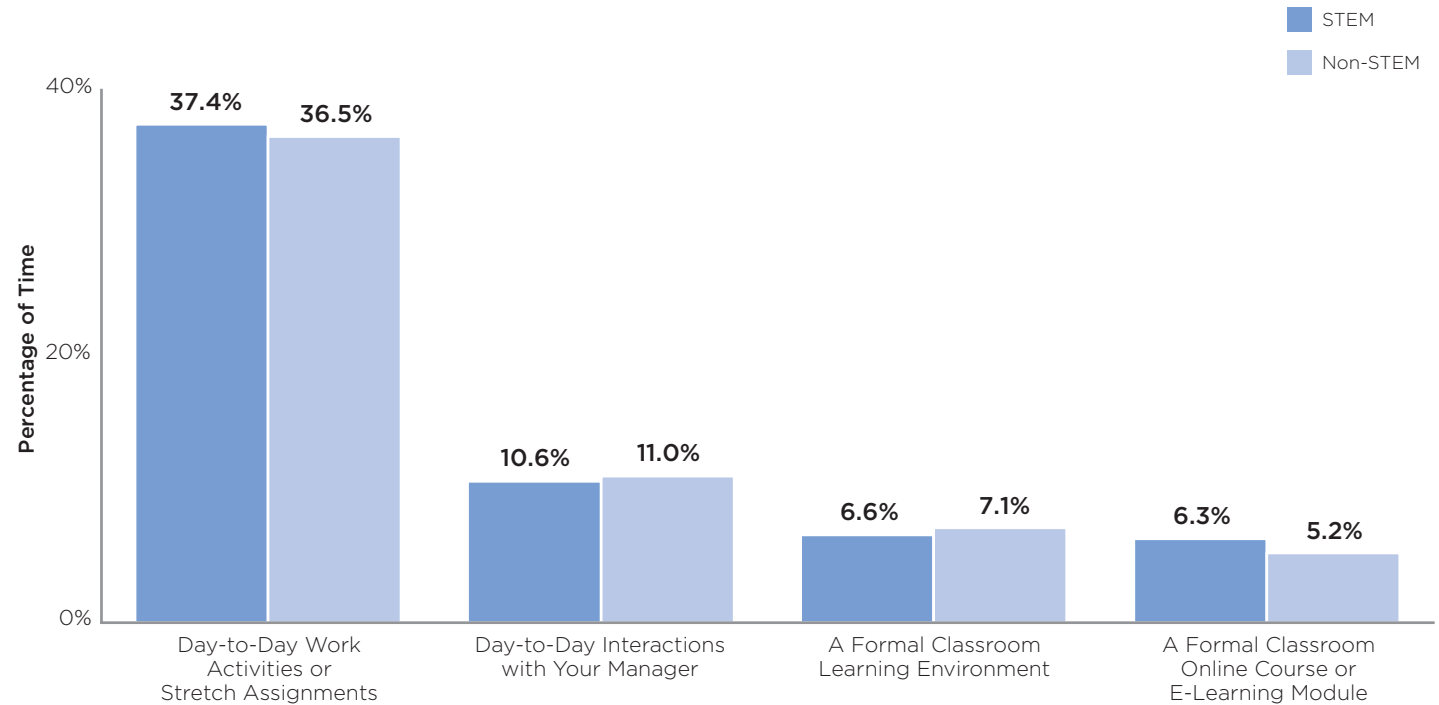




Organizations spend equal amounts of time developing STEM talent and non-STEM talent.

## STEM TALENT RECEIVES THE SAME AMOUNT OF TIME DEDICATED TO DEVELOPMENT AS OTHER TALENT

Employees Reporting Percentage of Work Time Spent on Learning and Development Over the Past Six Months Across Different Mediums



n = 17,971.

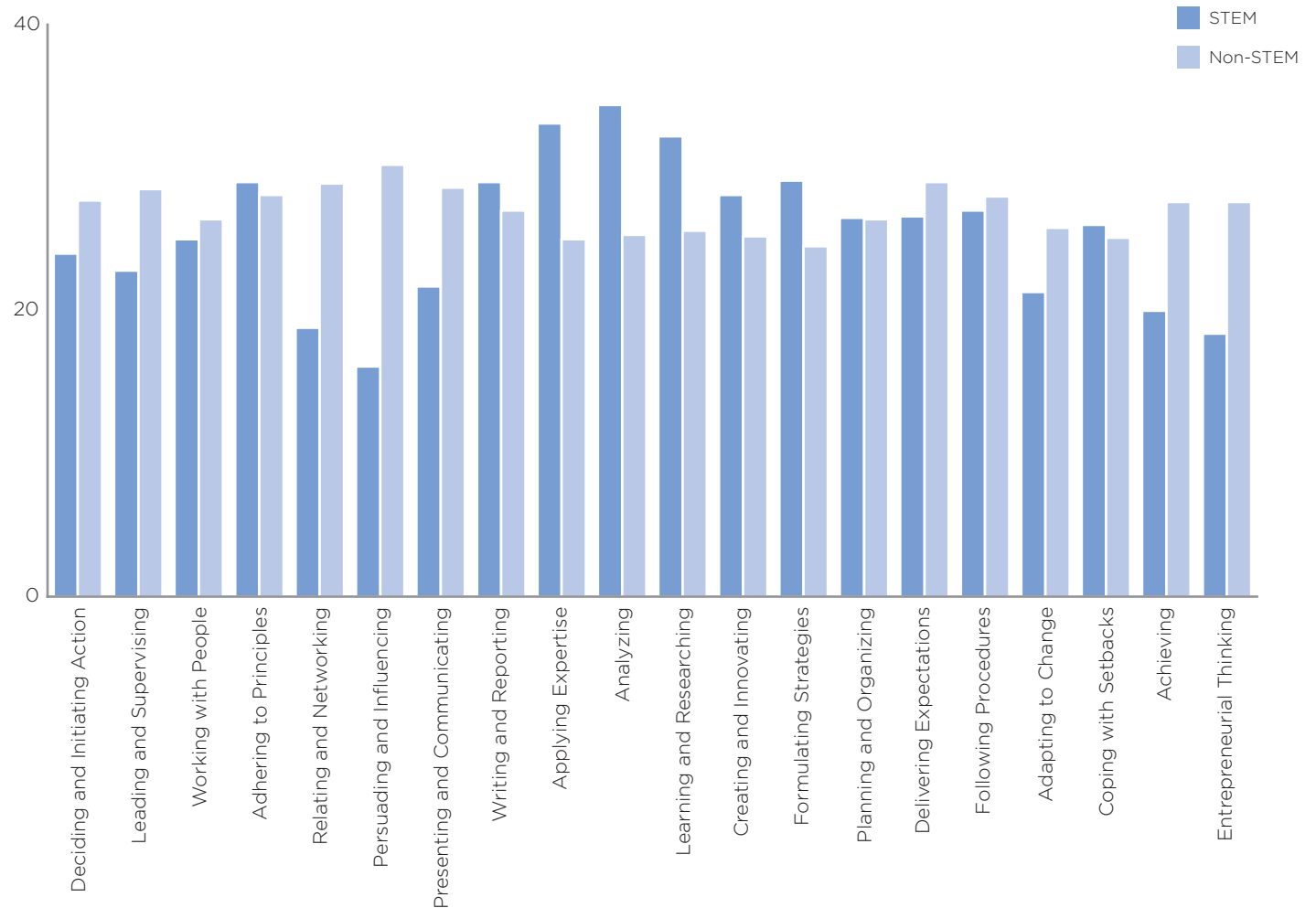
Source: CEB 2014 Q1 Global Labor Market Survey.



The Great Eight competencies are derived from SHL's UCF 20-competency set.

## BROADER VIEW OF STEM AND NON-STEM TALENT AGAINST SHL'S CRITICAL SUCCESS COMPETENCIES

Percentage of Talent in Top Quartile of Effectiveness



### SHL's UCF and "The Great Eight"

The SHL Universal Competency Framework (UCF) establishes a standard classification for **competencies required to succeed in any job, at any level, in any organization**. At the top of the competency hierarchy are "the Great Eight." Which are a general categorization of behaviors that influence job performance.

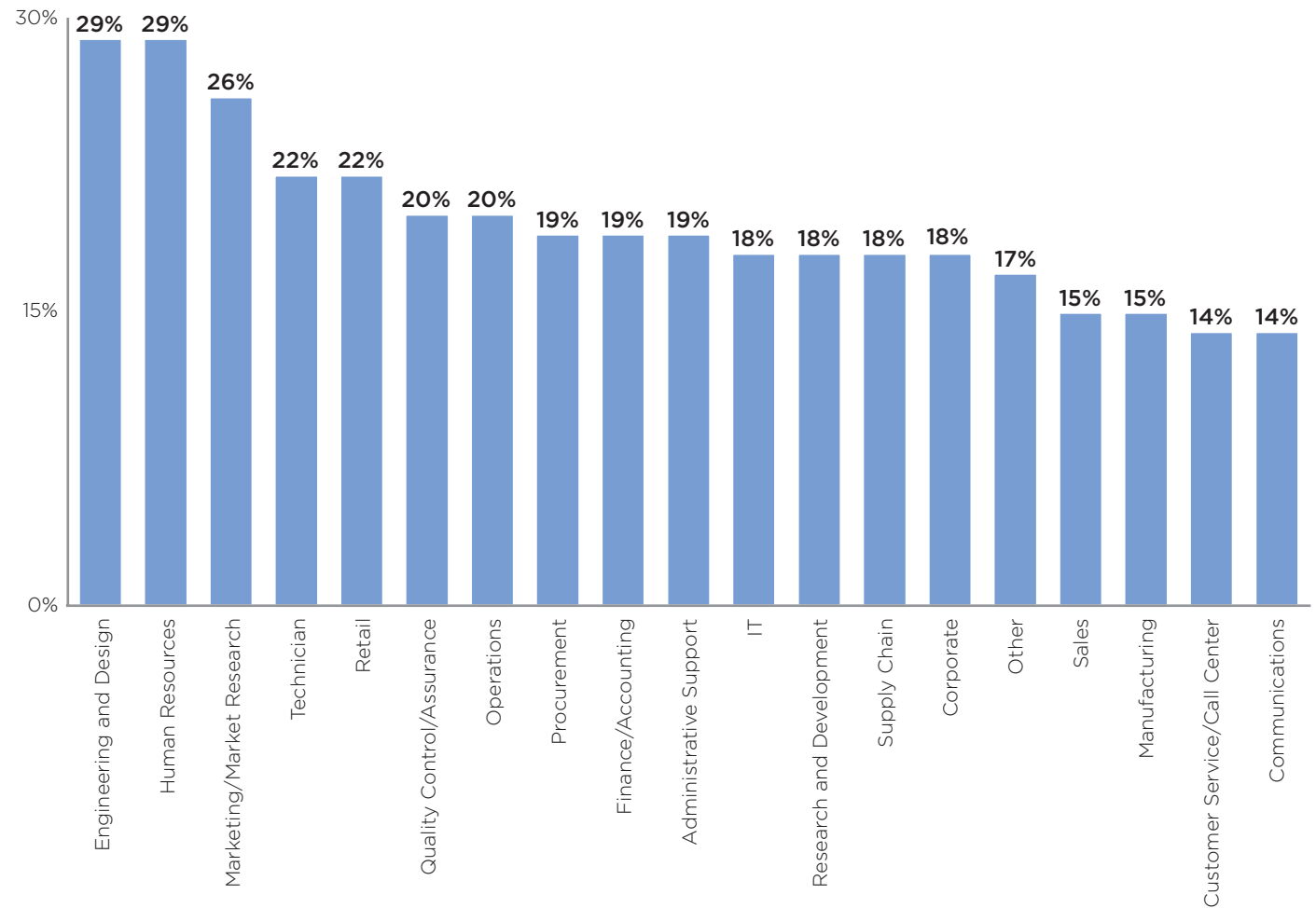
n = 242,684.

Source: CEB 2001-2014 SHL Universal Competency Framework.



Engineering and design employees are more likely to be enterprise contributors than are IT or R&D employees.

## PERCENTAGE OF ENTERPRISE CONTRIBUTORS BY FUNCTION



n = 10,531.

Source: CEB 2014 Enterprise Contribution Workforce Survey.