

# How to Prepare for the Coming Talent Short Fall

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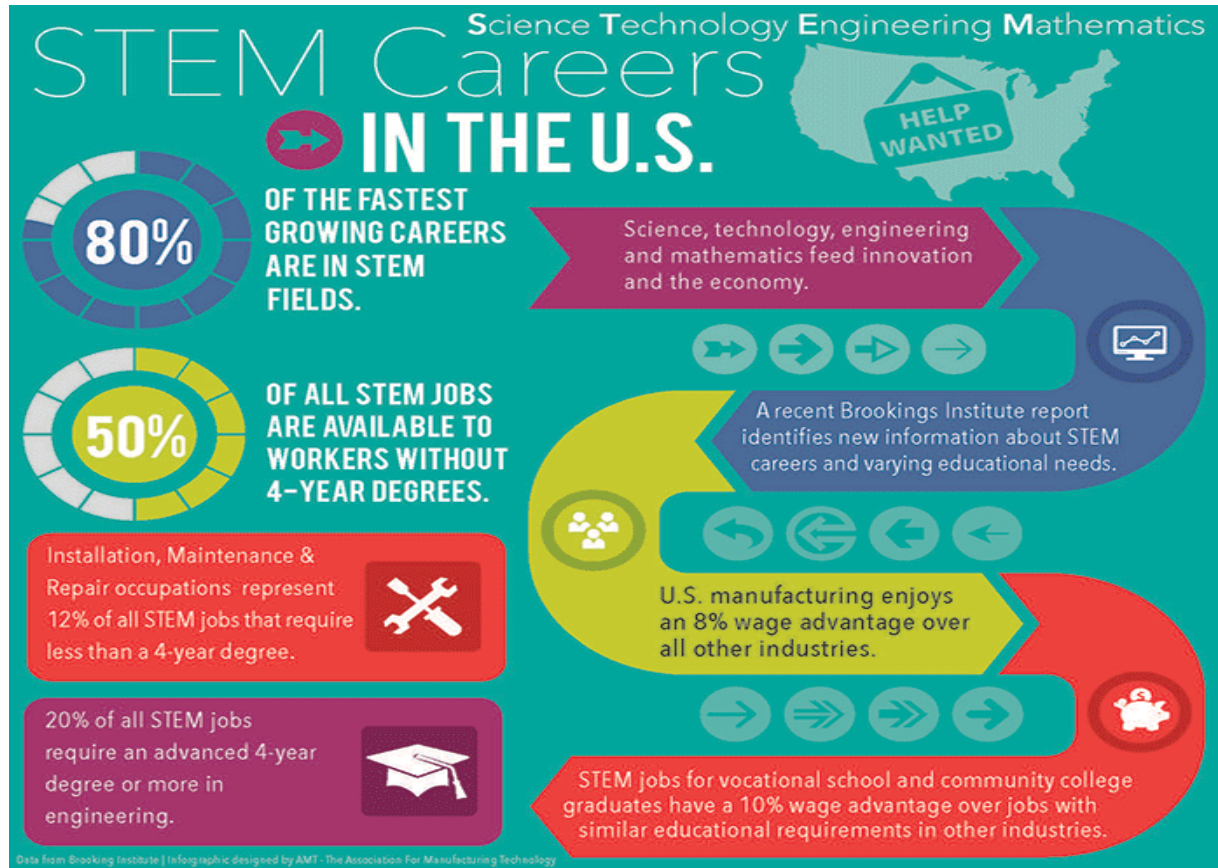


# Discussion Road Map/Objectives

- True or False - Is there a STEM Talent Shortage?
- Questions you need to ask your CEO & Leadership Team
- 7 Components to build a solid STEM Talent Strategy
- Top Five Companies to Benchmark Against



# Is there really a STEM Shortage?

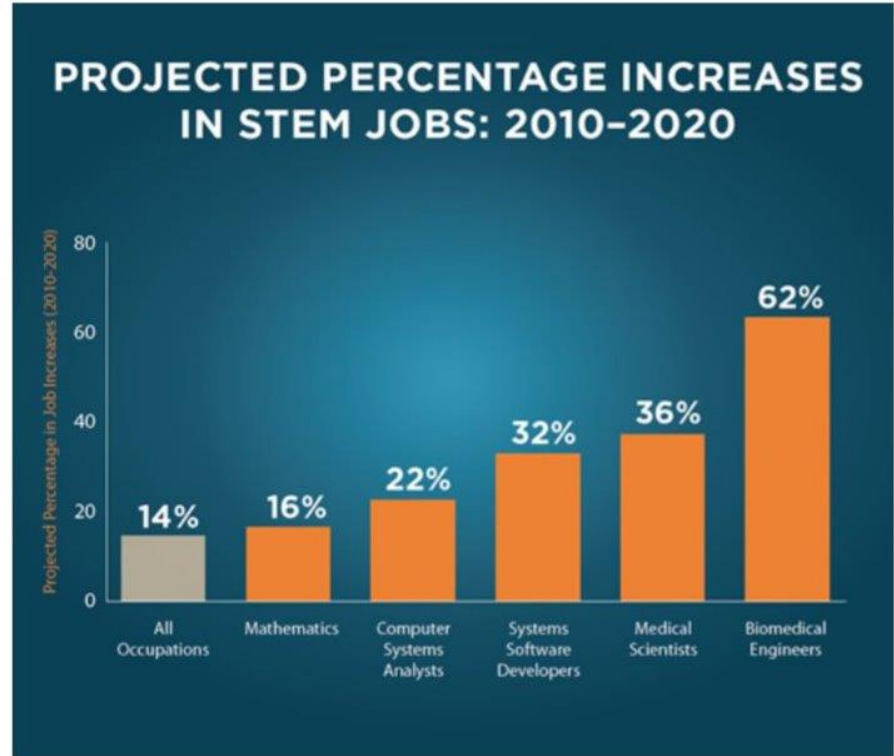


# Department of Labor Projected Growth

President Obama's Council of Advisors on Science and Technology, for instance, stated that over the next decade, [1 million additional STEM graduates](#) will be needed in the U.S.

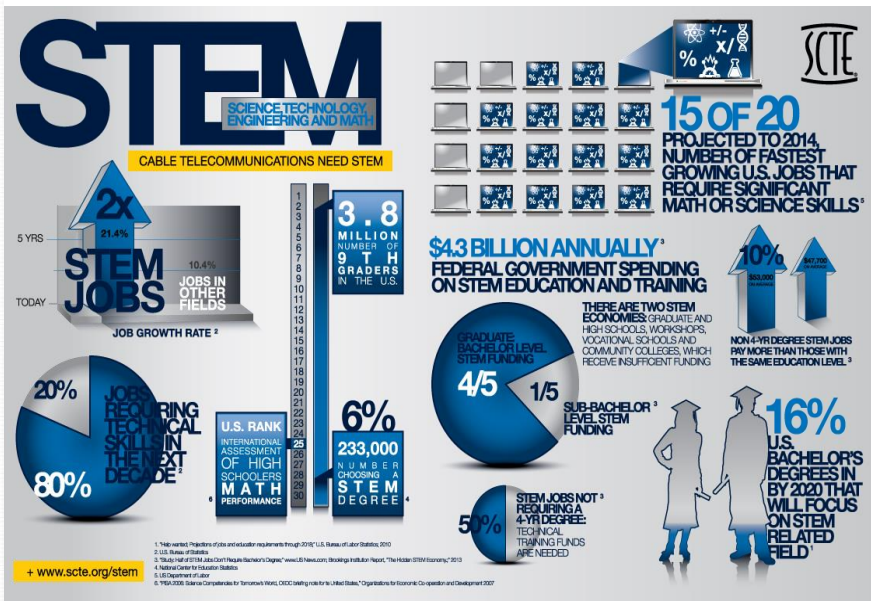
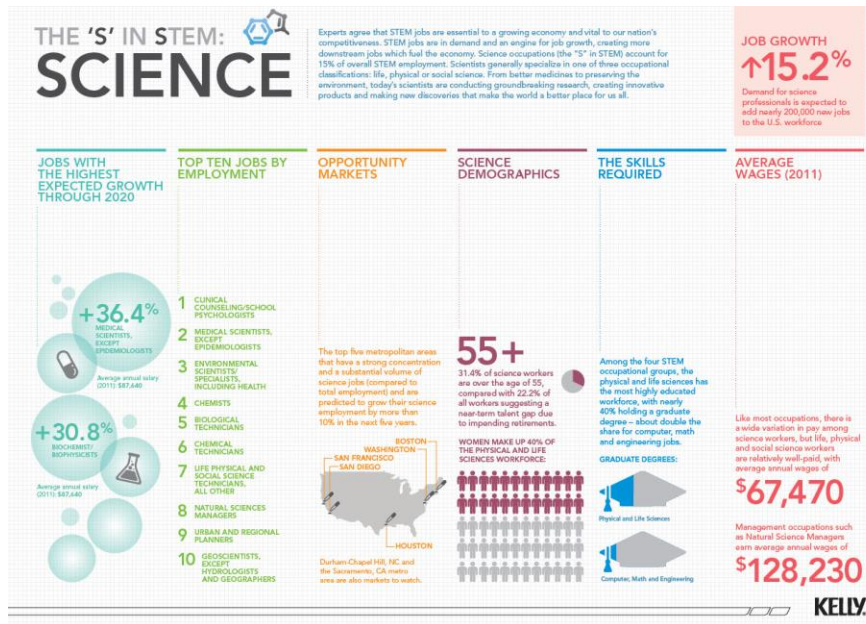
In the U.K., the Royal Academy of Engineering reported last year that the nation will have to graduate [100 000 STEM majors every year until 2020](#) just to stay even with demand.

[Germany, meanwhile, is said to have a shortage of about 210 000 workers](#) in what's known there as the MINT disciplines—mathematics, computer science, natural sciences, and technology.



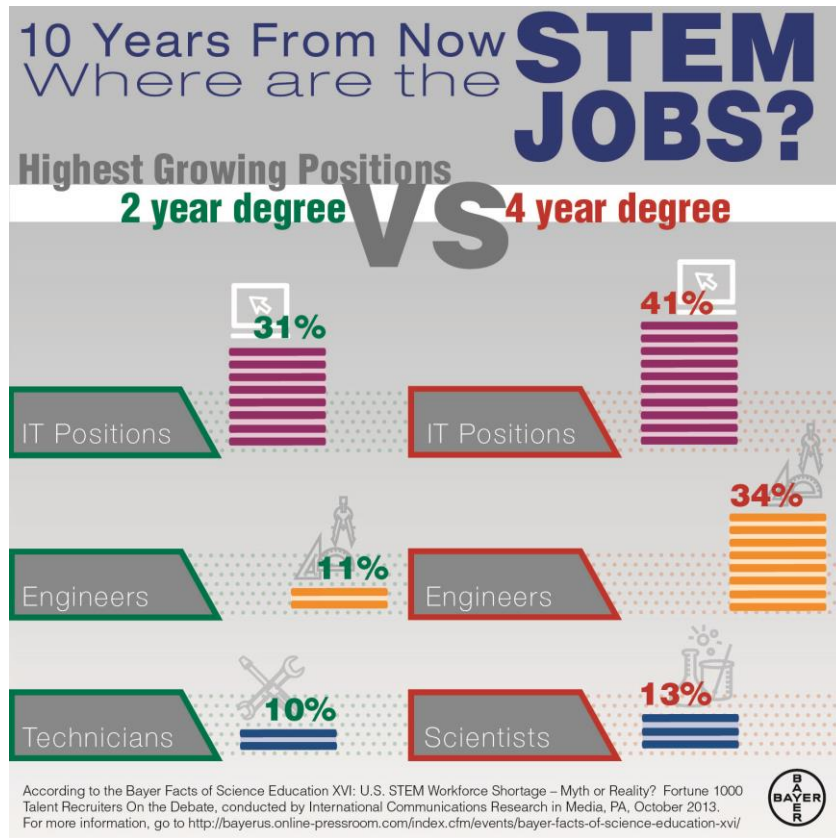
# Talent Gap is Across Industries

## Finances, Manufacturing, Medicine, Technology, Utilities





# Greatest need for talent by Type of Education



# Is there really a STEM Shortage?

## Generational Impact



- 10.5K Boomers retiring daily
  - The case of Mr. Howell
  - Lots of Knowledge – Phased Retirement
- GenXers - Forgotten Middle Children – competent but small percentage in Technical Fields caught between boomers/millennials
  - The Case of Determined Evie
- Movies to watch:
  - The Intern, 2014 - Robert De Niro
  - Younger, 2015
  - The Internship, 2013 – Vince Vaughn

# Is there really a STEM Shortage?



- 81 Million Millennials entering workforce
  - Accenture in Fortune Magazine
- Very Diverse
- Technologically sophisticated every thing is web driven
  - Mobile application process ...Linkedin connected
  - WhatsUp interview
  - Onboarding starts a time of acceptance
- Am ready to walk – Don't need to stay here
- I have marketable skills
- I don't have to worry about borders
- Coach me, train me, but don't tell me what to do



# But where are we really?



- Billions have been spent
- Some increases in females enrolling in STEM
- Millennials according to 2015 PEW Study more likely to enroll in Social Services and Business programs
- Some countries doing well with STEM Grads
  - India, China, Singapore, Indonesia
- Countries struggling with STEM Graduates
  - UK, Paris, Belgium, Ireland

# A Look at Minorities in STEM

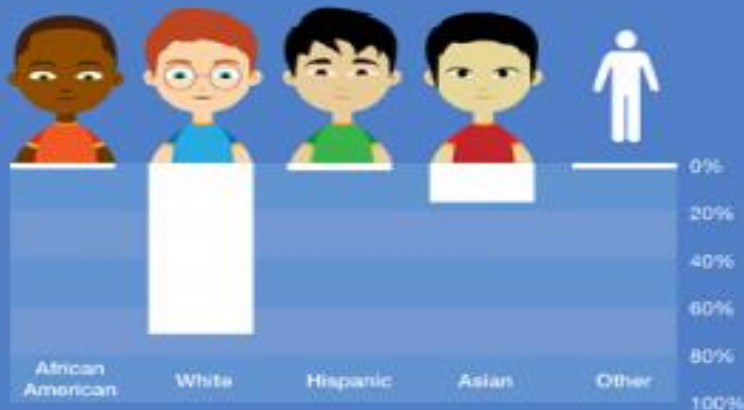
(Science, Technology, Engineering, & Mathematics)

One in five STEM workers is foreign-born. Of those, 63% of foreign-born STEM workers come from Asia.



Half of all Asian workers with STEM degrees have STEM jobs, compared to 30% of Hispanics, African Americans and American Indians.

Scientists and Engineers (2006)



1 in 10 STEM professionals is a minority woman

African Americans, American Indians, and Hispanics between 18-24 account for 34% of the population, but earn only 12% of all undergraduate degrees in engineering.



# Understand the Business Strategy Before Developing Your STEM Strategy



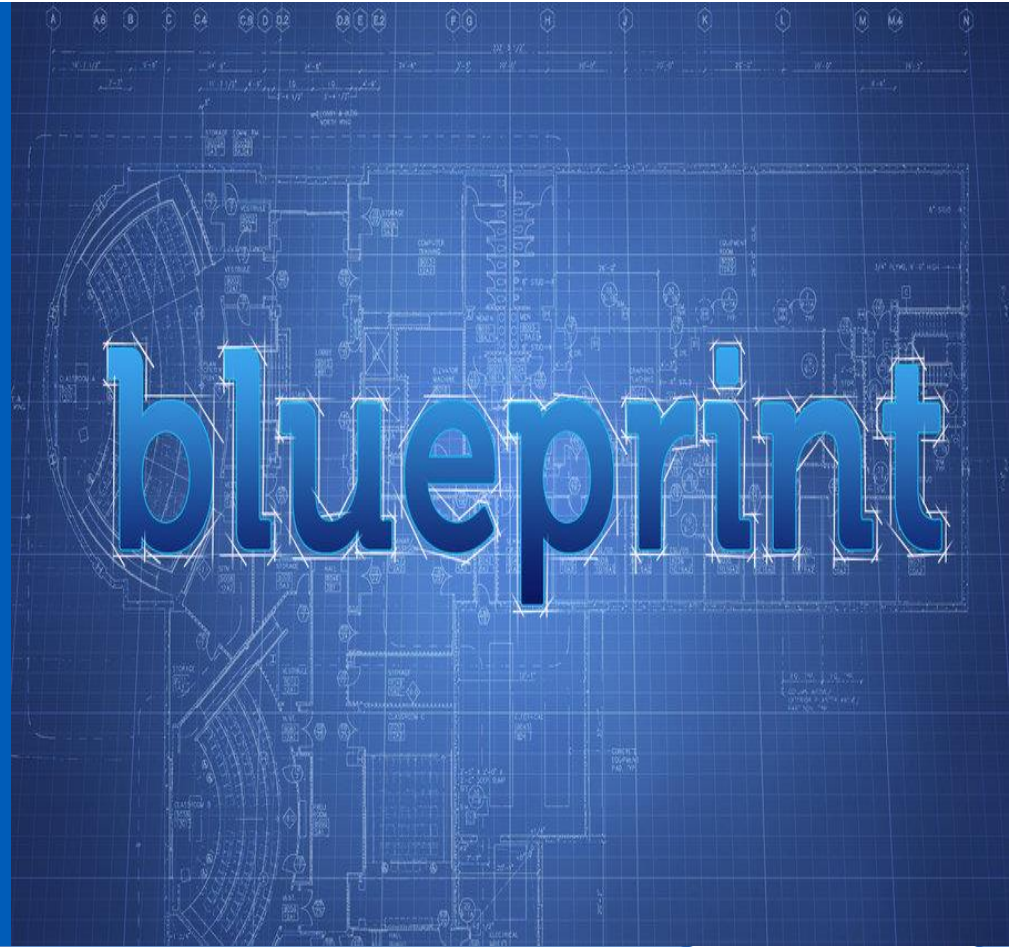
# CEO & Leadership Team Questions



- **Where is our business strategy taking us?**
  - What countries are we expanding too?
  - Which businesses/divisions are we looking to grow?
  - What is the level of financial investment being made on talent?
- **Specific Talent Needs**
  - What does our turnover rate look like by business/division
  - Which job skills are we going to need
  - What level are we looking at....
    - Early Talent Hires
    - Mid-Career professionals?
    - Seasoned Professionals?
    - Front-line?
  - Are there Affirmative Action gaps that we need to address



# How to Build a STEM Talent Strategy





# Seven STEPs to Building a STEM Talent Strategy

## Step 1: Understand the Business Strategy

- Where is the company planning to grow its operations?
- Where is there downsizing taking place?
- What business skills are going to be needed?

## Step 2: Get a read on company demographics

- What is the current state of gender demographics by business unit & specialty
- What percentage of the workforce will be retiring by business unit and specialty
- Are there Affirmative Action gaps that the company needs to address

## Step 3: Get a read on potential hiring needs

- Look over the last 3 to 5 years of hiring data what patterns do you see?
- Are there the top 3 to 4 businesses that generate the most volume of hiring needs?
- Look over the turnover data what positions have the greatest turn over?

## Step 4: Identify Potential Strategic Partnerships

- Pull together an advisory groups on your STEM hiring needs.
- People to include : HR Business Partners with greatest recruiting needs; Diversity Office Representative; Functional leader/senior leader; Representative from Early Talent; Representative from key employee resource groups; Representative from communications and community relations.

# Seven STEPs to Building a STEM Talent Strategy

## Step 5: Identify External Partners

- If you are looking for early talent go to second tier schools in your area
- Partner Regionally not just nationally
- Don't just go to conferences, have speakers from your company
- Focus on industry associations not just broad groups

## Step 6: Develop Practical Metrics

- Don't create stand alone metrics look for existing score cards to report results
- Set realistic target for female and minority talent goals
- Don't forget to set goals in terms of generational differences

## Step 7: Execute & Communicate

- Socialize plan once developed
- It is critical to keep your business functions informed of progress.
- Get in front of HR Business Partner and business leadership team meetings
- Build a strong communications plan to share internally and externally

# Finding Financial Resources



- Create a team to help build a plan and pull together financial resources
  - Community Relations
  - Diversity Department
  - Engineering or IT or Supply Chain Representative/Senior Leader
  - Social Media Leader
  - Corporate Communications
- Things to centralize
  - Advertising, Social Media, & Branding Efforts
  - Scholarships
  - Employee Resource Groups
  - Setting Goals & Tracking of Metrics

# Examples of Best Practice Techniques



- **Early Talent Strategies:**

- Creations of scholarships linked to internships
- Targeting 2<sup>nd</sup> tier colleges for recruiting
- Investing in college program curriculum and co-branding certification or training programs

- **Front-line Operations Partnerships:**

- Creation of partnerships with community non-profits to develop specialized skills
- Partnership with 2 year college certificate programs (i.e. drafting, computer design)
- Creation of Apprenticeship Programs (i.e. manufacturing, HVAC)

- **Specialized Skills:**

- Partnering with Professional Associations (i.e. NSBE, WITI, etc.)
- Leverage the employee resource groups to host events on professional development

- **Middle Management:**

- Employee Referrals
- Targeted advertising and scraping on websites
- Hosting special events and receptions to solicit informally warm clients

# Best Practices & Companies to Benchmark Against

- BASF huge supporter of Female pipeline development joined forces with the National Manufacturing Institute.
- GE partnership with Quirky.com
- Boeing created a partnership to promote awareness about flight
- Time Warner built campaign called Connect a Million Minds
- Intel committed \$350 million to pipeline development
- National Grid provided seed money to create STEM Connector.org and scholarships to engineering students
- Pink booth at Society of Women Engineers





# Final Thoughts



- Know what your competitors are doing
- Look outside of your industry
- Create a plan that engages the influencers in you company.
- Have fewer metrics build them into the core business goals
- Don't forget people with disabilities and military veterans & their spouses
- Leverage social media

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