

***Synergistic Effects of Hiring Retired Workers -  
May the (Work) Force be with Us***

**ASEE CIEC**

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# Overview

- ❑ Defining the senior retired worker demographic
  - Signs – 1970; Les Emmerson
  - Kennedy assassination - 1963
- ❑ Aging of the world's population
- ❑ Shortfall of skilled workers in the United States
  - Science and engineering supply and demand
- ❑ Senior Retired Worker Characteristics

## Defining Senior Retired Worker Cohort

- ❑ Veterans (1922-1946; 52 million population)
  - ❑ Boomers (1946-1964; 76 million population)
    - Began turning 65 in January 1, 2011
      - 10K/day; ~4M/yr; for next 18 yrs
  - ❑ Gen X (1964-1980; 44 million population)
    - Stagnant economy and slow job growth
  - ❑ Gen Y (1980-2000; 69.7 million population)
- } 42%  
Reduction

Although US Census Bureau provides the basic information on live births and birth rates, aside from the Veteran and Boomer cohorts, it is not wholly agreed to exactly which years should be counted in post-Boomer groups

**We have Insufficient  
Backfill for an Aging  
Population**

## Defining Senior Retired Worker Cohort Coupled with...

- ❑ The Gen Y cohort group, even though large in numbers is not yet fully available or ready to fill the requirements gap left by the reduction of Boomers.
- ❑ In comparison to the previous decades, males are marrying later in life from their previous age 22 to today's 27 years of age, while females are experiencing a comparable move to the right from age 20 to 25
- ❑ The largest % increase (+5%) in first-time mothers 35+; decrease in 27-34 age group (2010)
- ❑ Some Gen Y men even nominate 40 as a good age to be a father suggesting another reduction in population may manifest itself in our next documented generation.

# Aging World Population

- Life Expectancy - Male 78, Female 82
- 1900-2000; U.S. pop increased 3 times, 65+ increased 11 times
- 65+; **1 in 8 in 2005**; **1 in 6 2020**; **1 in 5 2030**; in 2100 65+ greater than entire US pop in 1940 = 131.2 million.



## Aging World Population - Dependency Ratio

- That portion of the population not likely to be working (65+) compared to the number of people of working age (15 – 64)
- 1950, for every person 65 and older, there were **12** people age 15 to 64
- 2045, for every person age 65 and older, there will be **4** people age 15 to 64
- 2000 to 2030, we see an increase in the dependency ratio of 21.1 percent to 37.0 percent of people age 65 to those aged 15 to 64

## Aging World Population – Dependency Ratio (world-wide issue)

*“...by 2050, [many nations] estimates paint a dark picture, with an average DR [dependency ratio] of 62.3% in these nations. In other words, there will 6.2 people of 65+ years for every 10 people likely to be in the workforce. Among nations forecast to suffer the most devastating DRs in 2050 are Germany at 73.9%, Spain at 91.3%, Poland at 83.1%, Korea at 91.4%, and Japan at 94.9%. Italy tops the chart at 98.5%; which means there will be only slightly more than one member of the labor force for each senior in Italy.”*

## No Shortage of Skilled Labor Shortage Forecasts

- ❑ 2000, it was forecasted we would have a shortfall of skilled labor by 2010; roughly 14 million people, 7 million of which were skilled labor
- ❑ 2003, forecasted a shortage of over 10 Million by 2010
- ❑ 2006, a shortfall of 6 million skilled people
- ❑ 2010, 4 million, another 8.9 million
- ❑ **2014, 8 million; 14M 65-74 yr olds**
- ❑ 2021, 20 million
- ❑ 2030, 35 million

## Skilled Labor Shortage Forecasts (world-wide)

- ❑ 2011, National Association of Manufacturers surveyed 779 industrial companies, found 32 percent reported “moderate to serious” skills shortages
- ❑ 2011, 2 million open jobs...an eye-catching claim at a time when the unemployment rate is 9.1 percent
- ❑ 2011, 13.9 million people are officially unemployed and another 8.5 million are working part-time
- ❑ 2030, 35 million (U.S.); 45 million (Europe)
- ❑ 2015, 300 Million new jobs required throughout the world...

## But Wait...

- Over 50 years; average goods-producing output per worker is up 330%
  - Telecon - Sametime
  - Powerpoint – Word - Excel
  - Instant Messaging



### Break the multitasking habit

By Anita Bruzzese, Gannett

Updated 7h 39m ago

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While you may know that studies have found multitasking hurts productivity, the truth is you really haven't stopped trying to do more than one thing at a time, have you?



#### On the Job

By Anita Bruzzese



Tony Bustos, The Arizona Republic

Try to do it all, all at once, and the only thing you really achieve is stress.

After all, while some people may not be able to multitask well, that certainly doesn't include you.

Care to test that theory?

**COLUMN:** Don't multitask; focus on your work instead

**STORY:** Multitasking fuels forgetting

**MORE:** Anita Bruzzese's column index

Here's how to test your multitasking abilities:

Have someone time you while you write the word "multitask" and then the numbers from 1 to 10. Record your time.

Have someone time you while you alternately write the letters of "multitask" and the numbers 1-10. For example, you will write "m" then "1" then "u" then "2" and so on. Record your time. After comparing the two times,

“...I read the article while reading my email, finishing a meeting agenda, listening to music, and talking on the phone. I think the article will help me if I can remember what I read”

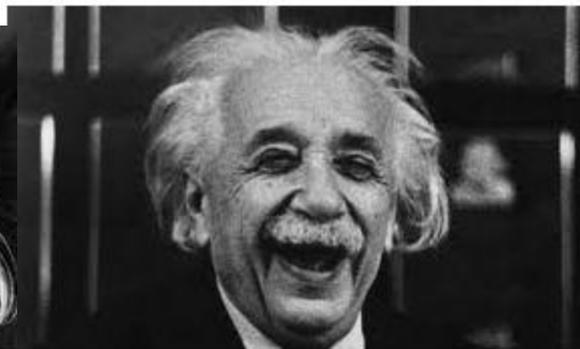
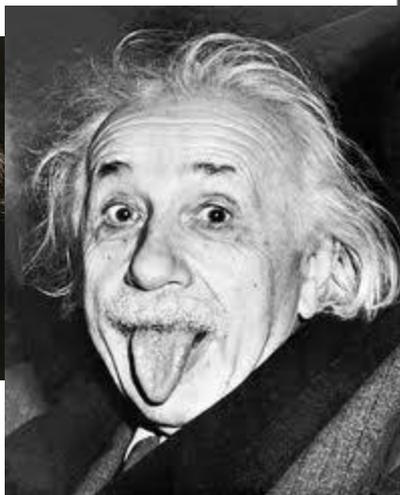
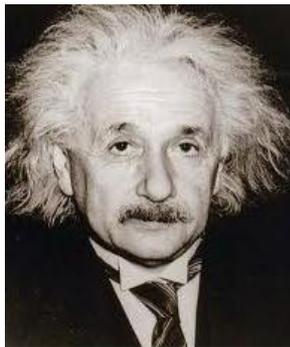
# Why a Shortage?

The argument for a shortfall of skilled labor worldwide is premised on an aging Baby Boomer population and slower birth rates; therefore creating the perceived shortfall

but....

# Growth of S&E Workforce

- U.S. Population ~ 312M people; 3.3 (bls) to 5.3M (nsf) Scientist and Engineers (~1%-2%)
- By 2010 science and engineering grew 3 times faster; creating a 47% increase in demand



## Science and Engineering Graduation Rates

- Undergraduate Education – **less than 40%** of those entering College in Science and Engineering graduate
- Generally, a slower growing and older S&E U.S. labor force
  - Majority of individuals in S&E U.S. labor force are 40+ years old
  - 25.6% in S&E U.S. labor force are 50+ years old

**To borrow a line - There is a Disturbance in the Supply and Demand Continuum**

Immortal words of great philosopher and Jedi Knight Yoda "There is a disturbance in the time and space continuum"...

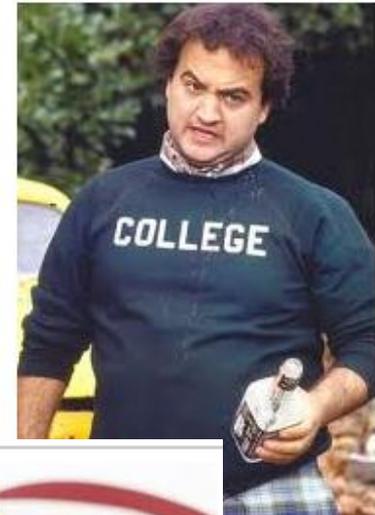
## Science and Engineering Demographics

*“...a primary driver of the future economy and concomitant creation of jobs in the 21<sup>st</sup> century will be innovation, largely derived from advances in science and engineering. While only 4 percent of the nation’s workforce is composed of scientists and engineers, this group disproportionately creates jobs for the other 96 percent.”*

National Academies of Science (2011, p. 4) titled *Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5*

## National Science Foundation; The Ratio Of Science And Engineering Degrees Per 100 24-year-olds Across Numerous Nations

- ❑ Finland--13
- ❑ France--11
- ❑ Taiwan--10.9
- ❑ South Korea--10.7
- ❑ United Kingdom--10.5
- ❑ Sweden--9.8
- ❑ Ireland--8.5
- ❑ Spain--8.1
- ❑ Japan--8.0
- ❑ Canada--6.6
- ❑ Germany--6.4
- ❑ United States--5.7



Opportunity in front of us to capitalize on the world's collective intelligence

# Hiring Senior Retired Workers

- ❑ Attitude towards work
- ❑ Cost of employment
- ❑ Experience of dealing with stress and emotional intelligence

# Attitude Towards Work

## A Bias for Action

- ❑ Provides a **social environment** which supplements the empty nester effect
- ❑ Have **less** outside **stressors** at work than do their younger counterparts
- ❑ Lower **absenteeism** and lower **turnover**
- ❑ Productivity does not fall but **rises** because of greater **dependability**, better **judgment** and **accuracy**
- ❑ Retired senior cohort group felt **most energized** by their work, thought time passed quickly when they were at work and felt a great deal of their **pride** came from their work and career

# Cost of Employment

- ❑ Since 1950 there have been eleven documented and agreed to U.S. economic recessions
- ❑ Stock market crash 1929; great depression of 1930
  - Most recent Dec 2007 – June 2009; NBER
  - More frugal than non-retired workers
- ❑ Recognition that their ageing cohort will live longer than previous cohorts
- ❑ Social Security is under constant attack

**Driving Forces Creating Frugality**

# Senior Retired Workers Can Be A Financial Windfall

- ❑ Receiving income from other sources, Social Security, pensions and a lifetime of savings
- ❑ May already have medical coverage

**Cohort Demands Less  
And Will Cost Less**

## Chronologically Age, We Go Through Somewhat Predictable Patterns

- ❑ Our 30's, we generally are collecting those material items
- ❑ Our 40's may prove to be transitional years as our children frequently grow older and may move on to college, yielding an empty nester effect
- ❑ Our 50's bring changes; mental, physical and psychological
- ❑ Financial needs of this particular cohort, therefore, are not as significant

# Life-time Of Experiences And Stress

- ❑ Lifetime of experience to bear on each problem
- ❑ Numerous jobs, perhaps spanning multiple companies or even industries
- ❑ Recognize the finality that brings current and future experiences into perspective
- ❑ As humans, we form associations or memory maps of each situation we encounter
  - Associative thinking
    - Forms barriers to thinking out of the box

# Two Types Of Stress

- ❑ Challenge stress
- ❑ Threat stress

**Differentiated by how in control we feel  
and whether we feel we have the resources to  
deal with the specific situation**

**Common denominator to both  
is experience**

# Not Destined For The CEO Chair

- ❑ “...semi-retired workers are seldom trying to climb the corporate ladder or establish a corporate reputation, as many have already done so. These men and women leave their egos at the door and are typically thankful to have a post-career job...”
- ❑ CEO is not where they wish to be
- ❑ Value their ability to do what they feel comfortable doing



# Emotional Intelligence

- ❑ Ability to accurately identify and understand one's own emotional reactions and those of others
- ❑ Neural systems responsible for intellect and or emotions are separate, but have intimately interwoven connections
  - Neural chemicals (oxytocin, serotonin, testosterone, vasopressin)
- ❑ Emotional Intelligence (EI) has been defined along four dimensions with a total of 19 competencies: self-awareness, self-management, social-awareness, social-skills

This is not to suggest all chronologically aged individuals are equally emotionally mature

# Thoughts on Senior Retired Workers

- ❑ Living longer and experiencing a healthier longevity
- ❑ Want to remain active and productive members of society
- ❑ Shortfall in skilled labor, the senior retired workforce can play a significant role in bridging the potential gap
- ❑ Calming effect frequently referred to as emotional intelligence