

# *ROR Subcommittee #03-4 Critical Skills / Retirement Bubble*

October 21, 2005  
Version 2



# SIS Critical Skills/Retirement Bubble Strawman Model

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November 2005

## Agenda

- I. Kickoff, Objectives & Profiles - 10 minutes  
(Mark Doran)
- II. Demographics – What we know - 10 minutes  
(April Cantwell)
- III. Changing Workforce & What Does Your CEO  
Need to Know - 10 minutes  
(Ron Webb)
- IV. Better Practices
  - I. Managing Your Core Competencies – 10 minutes  
(Stewart Witzeman)
  - II. Accessing Retiree Skills - 10 minutes  
(Mike Kostrzewa)
  - III. Fast Tracking & Retaining “trough” personnel – 10 minutes  
(Robin Bergstrom & Scott Steinmetz)
- V. Other better practices (Facilitated) - 60 minutes  
(Mark Doran/Scott Steinmetz)

# Overview: ROR Subcommittee #03-4

## *Critical Skills / Retirement Bubble*

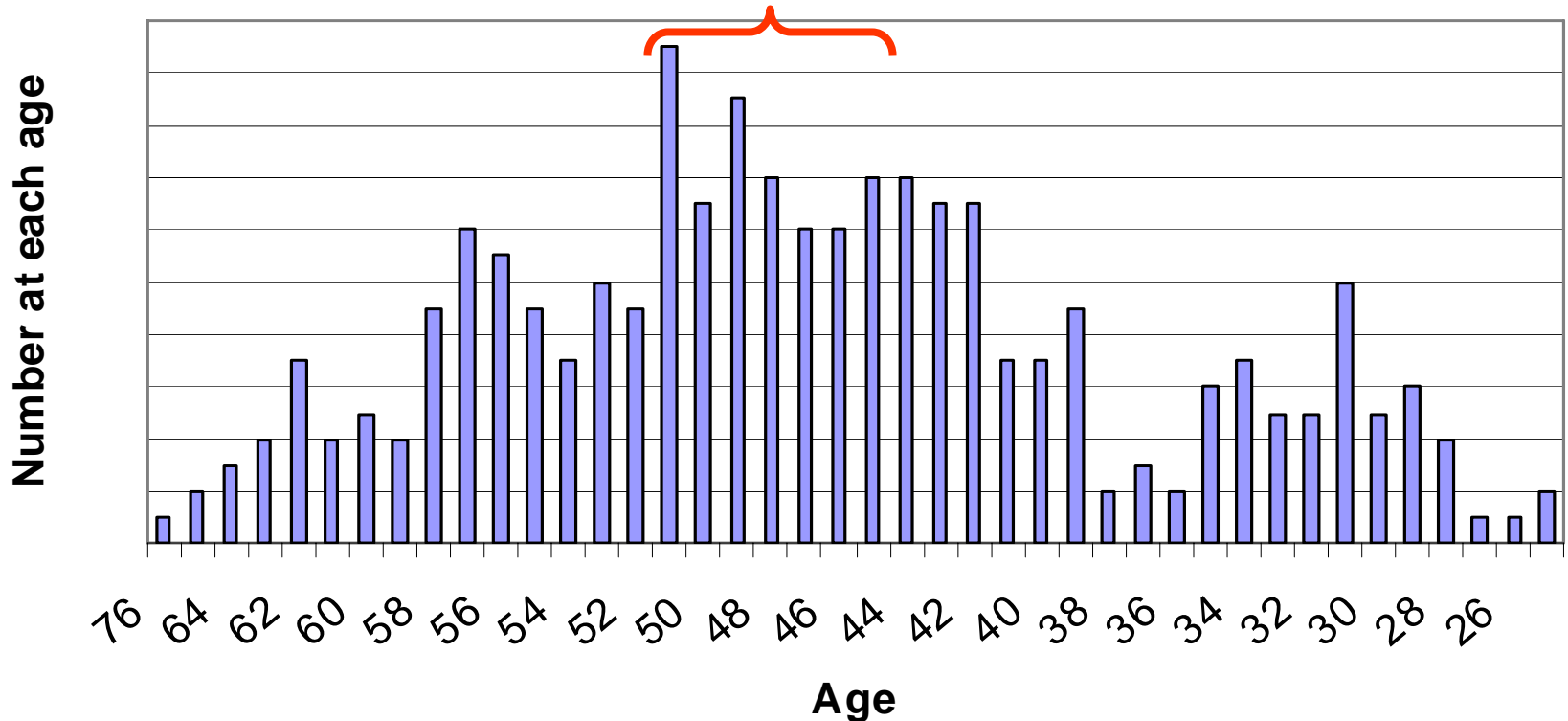
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- Objective/Scope: Determine how companies are planning for the upcoming bubble, skills succession planning & new methods to access skills.
- Dates Start Fall'03 Finish '05
- Key Deliverable: Special Interest Session (SIS)
- Value Proposition: Organizations are faced with a potential huge loss of knowledge as the boomers begin to retire – will companies be prepared or will suffer big impact?
- First – Brief review of the data

# RD & E Age Profile

What does the upcoming bubble look like at your company?

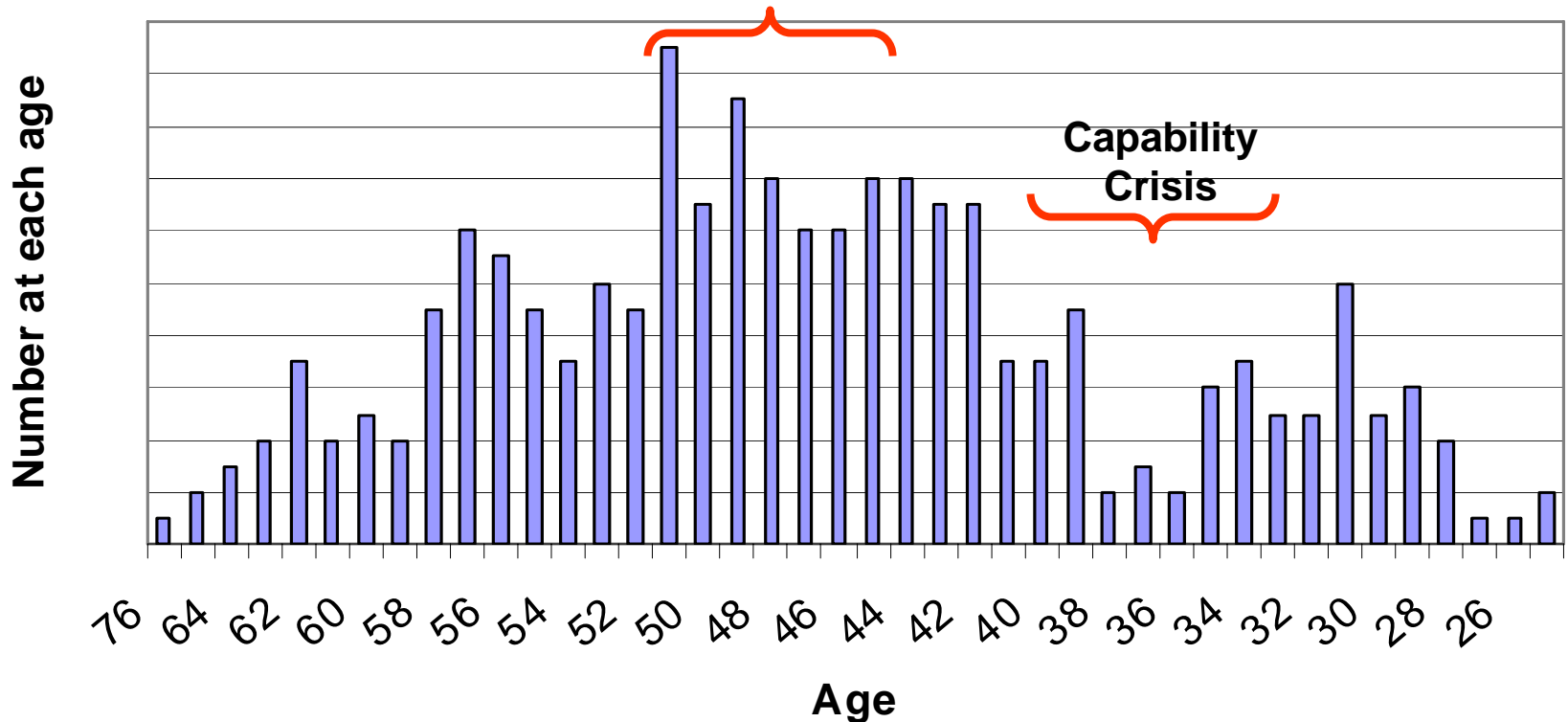
## Upcoming Retirement "Bubble" Actual Example - R,D and E Resources



# RD & E Age Profile

What does the upcoming bubble look like at your company?

## Upcoming Retirement "Bubble" Actual Example - R,D and E Resources

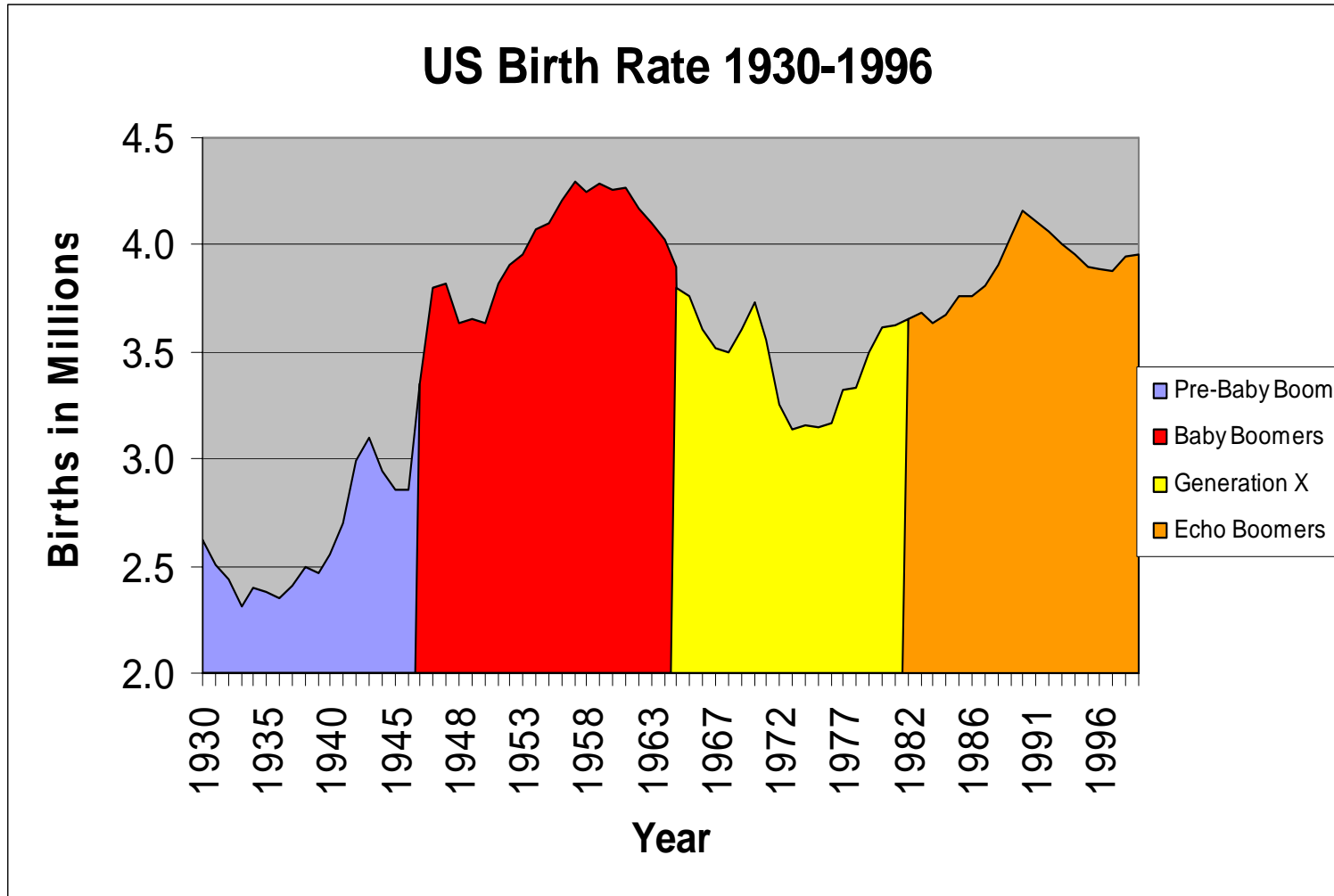




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# Demographics

# Demographics of the US



Data from National Center for Health Services – CIMS MBA students

# U.S. Demographics

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“The projected labor force growth will be affected by the aging of the baby-boom generation – persons born between 1946 and 1964. . . .

***“The labor force will continue to age, with the annual growth rate of the 55-and-older group projected to be 4.1%, nearly 4 times the rate of growth of the overall labor force.”***

from the U.S. Bureau of Labor Statistics, February 2004  
*Monthly Labor Review*





# Worldwide Birth Rates

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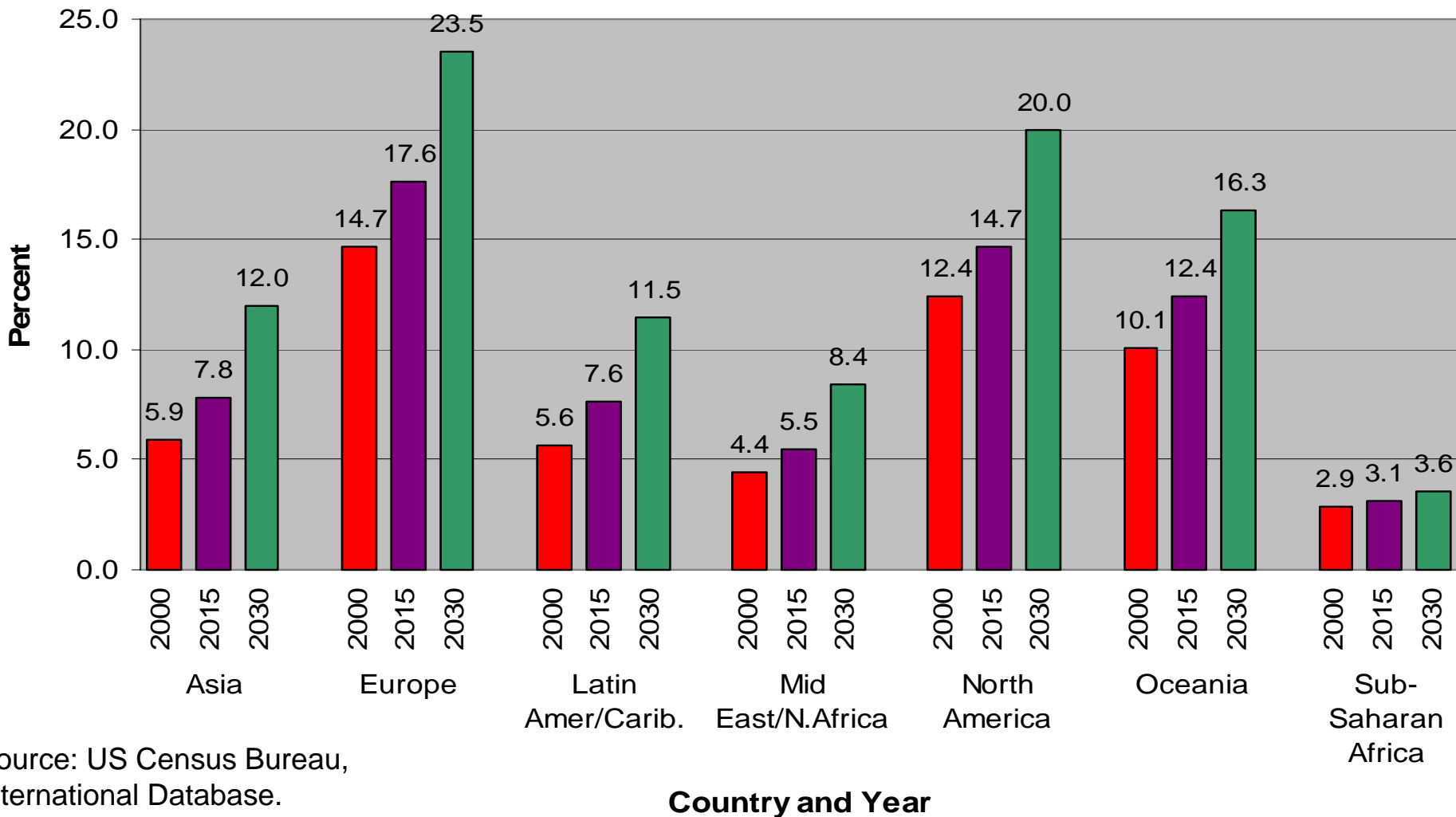
- Across the globe, the birth rate has been declining since the late 1960's.
- This trend is expected to continue at least through the year 2050.

# Aging World Population

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- The world population is aging.
- The Capability Crisis the US is facing will be faced by other nations as well.
- The graph on the next slide depicts aging trends (population age 65 and older) by world region.

# Percent of Population Aged 65+ by World Region (2000, 2015 and 2030)



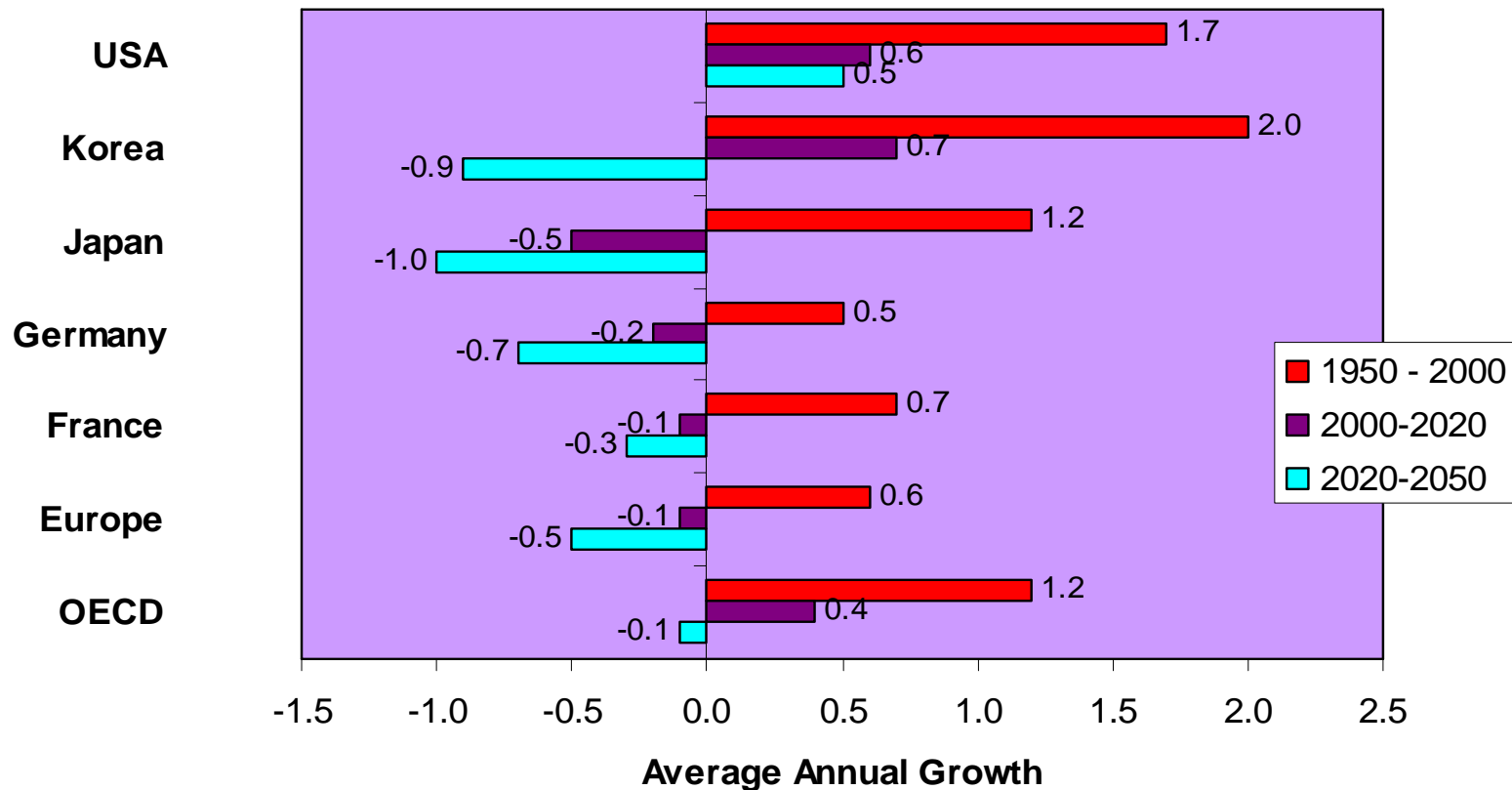
# Impacts of Aging Population on Labor Force Participation

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- In 6 countries examined, actual and projected data for the years 1950 – 2050 present a consistent trend of declining labor force participation.
- Of these countries, the crisis in the US is actually the least severe.

# Labor Force Participation Change, 1950 - 2050

Labor Force Growth in OECD Countries, 1950 - 2050



Projections for 2000 – 2050 assumes constant gender and labor participation in 5-year age groups at the 2000 level.

Data adapted from Figure 1.5 of the Organisation for Economic Co-operation and Development's (OECD) Ageing and Employment Policies: Korea, (2004).

# Immigration Data

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- Industrial managers in the US should not think they will be able to hire technically trained immigrants from other countries. It won't work out that way.
- The trend is toward decreasing or stable rates of immigration and migration rates, especially among highly skilled workers.
- In the countries studied, the immigration of highly skilled workers is offset by near-equal emigration.
- The countries currently benefiting most from immigration of highly skilled workers are the US, Australia Canada, France and Germany. Achieving even more favorable ratios in these countries is unlikely.



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# Changing Workforce

# Forces and Factors in the 21<sup>st</sup> Century

	<b>Traditional</b>	<b>Today</b>
<b>Corporation</b>	Profit Insulated Hierarchical Parent Rich Thorough Stable	PROFIT Competitive Flat Employer Lean Fast Hectic
<b>Employee</b>	Specialized Dependent Comfortable Loyal to Company Entitled	Broad Empowered Stressed Loyal to self Accountable



# So, what is success?

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## Traditional

Perception

Level growth

Job security

Length of service

Contentment

## Today


Performance

Leverage

Employment Security

Length of resume

Confidence



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What does your  
CEO need to know?

# Future Workforce Capacity and Capability Issues

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- Career-level retirements over the next 5 years could result in a significant loss in corporate knowledge base and technology competencies
- Workforce growth may need to be managed today for the transition
- Growth would require a significant investment

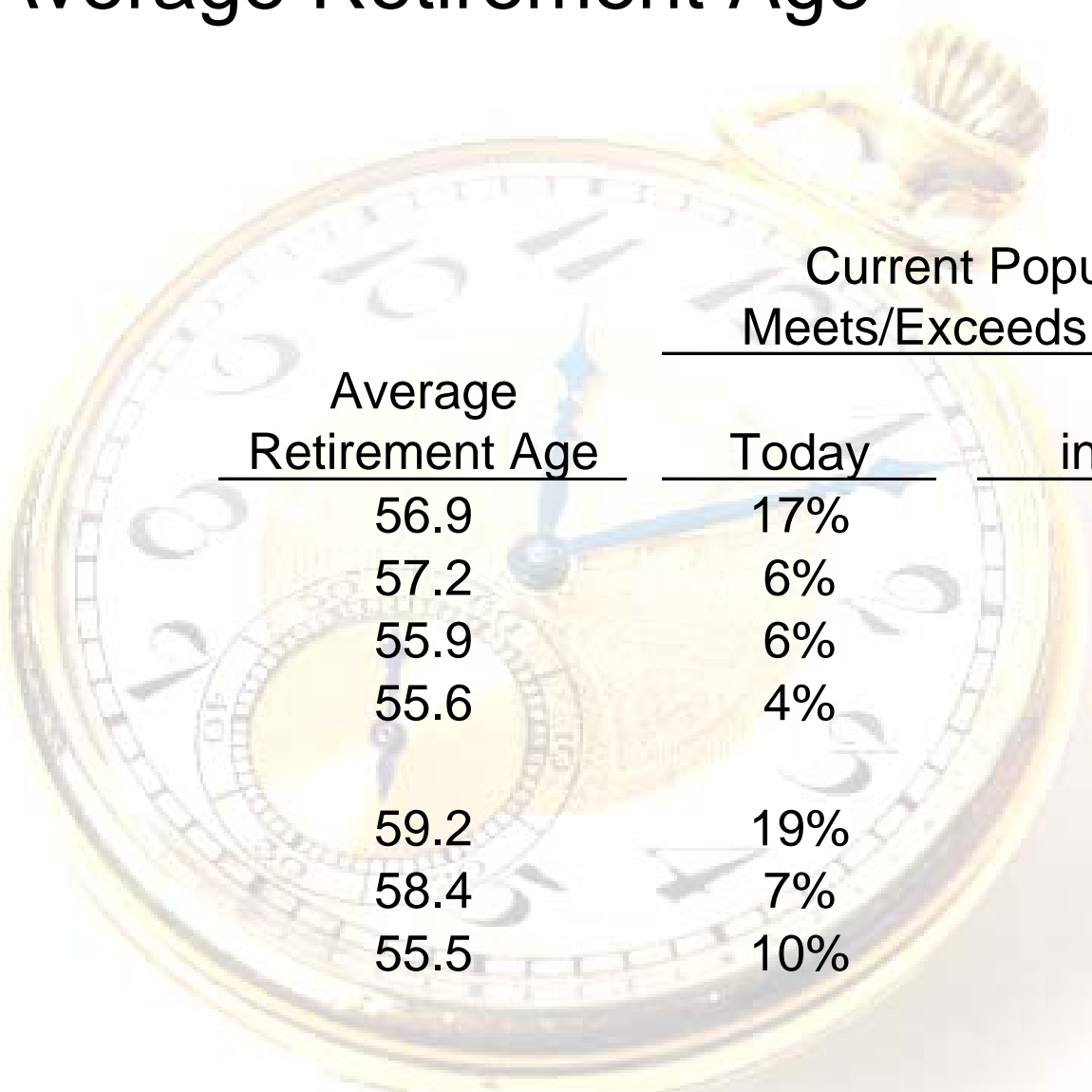
# What Will Your Organization Look Like In 10 Years If We Don't Do Something?

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- Excel-based P&G population flow model
  - All R&D employees identified by age, Band and business sector
- Algorithms used utilize input and output elements, rate controls and feedback loops (all variable that can be adjusted for modeling purposes)
  - Average rates of workforce growth, hiring, promotion and leaving
- A strategic model – most likely scenario we could encounter based on recent and historic trends

# Global Average Retirement Age\*

(P&G)



	<u>Average Retirement Age</u>	<u>Current Population Meets/Exceeds Average</u>	
		<u>Today</u>	<u>in 5 Years</u>
Officers	56.9	17%	67%
Band 5 M	57.2	6%	30%
Band 4 M	55.9	6%	22%
Band 3 M	55.6	4%	13%
Band 5 T	59.2	19%	50%
Band 4 T	58.4	7%	34%
Band 3 T	55.5	10%	29%

\*these numbers include incentive-based early retirements

# P&G Data

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If we follow historic attrition and promotion trends and keep enrollment flat (i.e., no intervention and let the dynamics continue to move forward), by the end of 10 years:

## *Positions Not Filled*

<u>U.S.</u>		<u>International</u>	
Officers	-30%		
Band 5 M	-28%	Band 5 M	-12%
Band 4 M	-18%	Band 2 T	-32%
Band 3 T	-31%		

# P&G Data

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- In order to maintain the current management structure 10 years out, some interventions need to be put in place now.

- Allow the organization to grow 1% per year for six years. One way to do this would be to increase recruiting:

	<u>current</u>	<u>new (2005)</u>
Band 1 T	60	105 (+90%)

- Increase advancement rates each year for these levels:

	<u>current</u>	<u>new (2005)</u>
Band 2 T	6.3%	8.0%
Band 3 M	3.8%	5.0%
Band 4 M	3.3%	5.0%

# What are the critical issues

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**Declining # of technical students, total and domestic**

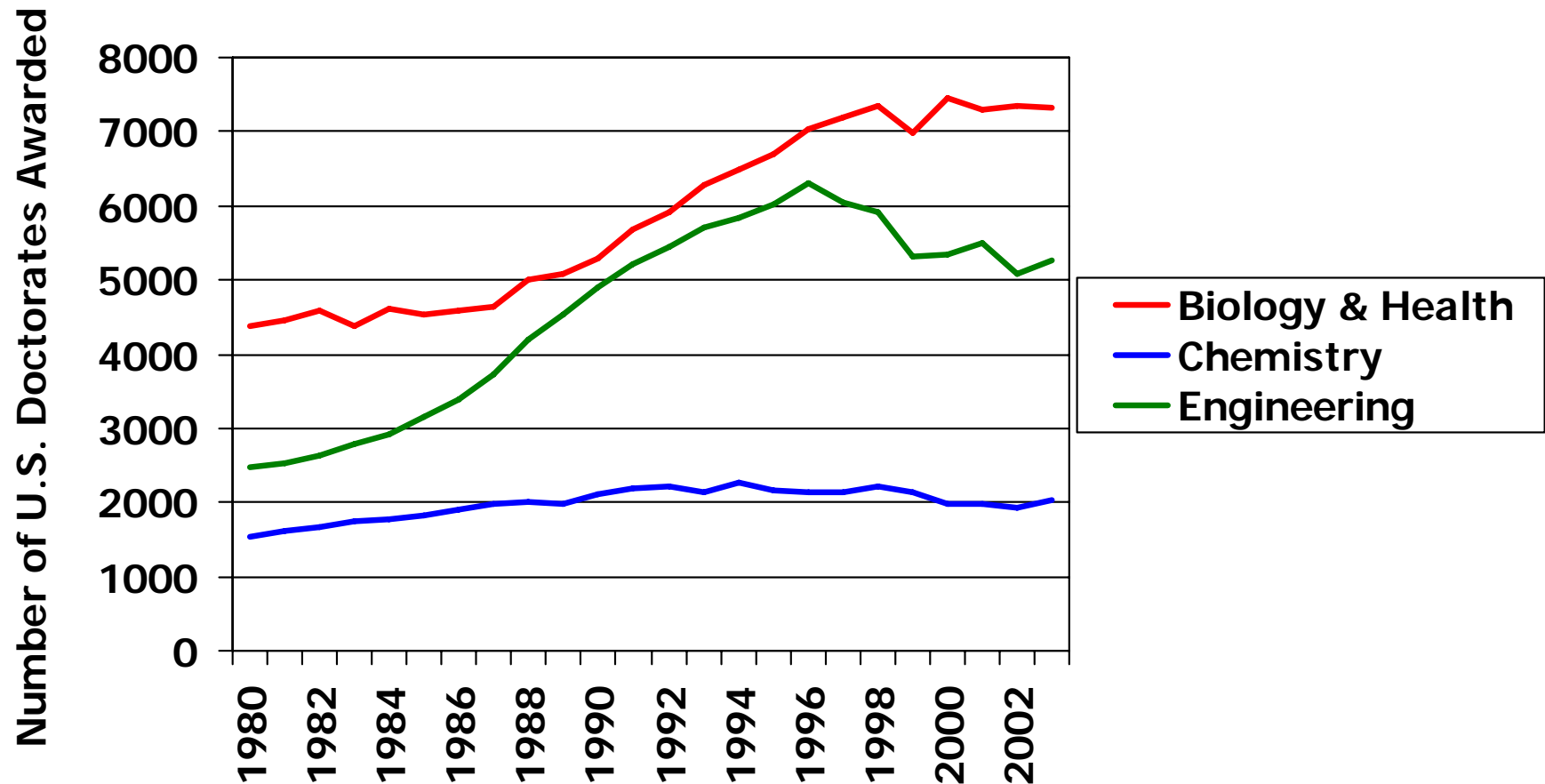
**Harder for foreign students to access US academic institutions**

**More difficult for foreign students to gain temporary employment in the US and Permanent Residency status**



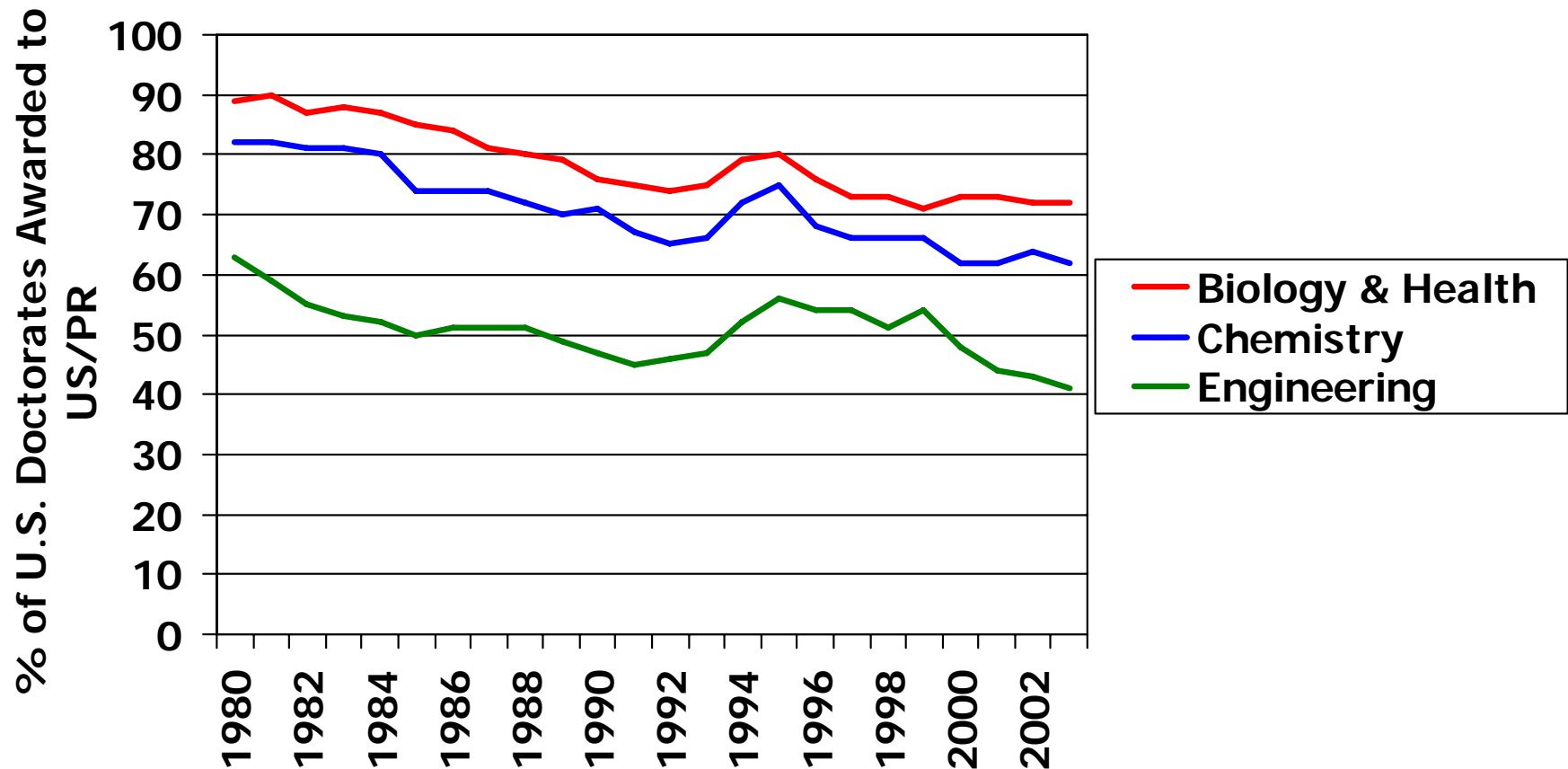
# The Job Market: Supply of Doctorates

NSF, Survey of Earned Doctorates, 1980-2003



# The Decline of US Citizens Earning Doctorates

NSF, Survey of Earned Doctorates,  
1980-2003



# What are the critical issues

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**Lost networks and lost skills go with retiree**

**Long learning curve for technical and management positions**



# Summary Point

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**You should not wait to  
address this issue!**



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# Better Practices

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# Managing Your Core Competencies

Dr. Dante Rutstrom

Eastman Chemical Company

Presented by: Stewart Witzeman

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# Objectives

- Identify Critical Technical Skills and Competencies
  - Agree on Core Skills
  - Agree on Strategic Importance
- Staff Planning Tool
  - Identify Current Experts
  - Identify Gaps/Propose plans to fill





# Step 3- Summarize Data

ID#	Status	Critical Skill Area	Current Experts (3 Rating)	Possible future experts (plan in place for names in red)	Anticipated Losses
1		Skill 1 (e.g. Polymer Synthesis)	Bill, Tom, Steve	Laurie, Tim	Tom
2		Stucture Property	Mike	Valerie, Lisa, Joe	
3		Skill 3	<b>Peter</b>	John	
4		Skill 4	Susan	Stan, Tammy	
5		Skill 5	Perry	Brad, Jim, Terry	

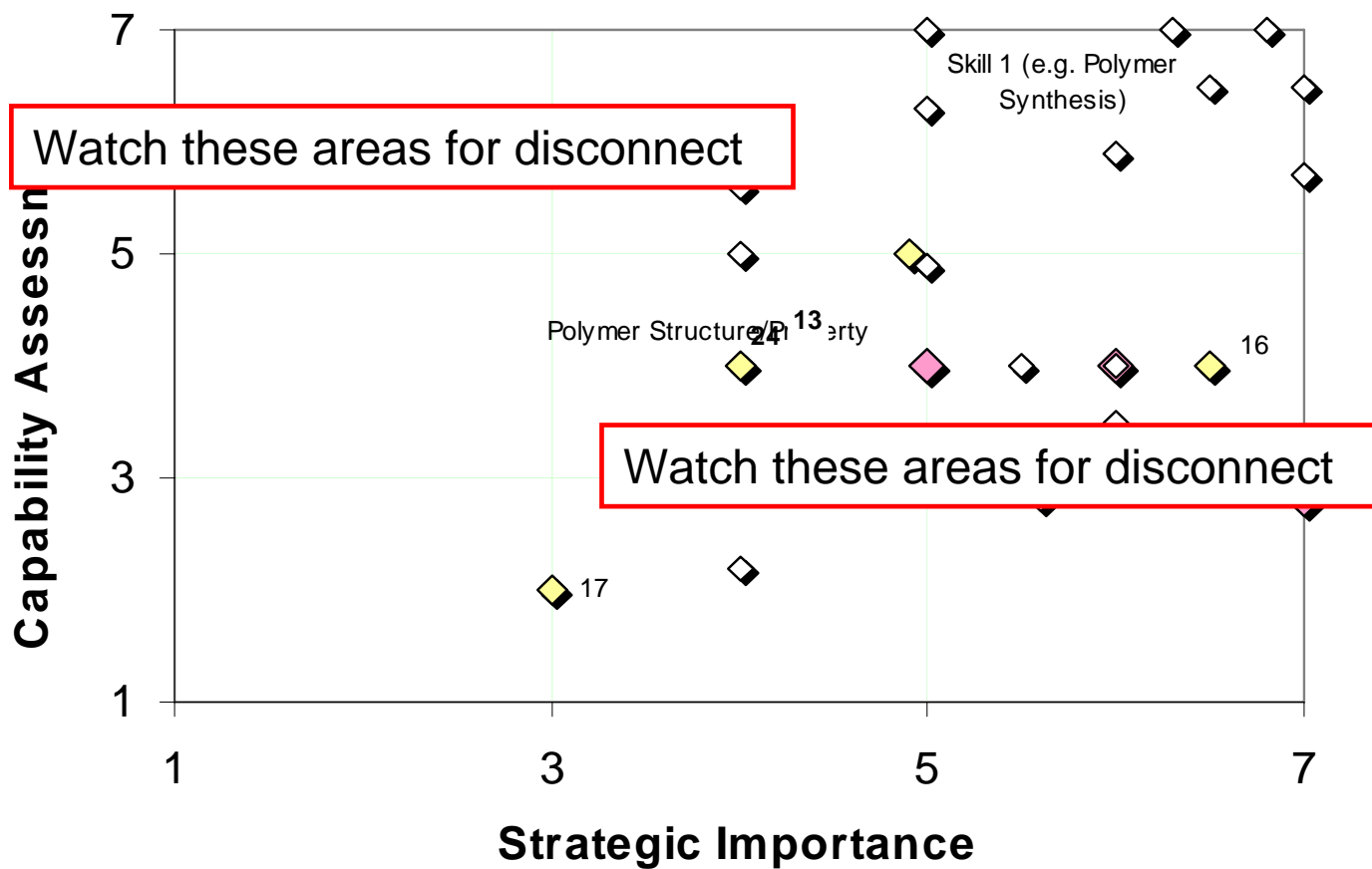
# Step 4 and 5- Strategy Connect

Status	Competency	Strategic Importance	Capability Assessment
	Skill 1 (e.g. Polymer Synthesis)	5	7.00
Watch	Polymer Structure/Property	4	4.00
Critical	Skill 3	6	3.00
	Skill 4	5	6.30
	Skill 5	4	5.00
	Skill 6	7	5.70
	7	6.5	6.50
	8	5.6	2.80
Critical	9	7	2.80
	10	4	5.60
	11	5	4.90
	12	6	3.50
Critical	13	6	4.00
	14	4	2.20
	15	5.5	4.00
Watch	16	6.5	4.00
Watch	17	3	2.00
	18	6	4.00
Watch	19	4.9	5.00
	20	6.8	7.00
	21	6.3	7.00
	22	7	6.50
	23	6	5.90
Critical	24	5	4.00

**Step 4-Business Organization Assigns "Strategic Importance" based on discussions with Technology**

**Step 5- Technology Assigns "Capability Score" based on comparison between # Current Experts and Perceptions of Ideal levels**

# Look for Disconnects Between "Strategic Importance" and Current "Capability"



# Step 6- Develop Action Plans

ID#	Status	Critical Skill Area	Current Experts (3 Rating)	Possible future experts (plan in place for names in red)	Anticipated Losses	Status	Plan?	Author (person asked to write)	Plan Being Executed?
1		Skill 1 (e.g. Polymer Synthesis)	Bill, Tom, Steve	Laurie, Tim	Tom	staffing improved with new hires			
2	Watch	Structure Property	Mike	Valerie, Lisa, Joe		Need training plan for Lisa, Joe, and Valerie	Yes	Bill	Plans have been developed and are being implemented
3	Critical	Skill 3	Peter	John		Need Hiring Plan	Yes	Steve	need approved requisition
4		Skill 4							
5		Skill 5	Perry	Brad, Jim, Terry		in career development plans for Brad and Jim	Yes	Bob	

Color Coding is quick reference indicating overall health:

**Red** = in need of immediate action

**Yellow** = OK for now, but one "bus accident" away from trouble

**White** = properly staffed to meet current and future business needs

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# Major Process Steps

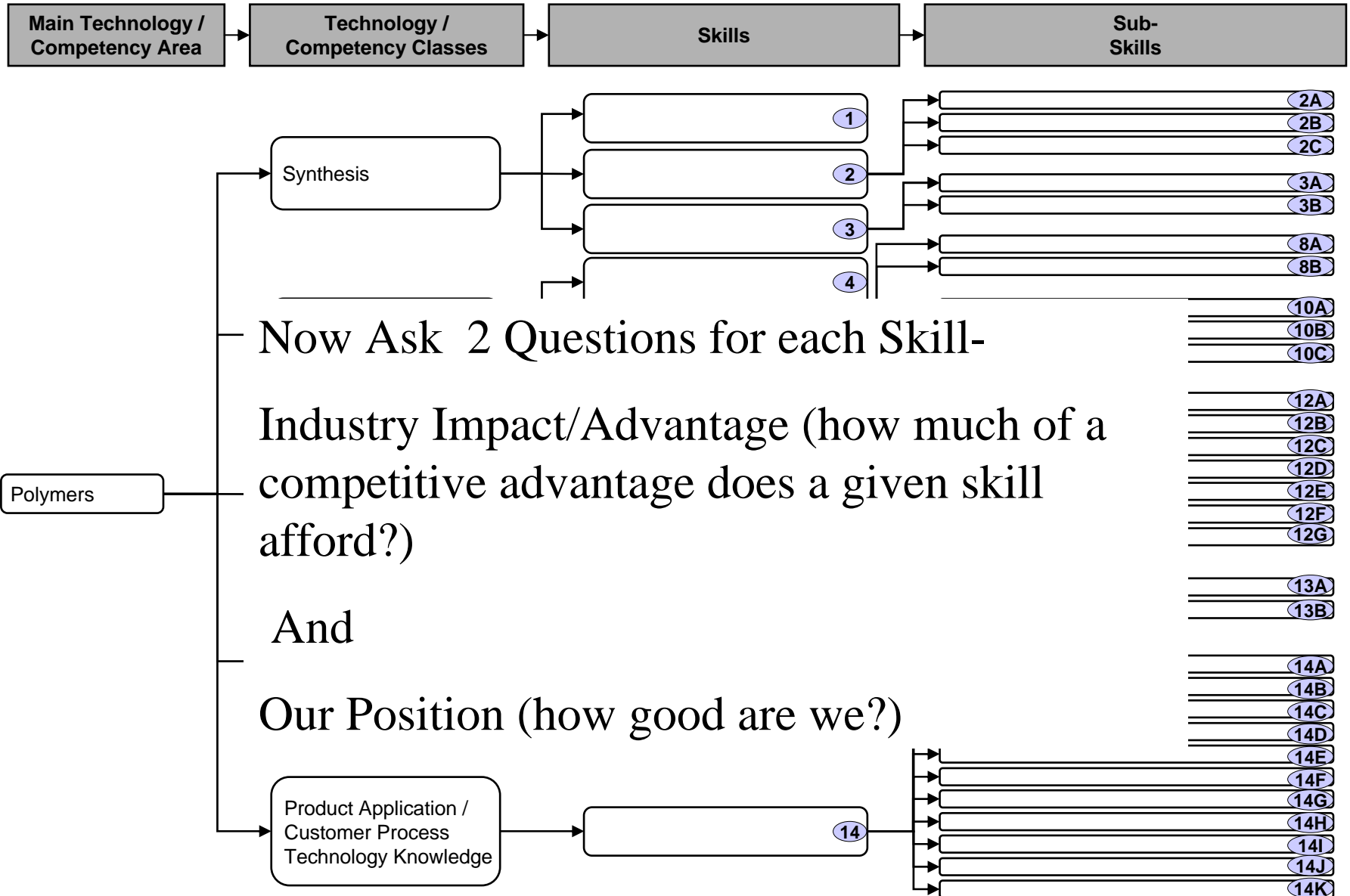
- Step 1- Agree on Critical Skills
- Step 2- Assess EVERY individual's ability for EACH Critical Skill (Rate Staff)
- Step 3- Summarize Data
- Step 4- Assign "Strategic Importance" values
- Step 5- Assess Overall Health of Organization (assign "Capability Assessment" values)
- Step 6- Develop Action Plans to address gaps.

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# Taking it to Another Level.....

- Focus so far had been an internal view of capabilities
- Can also analyze versus competition
  - How critical are certain skills in given markets
  - How good at we at these skills versus competition

# Structured List of Technology Competencies



# Definitions of Competitive Impact and Position

Competitive Impact: The inherent impact of a Technology / Competency in the market	
Competitive Impact	Characteristics
<b>Emerging</b>	<ul style="list-style-type: none"> <li>• Early research stage or emerging in another industry</li> <li>• True potential is hard to assess</li> <li>• Competitive impact is therefore unknown</li> <li>• They hold the promise of change the basis of competition or the industry</li> </ul>
<b>Pacing</b>	<ul style="list-style-type: none"> <li>• <b>OLED'S</b> change the basis of competition in an industry if successfully developed</li> <li>• Often adapted from different industries</li> <li>• Occasionally permitting entry of a new class of competitor</li> </ul>
<b>Key</b>	<ul style="list-style-type: none"> <li>• The most critical to competitive success today</li> <li>• Yield a clear competitive advantage to those who master them better than competitors</li> <li>• The most successful companies in an industry will be those</li> </ul>
<b>Base</b>	<ul style="list-style-type: none"> <li>• <b>Material Science</b> advantage</li> <li>• Benefits are not important to the customer or are easily replicated, bought, or otherwise matched by competitors</li> </ul>

Competitive position: Position in mastering a Technology / Competency relative to competitors	
Current position	Characteristics
<b>Weak</b>	<ul style="list-style-type: none"> <li>• Unable to sustain quality of technical output versus competitors</li> <li>• Short-term fire-fighting focus</li> </ul>
<b>Tenable</b>	<ul style="list-style-type: none"> <li>• Continuously in a “catch-up” mode</li> <li>• Unable to set an independent course</li> </ul>
<b>Favorable</b>	<ul style="list-style-type: none"> <li>• Able to sustain competitiveness in general</li> <li>• No distinct advantages versus competitors</li> </ul>
<b>Strong</b>	<ul style="list-style-type: none"> <li>• Able to express independent actions and set new directions</li> <li>• Gives a competitive advantage.</li> </ul>
<b>Clear leader</b>	<ul style="list-style-type: none"> <li>• Sets the pace and direction of “best practice” development and are recognized for such in the industry</li> <li>• Willingness and ability to adopt ideas coming from outside own industry exist</li> </ul>



# Technology Competency Map

Competitive Impact	Competitive Position				
	Weak	Tenable	Favorable	Strong	Clear Leader
Emerging					
Pacing					
Key					
Base		1	3B	2A 14F	

- 2A
- 2B
- 2C

Opportunity to leverage for strategic business advantage.



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# Accessing Retiree Skills

**Mike Kostrzewa**

***Executive Vice President***

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**Indianapolis, IN 46204**

**317.226.9301**

# *Two Types of Retirees...*

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- *Yours or someone else's*
  - Proven track record; low risk
  - Innovation or knowledge retention
  - Governance processes
- *Common motivations for staying involved*
  - From “70 mph to zero”
  - On their terms
  - Relinquish management role

## ***Consulting seems attractive...***

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- Leverage professional network
- Balanced lifestyle
- Extra \$ for “indulgences”
- Avoid company “aggravations”

### ***But has downside...***

- LLC formation, liability
- Proposals and invoicing
- Seek while delivering
- Chasing receivables



# *Using outside Retirees*

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## *Benefits*

- Richly-experienced innovation leaders
- Non-traditional approaches, fresh perspectives
- Access to Best Practices from multiple industries

## *Challenges*

- Confidentiality and IP security (in-bound and out-bound)
- On-boarding governance
- Contracting and compensation framework



# ***Returning your own Retirees***

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## ***Benefits***

- Know the lexicon, culture, systems and structure
- Have critical knowledge to share
- Sense of loyalty; organizational citizenship
- Immediately productive

## ***Challenges***

- ERISA, IRS, ADEA confusion and risk
- Engagement and compensation framework

# ***ERISA***

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- ***Employee Retirement Income Security Act*** -- 1974 law established legal guidelines for private pension plan administration and investment practices
- Framework for Defined Benefit plans—participation requirements, vesting, benefit formula, benefit eligibility, etc.
- DB plans may encourage long-term employees to retire early
- Returning may jeopardize DB plan as well as reduce individual benefits
- Shift to more portable Defined Contribution plans (401k)
- Conflicting rules with IRS tax code on in-service distribution of benefits

# ADEA

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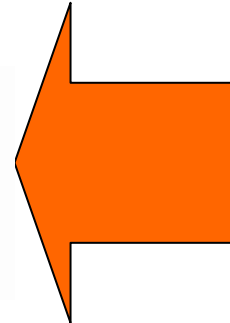
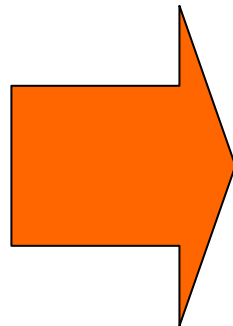
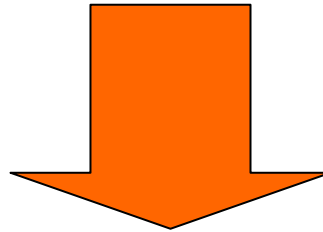
- **Age Discrimination in Employment Act** -- prohibits arbitrary discrimination against workers over the age of 40 in any employment decision, especially firing. The ADEA also provides that no worker can be forced to retire
- Employers returning retirees run risks relative to discrimination and conflict with ERISA benefit eligibility; tax code further confuses the issue

*Bottom Line:* Consult qualified labor counsel re: risks in returning your own retirees; third-party hiring of retirees mitigates these risks



# YourEncore: the Source for Retired Science and Engineering Experts

*Robust network of richly experienced, highly-skilled experts covering most S&E disciplines*



*On-demand talent for critical challenges in discovery, development and commercialization*

*Rigorous confidentiality and IP security processes; comprehensive on-boarding governance*

*Simple, transparent engagement and compensation terms; success and satisfaction metrics in place*

*"It was like having the best of both worlds -- the enthusiasm and passion of a new-hire, with the depth of experience of a seasoned veteran"*  
*...YourEncore Member Company Project Manager*



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# Fast Tracking & Retaining “trough” personnel



# Objective Today

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- Pursuing the silver bullet solutions
- What does your business look like?
- Understand the hidden costs of “lost knowledge”
- Learn about better practices.

# Analyze Your Business

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- Look at your workforce.
  - What knowledge/skills must be retained?
  - Do you currently have a competitive advantage?
  - Knowledge that is vulnerable?
  - Could knowledge go to the competitor?

Resourced from “Lost Knowledge: Confronting The Threat Of An Aging Workforce” by David Delong



# Analyze Your Business

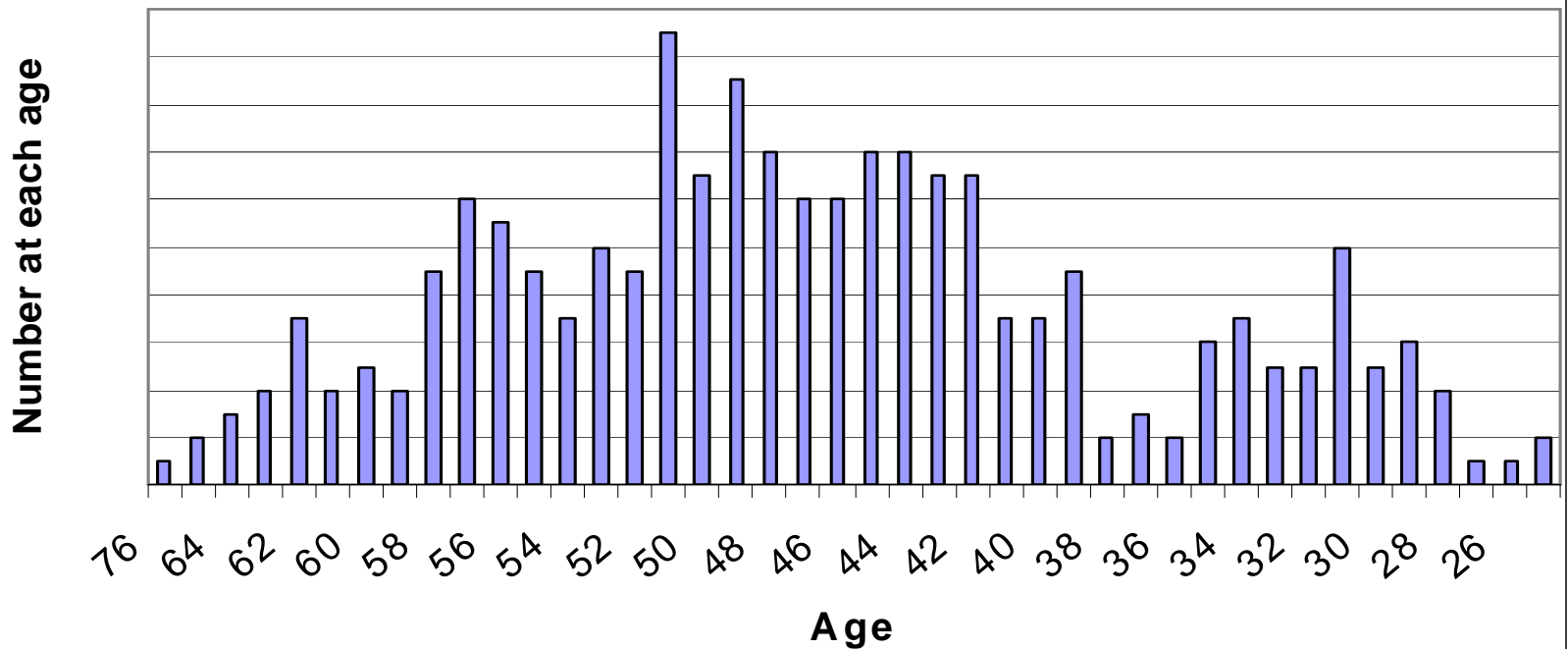
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- Do you support knowledge retention?
  - “Do your employees believe the company is being managed in a way that considers their interest as well as those of the shareholders?”

Taken from “Lost Knowledge: Confronting The Threat Of An Aging Workforce” by David DeLong

# RD&E Age Profile

**Upcoming Retirement "Bubble"**  
**Actual Example - R,D and E Resources**





# Facts

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- Diversity
- More options for new hires
- Economics of Retiring
- Resourced from “Chemical Industry Leaders: Are You ready For The Workforce of the Future?” by David W. De Long



# Hidden Costs of Lost R&D Knowledge

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- Reduced capacity to innovate
- Ability to pursue growth strategies is threatened
- More costly errors
- Less efficiency
- (Resourced from “Uncovering the Hidden Costs of “Lost Knowledge” in Global Chemical Companies by David W. DeLong, Accenture Institute for Strategic Change)





# Better Practices

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- Take Action Now<sup>1</sup>
- Rotational programs
- Incubator
- Homeroom/ Global Skill Resource Mgt.
- Case Studies on Lessons Learned
- Communities of Practice<sup>1</sup>
- Storytelling<sup>1</sup>

<sup>1</sup> Resourced from "Better Practices for Retaining Organizational Knowledge: Lessons From the Leading Edge" by David W. De Long

# Better Practices

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- Mentoring
- Training/Education (Shadowing) <sup>1</sup>
- Strengthened Recruiting Relationships<sup>1</sup>
- Accelerated Development Planning
- Phased Retirement<sup>1</sup>
- Effective Use of Retirees

<sup>1</sup> Resourced from "Better Practices for Retaining Organizational Knowledge: Lessons From the Leading Edge" by David W. De Long

# Retention Strategies

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- Understand your organizations current skill and knowledge base.
- Develop succession planning for your key employees
- Retain Employees<sup>1</sup> [LHH Strategic Framework](#)
- Understand what motivates your top performers. Do you have development plans in place for these people?<sup>2</sup>
  - Challenging work
  - Level of responsibility
  - Career Advancement
  - Salary / wages
  - Job security

1 Taken from Lee Hecht Harrison

2 Resourced from Employee Resource Council 2005 Job Attribute Importance Survey Results



# Retention Strategies

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- How do we encourage highly skilled older employees to stay?<sup>1</sup>
  - Pension plan regulations
  - Respect from younger workforce

Resourced from “Lost Knowledge: Confronting The Threat Of An Aging Workforce”  
by David DeLong



# Final thought

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Top Performer asked why he was leaving organization during the exit interview.

Response was....

“No one asked me to stay.”

Taken from Employee Resource Council



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Questions ?

# Facilitated Better Practices Development

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## What are other “Better Practices”?

- Break into tables of 5 - bring back and present to entire group:
  - Two “Better Practices”: that have not been covered.
  
- Final Deliverable: Share “Better Practices” with those who attend SIS.